

Conference Programme

9 -12 June Conference & Exhibition
13 June Technical Tours



EUBCE 2025
33rd European Biomass Conference & Exhibition

eubce.com

SUPPORTERS

COORDINATION OF THE TECHNICAL PROGRAMME
European Commission
Joint Research Centre



SUPPORT OF THE INDUSTRY TRACK
CBE JU | Circular Bio-based Europe
Joint Undertaking



National Partner



Institutional Industry Cooperation



Organiser



Supporting Organisations



Supporting Associations



Supporting Events



Media Partners



TABLE OF CONTENT

Outline Monday 9 th June	4
Outline Tuesday 10 th June	6
Outline Wednesday 11 th June	8
Outline Thursday 12 th June	10
Monday 9 th June Presentations	12
Tuesday 10 th June Presentations	29
Wednesday 11 th June Presentations	56
Thursday 12 th June Presentations	81
Monday 9 th June Visual Presentations	97
Tuesday 10 th June Visual Presentations	114
Wednesday 11 th June Visual Presentations	139
Thursday 12 th June Visual Presentations	164
Prizes & Awards	178
Publications	180
Programme Committee Members	181



MONDAY 9th JUNE

09:00 Auditorium 1					
10:15 Scientific Opening					
11:25 Political Opening					
12:30 Moderated Policy Panel					
12:30 Networking Lunch					
13:45 Auditorium 1					
14:45 Plenary session AP.1 Biomass availability perspectives for bioenergy and bioeconomy					
Break					
Auditorium 1	Auditorium 2	Room A	Room B	Poster Area A	Poster Area B
15:00 1AO.1 Biomass resource potentials and mobilisation	4AO.2 Emission reduction and novel applications	6AO.2 Innovations in biomass pyrolysis	IAO.1 Advanced biofuels - Road & heavy-duty transport	2AV.1 Perspectives of sustainability enhancing socio-economic and policies assessments	5AV.2 Biofuels and renewable hydrocarbons
16:00 Break					
16:15 1AO.4 Biomass resource availability and harvest logistics	4AO.5 Biomass gasification, processes, gas cleaning, activated carbon and chemical looping	6AO.6 Valorization of nano-cellulose and lignin in biomaterials	IAO.2 Advanced biofuels - Aviation	2AV.3 Life cycle thinking and environmental assessments in bio-based innovations: from materials to energy systems	5AV.4 Fundamental investigation in pyrolysis
17:15 Break					
17:30 1AO.7 Biomass potentials from marginal land and alternative cropping systems	4AO.8 Advanced biomass gasification concepts	6AO.9 Bio-based platform technologies and chemicals	IAO.3 Advanced biofuels - Shipping	2AV.5 Climate impacts and GHG performance	3AV.6 Integration of flexible bioenergy: biomethane, hybrid heating and flexible gasification systems
18:30 EUBCE Welcome Reception					
20:00					

TUESDAY 10th JUNE

	Auditorium 1	Auditorium 2	Room A	Room B	Poster Area A	Poster Area B
09:00	1BO.1 Low ILUC alternatives to bioenergy, biofuels and biobased products	5BO.2 Bio-Jet fuels	3BO.3 Flexible bioenergy in the energy transition	IBO.1 Sustainable biomass production and carbon management for industrial applications	4BV.1 New approaches towards emission reduction, modelling, new fuels as well as performance optimisation. Advances in biomass and waste gasification technologies	6BV.2 Innovations in biogas and biochar production
10:00	Break					
10:15	Auditorium 1					
11:30	Plenary session BP.1 Policies and Sustainability					
	Break					
11:45	1BO.4 Modelling and mapping tools to identify areas for sustainable integrated cropping systems	6BO.5 Advances in the production of value-added compounds from biomass	3BO.6 Low-carbon and hybrid heating systems	IBO.2 Sustainability, GHG performance and socioeconomics aspects in industrial applications for advanced biofuels	1BV.3 Biomass resource potentials and mobilisation	5BV.4 Thermochemical processes for synthetic fuels from biomass and hydrogen
12:45	Networking Lunch					
13:45	Auditorium 1					
14:45	Plenary session BP.2 Recent trends on developing intermediate bioenergy carriers and sustainable biofuels					
	Break					
15:00	1BO.7 Sustainable feedstocks for clean biofuels production	6BO.8 Biomass utilization for purification purposes	3BO.9 Biogas in biorefineries	IBO.3 Biomethane production	4BV.5 Clean biomass-based syngas generation	5BV.6 Biogenic feedstocks and biological processes for synthetic fuels from biomass and hydrogen
16:00	Break					
16:15	1BO.10 Production processes of waste into biofuels and bioproducts	6BO.11 Co-production of biofuels and biochemicals	3BO.12 Resource efficient approaches to bioeconomy solutions	IBO.4 Mass balancing in the bioeconomy	2BV.7 Biomass strategies and policies	5BV.8 Applied pyrolysis
17:15	Break					
17:30	4BO.13 New combined concepts and gas cleaning and upgrading towards clean hydrogen-rich syngas	5BO.14 Biochar production and decarbonisation	3BO.15 Biobased solutions to de-fossilize the economy	6BO.16 New developments related to lignin depolymerisation	2BV.9 Modelling and decision making in bioenergy systems	6BV.10 Co-production of biofuels and biochemicals
19:30-23:30	EUBCE Dinner					

PARALLEL EVENTS

09:30-11:30 | ROOM: Parallel 1
The Clean Tech Revolution: pathways to scale-up renewable gas in Europe

11:45-12:45 | ROOM: Parallel 3
Experts meeting to discuss the LCA for SUN-PERFORM project

11:45-12:45 | ROOM: Exhibition Forum
Innovative Technologies for Wood Biomass Valorisation: Insights from the NewWave Project

13:45-16:15 | ROOM: Exhibition Forum
The role of biomass in the Decarbonization of the European Metallurgical Industry and visit of an industrial pilot plant for Hydrothermal Carbonization

WEDNESDAY 11th JUNE

	Auditorium 1	Auditorium 2	Room A	Room B	Poster Area A	Poster Area B
09:00	5CO.1 Thermochemical processes for synthetic fuels from biomass and hydrogen	1CO.2 From municipal bio-waste and sewage sludge to renewable chemicals	3CO.3 Biorefinery processes	1CO.1 Circular bio-based alternative materials and ingredients from algae	5CV.1 New trends in hydrothermal liquefaction	1CV.2 Biomass availability and logistics
10:00	Break					
10:15	Auditorium 1					
11:30	Plenary session CP.1 Biogas & Biomethane					
11:30	Break					
11:45	1CO.4 Algae and aquatic biomass production systems	2CO.5 Bioenergy and carbon capture technologies: social implications	5CO.6 Technico-economic assessments of synthetic fuels from biomass and hydrogen	1CO.2 Transforming biomass into high-value products: Bio-based and Sustainable Packaging	4CV.3 Biomass pre-treatment and production of intermediates	3CV.4 Biorefinery concepts and processes I
12:45	Networking Lunch					
13:45	Auditorium 1					
14:45	Plenary session CP.2 Biomass pre-treatment and production of intermediates					
14:45	Break					
15:00	5CO.7 Biofuels processes	2CO.8 Advancing sustainability: environmental impacts and innovations in biofuel and hydrogen systems	3CO.9 How consistent policies can shape markets for fuels and biobased products	1CO.3 Innovative biorefineries: production of bioproducts & biochemicals	4CV.5 Biogas and biomethane	6CV.6 Developments in biomass conversion to chemicals and materials
16:00	Break					
16:15	5CO.10 Fuel production by pyrolysis	2CO.11 Balancing bioeconomy development: land use, biodiversity, and environmental impacts of bio-based products and biofuels	4CO.12 Pretreatment of varied feedstocks and their characterization	1CO.4 EABA - Algae	6CV.7 Biomass valorization for different applications	3CV.8 Innovative biobased applications
17:15	Break					
17:30	5CO.13 Plant operation and modelling	2CO.14 Sustainability and GHG performance	4CO.15 Hydrothermal pretreatment for the production of intermediates	2CO.16 Social perspectives in the bioenergy	6CV.9 New approaches for the production of bio-based platform chemicals and polymers	3CV.10 Examples of implementation in different countries and sectors: biobased, biochar and bioheat
18:30						

THURSDAY 12th JUNE

	Auditorium 1	Auditorium 2	Room A	Room B	Poster Area A	Poster Area B
09:00	3DO.1 Biorefinery concepts and assessments	2DO.2 Climate impacts and GHG performance	5DO.3 Biological processes for synthetic fuels from biomass and hydrogen	IDO.1 Thermochemical biomass conversion	1DV.1 Municipal and industrial bio-wastes	5DV.2 New trends in hydro-thermal gasification and carbonization
10:00	Break					
10:15	Auditorium 1					
11:30	Plenary session DP.1 SAF & maritime					
	Break					
11:45	4DO.4 Recent advances in biogas research	2DO.5 Biomass strategies and policies	5DO.6 Hydrothermal liquefaction	IDO.2 India	IDV.3 Industry topics	1DV.4 Sustainable integrated agricultural management practices
12:45	Networking Lunch					
13:45	4DO.7 Combining biogas with thermal / thermo-chemical processes	2DO.8 Overall supply chain analysis	5DO.9 Hydrothermal carbonization and gasification	IDO.3 China	1DV.5 Sustainable integrated agricultural management practices and algae	3DV.6 Biorefinery concepts and processes II
14:45	Break					
15:00	Auditorium 1					
	Plenary session DP.2 Advances in biochemical and biomaterials					
	Roundtables / Panel Discussions					
17:00	Auditorium 1					
18:00	Closing Session					

PARALLEL EVENTS

13:45-16:00 | ROOM: Parallel 1
ICARUS/BioTheRoS Workshop
“International R&I Cooperation on Sustainable Aviation and Maritime Fuels”

09.00 - 10.00 **Scientific Opening**
ROOM: Auditorium 1

10.15 - 11.25 **Political Opening**
ROOM: Auditorium 1

11.25 - 12.30 **Moderated Policy Panel**
ROOM: Auditorium 1

Networking Lunch **12.30 - 13.45**

PLENARY SESSION AP.1

13.45 - 14.45 **Biomass availability perspectives for bioenergy
and bioeconomy**
ROOM: Auditorium 1

This session will discuss the most recent developments on the conversion of lignin to nanoparticles and their potential applications.

CHAIRPERSON:

Ana Luisa FERNANDO

Universidade Nova de Lisboa, PORTUGAL

AP.1.1

Berien ELBERSEN

Wageningen Environmental Research, Earth Informatics Dpt., THE NETHERLANDS

Co-authors: T. Ceccarelli, M. van Eupen, C. van Haren, G. Hazeu, I. Staritsky,

J. Snethlage, S. Verzandvoort, H. Boogaart, Wageningen Environmental Research,

The Netherlands; M. Koper, S. Peeters, Guidehouse, Utrecht, The Netherlands; G.

Toop, Guidehouse, Londen, United Kingdom; L. Salvati, MEDES, Pizza, Italy

**CAN AGRICULTURE IN 2050 SOURCE ENOUGH BIOMASS FOR THE
BIOECONOMY?**

AP.1.2

Marco BUFFI

European Commission Joint Research Centre, Institute for Energy - Renewable Energy Unit, ITALY

Co-authors: R. Salvucci, M. Roszai, M. Wegener, F. Neuwahl, European Commission Joint Research Centre, Seville, Italy; N. Scarlat, European Commission Joint Research Centre, Ispra, Italy

THE ROLE OF BIOFUELS AND BIOENERGY IN THE DECARBONISATION OF THE EU ENERGY SYSTEM: INSIGHTS FROM THE POTENCIA MODEL

AP.1.3

Walter ZEGADA-LIZARAZU

University of Bologna, Agricultural Science Dpt., ITALY

Co-authors: E. Ferro, E. Pagliarini, F. Gaggia, A. Monti, University of Bologna, Italy

DESIGNING MIXED-CROPPING ALTERNATIVES FOR THE PRODUCTION OF SUITABLE FEEDSTOCK FOR SAF

Break **14.45 - 15.00**

ORAL SESSION 1AO.1

15.00 - 16.00 **Biomass resource potentials and mobilisation**
ROOM: Auditorium 1

This session explores the availability of biomass resources in different countries and their mobilisation for energy production.

CHAIRPERSONS:

Athanasios RENTIZELAS

National Technical University of Athens, GREECE

Hans LANGEVELD

Research4Life, THE NETHERLANDS

1AO.1.1

Nadia MALINVERNO

Empa, Technology and Society Laboratory, SWITZERLAND

Co-authors: K. Vogel, G. Nyström, B. Nowack, C. Som, Empa, St.Gallen, Switzerland; E. Thürig, WSL, Birmensdorf, Switzerland

DEVELOPING A COMPREHENSIVE FRAMEWORK FOR OPTIMAL CASCADING USE OF WOOD: CRITERIA AND APPLICATION SELECTION

1AO.1.2

Alma FAHLÉN HAMMAR

Luleå Tekniska Universitet, SWEDEN

Co-authors: L. Engstam, A. Tayebi, SLU Swedish University of Agricultural Sciences, Uppsala, Sweden; E.J. Nylund, Swerim, Stockholm, Sweden

FUELING AGRICULTURAL VEHICLES WITH EXCESS AGRICULTURAL BIOMASS: A SWEDISH CASE STUDY**1AO.1.3**

Joshua NGETUNY

Technische Hochschule Ingolstadt, Institute of new Energy Systems (InES), GERMANY

Co-author: W. Zörner, Technische Hochschule Ingolstadt, Ingolstadt, Germany

BIOGAS IN THE DEVELOPING WORLD: FEEDSTOCK AVAILABILITY AND SELECTION USING ANALYTIC HIERARCHY PROCESS**1AO.1.4**

Keith L. KLINE

Oak Ridge National Laboratory, Environmental Sciences Division, USA

Co-author: J. Spaeth, US Dept of Energy, Golden, Usa

STATUS OF 2025 CEM BIOFUTURE ACTION PLAN & COLLABORATIONS TO ACCELERATE PRODUCTION OF SUSTAINABLE FUELS**ORAL SESSION 4AO.2****15.00 - 16.00****Emission reduction and novel applications
ROOM: Auditorium 2**

The session is dealing with catalytic NOx reduction, the characterisation of condensable organic emissions in stoves, the application of chemical looping combustion as well as the use of pyrolysis oil in microturbines.

CHAIRPERSON:**Marco BARATIERI**

Free University of Bolzano, ITALY

4AO.2.1

Danish REHMAN

MITIS, R&D Dpt., BELGIUM

Co-authors: S. Harboe-Minwegen, D. Möntmann, Y. John, OWI Science for Fuels, Aachen, Germany; E. Leijenhorst, MITIS, BTG, The Netherlands

HYDROTREATED PYROLYSIS OIL FOR SUSTAINABLE MICROTURBINE COMBUSTION: EXPERIMENTAL EVALUATION UNDER FLAMELESS CONDITIONS**4AO.2.2**

Clara AKL

Laboratoire Gestion des Risques et Environnement, FRANCE

Co-authors: J. Schobing, C. Schonnenbeck, G. Trouve, Laboratoire gestion des risques et environnement, Mulhouse, France

CHARACTERIZATION OF CONDENSABLE ORGANIC EMISSIONS IN GASEOUS AND PARTICULATE PHASES FROM RESIDENTIAL WOOD COMBUSTION**4AO.2.3**

Margarita DE LAS OBRAS LOSCERTALES

Instituto de Carboquimica, SPAIN

Co-authors: Y. Domingos, A. Abad, M.T. Izquierdo, Instituto de Carboquimica (ICB-CSIC), Zaragoza, Spain

COMBUSTION OF SWINE MANURE FOR BIOENERGY PRODUCTION WITH CO₂ CAPTURE VIA CHEMICAL LOOPING WITH OXYGEN UNCOUPLING (CLOU) TECHNOLOGY**4AO.2.4**

Ingwald OBERNBERGER

BIOS Bioenergiesysteme, AUSTRIA

Co-authors: T. Brunner, C. Schloegl, C. Mandl, BIOS Bioenergiesysteme, Graz, Austria; F. Silversand, T. Hargitai, CATATOR, Lund, Sweden; A. Sahin, Polytechnik Luft- und Feuerungstechnik, Weissenbach, Austria

TOWARDS ZERO NOx EMISSION COMBUSTION—DEVELOPMENT AND APPLICATION OF AN ADVANCED THREE-WAY CATALYST FOR BIOMASS COMBUSTION PLANTS**ORAL SESSION 6AO.3****15.00 - 16.00****Innovations in biomass pyrolysis
ROOM: Room A**

The session will discuss the most recent developments in the area of biomass pyrolysis.

CHAIRPERSONS:**Cristina MOLINER**

University of Genova, ITALY

Christopher KICK

Fraunhofer UMSICHT, GERMANY

6AO.3.1

Aitor ARANDIA
 VTT Technical Research Centre of Finland, FINLAND
 Co-authors: V. Lehtinen, I. Uotila, N. Van Strien, M. Reinikainen, J. Kihlman, J. Lehtonen, VTT Technical Research Centre of Finland, Espoo, Finland
SUSTAINABLE PRODUCTION OF GREEN AROMATICS FROM BIOMASS PYROLYSIS BIO-OILS WITH ZINC AND GALLIUM-DOPED ZSM-5 ZEOLITES

6AO.3.2

Nurhan DUNFORD
 Oklahoma State University, Biosystems Engineering Dpt., USA
 Co-authors: N. Aktay, S. Chakraborty, Oklahoma State University, Stillwater, Usa
EFFECT OF PROCESSING CONDITIONS AND BIOMASS TYPE ON PHYSICAL AND CHEMICAL PROPERTIES OF CARBON PRODUCED BY PYROLYSIS

6AO.3.3

Invited

6AO.3.4

Andrea SALIMBENI
 RE-CORD, Raw Materials and Carbon Recycling Dpt., ITALY
 Co-authors: A. Miniati, N. Pezzati, RE-CORD, Firenze, Italy; D. Chiaramonti, Polytechnic of Turin, Torino, Italy
OPPORTUNITIES OF INTEGRATING PYROLYSIS AND CHEMICAL LEACHING FOR A SELECTIVE RECOVERY NUTRIENTS AND STABLE CARBON FROM AGRICULTURAL DIGESTATE

ORAL SESSION IAO.1

15.00 - 16.00 **Advanced biofuels - Road & heavy-duty transport**
ROOM: Room B

CHAIRPERSON:

Francisco GIRIO
 LNEG - Laboratorio Nacional de Energia e Geologia, PORTUGAL

IAO.1.1

Dhanisha JULEEMUN
 SGS, GERMANY
 Co-author: A. Gonzalez Palomino, SGS, Hamburg, Germany
THE NEED FOR ADVANCED BIOFUELS IN ROAD TRANSPORT SECTOR

IAO.1.2

Agnete BUGGE
 Topsoe, DENMARK
 Co-authors: M.Z. Stummann, J. Hansen, B. Olinai, L.Y. Lemus-Olsen, C. Weise, E. Bek-Pedersen, Topsoe, Kgs. Lyngby, Denmark
TRANSFORMING DIVERSE BIOMASS INTO HIGH-QUALITY BIOFUELS VIA NEXT GENERATION HYDROTREATING TECHNOLOGY

IAO.1.3

Klaus SCHÖFFEL,
 Silva Green Fuel DA, Technology, NORWAY
SILVA GREEN FUEL: DEMO-SCALE HTL BASED PRODUCTION OF LIQUID ADVANCED BIOFUELS

IAO.1.4

Invited

VISUAL PRESENTATIONS 2AV.1

15.00 - 16.00 **Perspectives of sustainability enhancing socio-economic and policies assessments**
ROOM: Poster Area A

Detailed information on this session is presented in the section entitled "Visual Presentations".

VISUAL PRESENTATIONS 5AV.2

15.00 - 16.00 **Biofuels and renewable hydrocarbons**
ROOM: Poster Area B

Detailed information on this session is presented in the section entitled "Visual Presentations".

Break **16.00 - 16.15**

ORAL SESSION 1AO.4

16.15 - 17.15 **Biomass resource availability and harvest logistics**
ROOM: Auditorium 1

This session focusses on supply availability and harvest logistics.

CHAIRPERSONS:**Myrsini CHRISTOU**

Center for Renewable Energy Sources and Saving, GREECE

Sylvain MARSAC

ARVALIS, FRANCE

1AO.4.1

Stavroula ZERVOPOULOU

TU Wien, Institute of Chemical, Environmental and Bioscience Engineering, AUSTRIA

Co-authors: M. Inayat, M. Järvinen, Aalto University, Espoo, Finland;

S. Papadokonstantakis, TU Wien, Vienna, Austria

ASSESSMENT OF WHEAT AND RYE STRAW AVAILABILITY IN THE EU-27 FOR SUSTAINABLE AVIATION FUEL PRODUCTION THROUGH SOLAR PYROLYSIS AND ALIGNMENT WITH REFUELEU AVIATION TARGETS THROUGH 2050

1AO.4.2

Carina GUNNARSSON

RISE Research Institutes of Sweden, SWEDEN

Co-author: A. de Toro, Independent researcher, Uppsala, Sweden

STRAW AVAILABILITY DEPENDING ON WETHER VARIATIONS AND MOISTURE CONTENT AT BALING

1AO.4.3

Suani COELHO

University of Sao Paulo - Julio Romano Meneghini - PROCESSO FAPESP 2020/15230-5, BRAZIL

Co-authors: D. Higgin Amaral, A.C. Gutierrez-Gomez, M.J. do Nascimento Anater, M. Mariano dos Santos, V. Pecora Garcilasso, S. Teixeira Coelho, University of São Paulo, Brazil; P.R. Freitas Neves, A.A. Bandeira Santos, SENAI - CIMATEC, Salvador, Brazil; O.L. Soliano Pereira, Universidade Federal da Bahia, Salvador, Brazil; T.V. Mousinho Reis, Centro Brasileiro de Energia e Mudanças Climáticas, CBEM, Salvador, Brazil; C.R. Cavalcante Rodrigues, Secretaria de Infraestrutura do Estado da Bahia, Salvador, Brazil; F. Rodrigues Moraes, Secretaria de Ciência, Tecnologia e Inovação da Bahia, Salvador, Brazil; M.B. do Nascimento Silva, Companhia de Gas da Bahia, Salvador, Brazil; P.H. Lara dos Santos Matai, Brazil

SPATIAL ASSESSMENT OF THE TECHNICAL ENERGY POTENTIAL OF BIOMASS RESIDUES AND WASTE FOR BIOENERGY IN THE STATE OF BAHIA, BRAZIL

1AO.4.4

Md Mashum BILLAL

University of Alberta, Mechanical Engineering Dpt., CANADA

Co-author: A. Kumar, University of Alberta, Edmonton, Canada

THE DEVELOPMENT OF A FRAMEWORK TO FORECAST THE AVAILABILITY OF BIOMASS FEEDSTOCKS UP TO 2050 USING AI

ORAL SESSION 4AO.5

16.15 - 17.15

Biomass gasification, processes, gas cleaning, activated carbon and chemical looping
ROOM: Auditorium 2

The session explores the latest innovations in biomass gasification technology and its integration into energy systems, ranging from advanced fluid dynamic analyses, integrated gas extraction and cleaning technologies, activated carbon production and chemical looping combustion systems, providing critical insights into optimizing these processes for sustainable energy applications.

CHAIRPERSONS:**Francesco PATUZZI**

Free University of Bolzano, ITALY

David BAXTER

Former European Commission, Joint Research Centre, UNITED KINGDOM

4AO.5.1

Carmine FLORIO

ENEA, ITALY

Co-authors: G.D. Zito, F. Zimbardi, N. Cerone, L. Contuzzi, G. Santilli, M. Carnevale, V. Valerio, C. Ragone, A. Villone, ENEA, Rotondella, Italy; L. Fabbiano, Politecnico di Bari, Italy

FLUID DYNAMIC ANALYSIS OF SYNGAS FLOW AND RESIDENCE TIME DISTRIBUTION IN AN UPDRAFT BIOMASS GASIFIER

4AO.5.2

Thomas BRUNNER

BIOS Bioenergiesysteme, AUSTRIA

Co-authors: C. Mandl, I. Obernberger, BIOS Bioenergiesysteme, Graz, Austria; ù T. Hargitai, F. Silversand, CATATOR, Lund, Sweden

MICRO-BIO-CHP—DEVELOPMENT OF A NOVEL GAS EXTRACTION AND CLEANING TECHNOLOGY DIRECTLY INTEGRATED IN A BIOMASS UPDRAFT GASIFIER WITH SUBSEQUENT GAS BURNER

4AO.5.3

David GURTNER

MCI Internationale Hochschule, JRZ Pulveraktivkohle, Energy and Environmental Engineering Dpt., AUSTRIA

Co-authors: M. Kresta, M. Maurer, A. Hofmann, Management Center Innsbruck, Innsbruck, Austria; C. Pfeifer, University of Natural Resources and Life Science, Vienna, Austria

INTEGRATION OF PHYSICAL ACTIVATION INTO INDUSTRIAL WOOD GASIFICATION PLANT: ACTIVATED CARBON PRODUCTION, PAH REMOVAL AND ELECTRICAL EFFICIENCY IMPROVEMENT

4AO.5.4

Eddy Jonatan MORENO ROMAN

IFPEN, Reactions and Reactors Modelization Dpt., FRANCE

Co-authors: P. Font, N. Vin, P. Hazemann, IFPEN, Solaize, France

BIOMASS GASIFICATION AND REACTION KINETICS PATHWAYS IN CHEMICAL LOOPING COMBUSTION

ORAL SESSION 6AO.6**16.15 - 17.15**

**Valorization of nanocellulose and lignin in biomaterials
ROOM: Room A**

This session will discuss the most recent developments in nanocellulose and lignin application in the area of biomaterials.

CHAIRPERSON:**Rebecca SERNA GARCÍA**

University of Valladolid, SPAIN

6AO.6.1

Pedram FATEHI

Lakehead University, Biomass Utilization Research Laboratory, CANADA

Co-authors: F. Hassanpour, R. Zare, Lakehead University, Thunder Bay, Canada

Keynote presentation**FUNCTIONAL LIGNIN NANOPARTICLE PRODUCTION AND USE****6AO.6.2**

Bernd WITTEGENS

SINTEF Industry, Process Technology Dpt., NORWAY

Co-authors: M. Gilardi, T. Rücker, SINTEF Industry, Trondheim, Norway

FUNGAL BIOMASS VALORIZATION FOR THE PRODUCTION OF BIO-BASED MATERIALS: A NOVEL VALUABLE PATH

6AO.6.3

Michael DARAMOLA

University of Pretoria, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: L. Chawane, N. Ndwandwa, F. Aaya, S.A. Iwarere, University of Pretoria, South Africa

CONVERSION OF THATCHING GRASS WASTE (HYPARRHENIA FILIPENDULA) TO A HIGH-QUALITY FOOD PACKAGING MATERIAL

6AO.6.4

Diego ROMANO

University of Milan, Food, Environmental and Nutritional Sciences - DeFENS Dpt., ITALY

Co-authors: M.L. Contente, S. Donzella, L. Nespoli, E. Ribul Moro, S. Farris, University of Milan, Italy

VALORIZATION OF APPLE POMACE: PRODUCTION OF PHLORETIN USING A BACTERIAL CELLULOSE-IMMOBILIZED β -GLYCOSIDASE

ORAL SESSION IAO.2

16.15 - 17.15 **Advanced biofuels - Aviation**
ROOM: Room B

This session will discuss the most recent developments in nanocellulose and lignin application in the area of biomaterials.

CHAIRPERSONS:

Invited

Kyriakos MANIATIS

Kyriakos Maniatis, BELGIUM

IAO.2.1

Mathieu POMINVILLE-RACETTE
Université Sherbrooke, CANADA

Co-authors: R. Overend, Nextfuels LLC., Ottawa, Canada; N. Abatzoglou, I. Achouri, Université Sherbrooke, Canada

HEFA-TO-JET: ARE WE HEADING IN THE RIGHT DIRECTION FOR SUSTAINABLE AVIATION FUEL PRODUCTION?**IAO.2.2**

Alba CÁNOVAS CREUS
RSB, SWITZERLAND

Co-authors: A. Ehrenhaus, A. Baldo, C. Wessels, C. Grassi, M. Tracastro, RSB, Châtelaine, Switzerland; O. Andrade, O. Cavalett, Boeing, São Paulo, Brazil; P. Gangopadhyay, Boeing, Washington, Usa; R. Boyd, Boeing, Brisbane, Australia; S. Tan, Boeing, Singapore, Singapore

SUSTAINABLE AVIATION FUEL PRODUCTION IN SOUTHEAST ASIA**IAO.2.3**

Pedro ORTIZ-TORAL
GTI Energy, Bioenergy Dpt., USA

Co-author: T. Marker, GTI Energy, Des Plaines, Usa

IH2 FOR THE DIRECT PRODUCTION OF DROP-IN FUELS, TEST RESULTS AND ECONOMICS**IAO.2.4**

Invited

VISUAL PRESENTATIONS 2AV.3

16.15 - 17.15 **Life cycle thinking and environmental assessments in bio-based innovations: from materials to energy systems**
ROOM: Poster Area A

Detailed information on this session is presented in the section entitled "Visual Presentations".

VISUAL PRESENTATIONS 5AV.4

16.15 - 17.15 **Fundamental investigation in pyrolysis**
ROOM: Poster Area B

Detailed information on this session is presented in the section entitled "Visual Presentations".

Break

17.15 - 17.30

ORAL SESSION 1AO.7

17.30 - 18.30 **Biomass potentials from marginal land and alternative cropping systems**
ROOM: Auditorium 1

This session focusses on biomass availability from marginal lands, and novel cropping systems.

CHAIRPERSONS:**Jarno FÖHR**

Lappeenranta-Lahti University of Technology, FINLAND

Jerónimo GONZÁLEZ CORTÉS

Junta de Extremadura, SPAIN

1AO.7.1

Sylvain MARSAC
ARVALIS, R&D Dpt., FRANCE

Co-authors: L. Casal, ARVALIS, Loireauxence, France; N. Dagorn, M. Dallagnese, ARVALIS, Baziège, France; C. Richard, S. Tesseron, ENGIE Lab - CRIGEN, Stains, France; C. Sambusiti, M. Salomez, TotalEnergies OneTech R&D, Pau, France

ANALYSIS OF FRENCH ENERGY COVER CROPS POTENTIAL IN DOUBLE CROPPING SYSTEMS

1AO.7.2

Valentina JARA RÍOS

Wageningen Environmental Research, THE NETHERLANDS

Co-authors: V. Jara-Ríos, B. Elbersen, M. van Eupen, Wageningen Environmental Research, The Netherlands; M. van Cossel, Biobased Products and Energy Crops, Institute of Crop Science, Stuttgart, Germany; E. Alexopoulou, Centre for Renewable Energy - CRES Biomass Department, Athens, Greece

EVALUATING THE YIELD POTENTIAL AND SUITABILITY OF INDUSTRIAL CROPS ON MARGINAL LANDS**1AO.7.3**

Saori MIYAKE

University of Technology Sydney, AUSTRALIA

Co-authors: M. Feenstra, University of Technology Sydney, Sydney, Australia; F. Ximenes, NSW Department of Primary Industries, Sydney, Australia

EVALUATING OPPORTUNITIES FOR BIOMASS PRODUCTION FROM MARGINAL, LESS PRODUCTIVE LANDS IN AUSTRALIA**1AO.7.4**

Raquel BADOS SEVILLANO

CIEMAT-CEDER, Energía Dpt., SPAIN

Co-authors: C.S. Ciria, J. Perez, R. Corredor, R. Barro, L.S. Esteban, I. Mediavilla, M.J. Fernandez, CIEMAT-CEDER, Luvia, Spain

YIELDS AND COSTS OF MECHANIZED HARVESTING WITH A HARVESTER-MULCHER OPERATING IN A ROCKROSE (CISTUS LAURIFOLIUS L.) SHRUBLAND**ORAL SESSION 4AO.8****17.30 - 18.30****Advanced biomass gasification concepts
ROOM: Auditorium 2**

This session is targeted at the development of new gasification reactor designs and processes.

CHAIRPERSONS:**Wiebren DE JONG**

TU Delft, THE NETHERLANDS

Ingwald OBERNBERGER

BIOS Bioenergiesysteme, AUSTRIA

4AO.8.1

Ulrike SANTO

Karlsruhe Institute of Technology, Gasification Technology Dpt., GERMANY

Co-authors: D. Böning, S. Fleck, T. Jakobs, B. Michelfelder, B. Zimmerlin, F. Scheiff, T. Kolb, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

HIGH-PRESSURE ENTRAINED-FLOW GASIFICATION: VALIDATED DATA FROM PILOT-SCALE EXPERIMENTS FOR OPTIMISATION AND SCALE-UP**4AO.8.2**

Armando VITALE

Università degli Studi di L'Aquila, ITALY

Co-authors: A.A. Papa, M. Ragnoli, A. Di Carlo, Industrial Engineering Department, University of L'Aquila, Italy; E. Bocci, Department of Engineering Sciences, University of Guglielmo Marconi, Rome, Italy

PERFORMANCE EVALUATION OF AN INNOVATIVE 100 KWTH DUAL BUBBLING FLUIDIZED BED BIOMASS GASIFIER COUPLED WITH HOT GAS CLEANING AND CONDITIONING**4AO.8.3**

Andrés ANCA-COUCÉ

University Carlos III Madrid, Thermal and Fluids Engineering Dpt., SPAIN

Co-authors: T. Graul, J.F. Guil-Pedrosa, L.M. García-Gutiérrez, E. Cano-Pleite, A. Soria-Verdugo, University Carlos III Madrid, Leganés, Spain

DEVELOPMENT OF A NOVEL THREE-STAGES FLUIDIZED BED GASIFIER WITH A LOW TAR CONTENT AND HIGH QUALITY PRODUCT GAS**4AO.8.4**

Matteo GILARDI

SINTEF Industry, NORWAY

Co-authors: F. Bisotti, B. Wittgens, SINTEF Industry, Trondheim, Norway

DESIGN OF A NOVEL PROCESS FOR BIOMETHANE PRODUCTION VIA THERMOCHEMICAL CONVERSION OF WOODY BIOMASS

ORAL SESSION 6AO.9

17.30 - 18.30 **Bio-based platform technologies and chemicals**
ROOM: Room A

The session addresses most promising platform chemicals and technologies to produce them, including gas/-electro fermentation and electrically-heated catalytic reactor technologies for bio-methanol production.

CHAIRPERSONS:**Tim SCHULZKE**

Fraunhofer UMSICHT, GERMANY

Diego ROMANO

University of Milan, ITALY

6AO.9.1

Michel WEBER

Technical University Munich, Chair of Carbon Composites, GERMANY

Co-authors: A. Wurtler, PSM Merseburg, Merseburg, Germany; K. Drechsler, M. Tal, Technical University Munich, Garching bei München, Germany

BIO-BASED PBS-COPOLYMER MODIFICATIONS WITH ENHANCED PROPERTIES: A SUSTAINABLE SOLUTION FOR DIVERSE APPLICATIONS**6AO.9.2**

Nils RETTENMAIER

IFEU - Institute for Energy and Environmental Research Heidelberg, Food and Biobased Systems Dpt., GERMANY

Co-authors: S. Haertle, H. Keller, G. Reinhardt, IFEU - Institute for Energy and Environmental Research Heidelberg, Heidelberg, Germany

RENEWABLE ELECTRICITY FOR BIO-METHANOL OR SYNTHETIC METHANOL? A COMPARISON OF EFFICIENCIES AND PROSPECTIVE ENVIRONMENTAL IMPACTS**6AO.9.3**

Lukas HORNDASCH

PtX Lab Lausitz, GERMANY

Co-authors: I. Akhmetova, A. Demuth, S. Sander, O. Ziegler, S. Kühnel, S. Bernhard, H. Lehmann, PtX Lab Lausitz, Cottbus, Germany

MEETING THE NAPHTHA DEMAND IN THE EUROPEAN CHEMICAL INDUSTRY WITH BIOGENIC CO₂: POTENTIALS, LIMITATIONS, AND ALTERNATIVES**6AO.9.4**

Werner FUCHS

Institute of Environmental Biotechnology, AUSTRIA

Co-authors: K. Ludwig, B. Drosig, BEST - Bioenergy and Sustainable Technologies, Graz, Austria; C. Hiebl, University of Natural Resources and Life Sciences, Vienna, Tulln, Austria; M. Gabryszewska, I. Samson-Brek, IOS-PIB - Instytut Ochrony Srodowiska – Panstwowy Instytut Badawczy, Warszawa, Poland; A. Okninski, P. Wieczorek, WARMIL TECH, Warszawa, Poland

UPGRADING RESIDUAL MATERIALS INTO HIGH-QUALITY CHEMICALS THROUGH GAS- /ELECTRO FERMENTATION

ORAL SESSION IAO.3

17.30 - 18.30 **Advanced biofuels—Shipping**
ROOM: Room B

CHAIRPERSON:**Kyriakos MANIATIS**

Kyriakos Maniatis, BELGIUM

IAO.3.1

Jonathan MONCADA

The Netherlands Organisation for Applied Scientific Research - TNO, THE NETHERLANDS

Co-authors: P. Wammes, A. Uslu, The Netherlands Organisation for Applied Scientific Research - TNO, Amsterdam, The Netherlands

CHALLENGES AND OPPORTUNITIES ON THE SUPPLY OF BIO-LNG AS BUNKER FUEL IN PORTS: THE CASE OF THE PORT OF ROTTERDAM**IAO.3.2**

Lukas JASIUNAS

Ecorbio, CYPRUS

Co-authors: R. Persiani, Ecorbio, Nicosia, Cyprus; P. Philimis, CyRIC, Nicosia, Cyprus

WASTE BIOMASS-DERIVED BIOCHEMICALS TO HELP WITH DECARBONISING THE MARITIME SECTOR**IAO.3.3**

Fabio GUTIÉRREZ

FUNDACIÓN Valenciaport, SPAIN

Co-authors: M. Soler de Dios, J. Sanz-Argent, Fundación Valenciaport, Valencia, Spain; P. Schwarz, R. Daschner, Fraunhofer UMSICHT, Oberhausen, Germany

TECHNO-ECONOMIC FEASIBILITY OF WINTER BIOFUELS FOR MARITIME APPLICATIONS

IAO.3.4*Invited***VISUAL PRESENTATIONS 2AV.5**

17.30 - 18.30 **Climate impacts and GHG performance**
ROOM: Poster Area A

Detailed information on this session is presented in the section entitled "Visual Presentations".

VISUAL PRESENTATIONS 3AV.6

17.30 - 18.30 **Integration of flexible bioenergy: biomethane, hybrid heating and flexible gasification systems**
ROOM: Poster Area B

Detailed information on this session is presented in the section entitled "Visual Presentations".

EUBCE Welcome Reception **18.30 - 20.00**

ORAL SESSION 1BO.1

09.00 - 10.00 **Low ILUC alternatives to bioenergy, biofuels and biobased products**
ROOM: Auditorium 1

Innovative cropping systems on marginal, degraded and contaminated soils. Provision of feedstock with low ILUC for the biofuels, bioenergy and biobased industries.

CHAIRPERSON:**Nicolai David JABLONOWSKI**

Forschungszentrum Jülich, GERMANY

1BO.1.1

Moritz VON COSSEL

University of Hohenheim, Biobased Resources in the Bioeconomy (340b), GERMANY
 Co-authors: E. Berwangener, M. Brucker, M. Herre, G. Krausse, L.-S. Loew, M. Neuberger, V. Schlecht, I. Lewandowski, University of Hohenheim, Stuttgart, Germany; B. Elbersen, Wageningen University & Research, The Netherlands; T. Konrad, University of Hohenheim Experimental Station Oberer Lindenhof, Eningen, Germany

STRIP-INTERCROPPING OF THE INDUSTRIAL CROPS MISCANTHUS, FIBER HEMP, CRAMBE, AND YELLOW MELILOT ON A MARGINAL SITE IN SOUTHWEST GERMANY—A REVIEW OF THE FIRST TWO GROWING SEASONS

1BO.1.2*Invited***1BO.1.3***Invited***1BO.1.4**

Carla DIAS

Universidade Nova de Lisboa, Faculdade de Ciências e Tecnologias, Química Dpt., PORTUGAL

Co-authors: A.L. Fernando, B. Barbosa, Universidade Nova de Lisboa, Caparica, Portugal; E. Alexopoulou, CRES, Athens, Greece

OPPORTUNITIES AND CONSTRAINTS ASSOCIATED WITH THE PRODUCTION OF LOW INDIRECT LAND USE CHANGE (ILUC) INDUSTRIAL CROPS TO BIOENERGY, BIOFUELS AND BIOPRODUCTS IN MARGINAL SOILS

ORAL SESSION 5BO.2

09.00 - 10.00

Bio-Jet fuels
ROOM: Auditorium 2

These projects all aim to produce Sustainable Aviation Fuels (SAF), but they use different feedstocks and processes. In essence, these are four distinct pathways to create sustainable jet fuel, each with a focus on different feedstocks and chemical processes.

CHAIRPERSONS:**Francisco GIRIO**

LNEG - Laboratório Nacional de Energia e Geologia, PORTUGAL

Marco BUFFI

European Commission Joint Research Centre, ITALY

5BO.2.1

Zzhenquan FANG

Southeast University, P.R. CHINA

Co-authors: X. Zhang, Southeast University, Nanjing, Jiangsu province, P.R. China; J. Bai, Polytechnic University of Milan, Milan, Italy; L. Ma, Southeast University, Nanjing, Jiangsu province, P.R. China

SYNTHESIS OF HIGH-ENERGY-DENSITY JET FUELS WITH GLYCEROL AND FURFURAL ALCOHOL DERIVED FROM ALLOGENOUS BIOMASS

5BO.2.2

Iker AGUIRREZABAL

Universidad del País Vasco, Chemical and Environmental Engineering Dpt., SPAIN

Co-authors: N. Viar, C. Mugica, UPV/EHU, Bilbao, Spain

DEVELOPMENT OF ACID FUNCTIONAL ZEOLITE CATALYSTS FOR SAF PRODUCTION VIA ISOBUTANOL-PATHWAY

5BO.2.3

Giannis PENLOGLOU

CERTH, CPERI Dpt., GREECE

Co-authors: A. Pavlou, CERTH, Thessaloniki, Greece; C. Kiparissides, CERTH and AUTH, Thessaloniki, Greece

HARNESSING MICROALGAE FOR ON-SITE INDUSTRIAL CO₂ CAPTURE AND BIOFUEL PRODUCTION: A NOVEL PATH TO SUSTAINABLE TRANSPORTATION FUELS

5BO.2.4

Laura AZÓCAR

Universidad Católica de la Santísima Concepción, Química Ambiental Dpt., CHILE
Co-authors: R. Muñoz, M. Coronado, F. Sandoval, Universidad Católica de la Santísima Concepción, Concepción, Chile; V. Guzman, Universidad de Concepción, Concepción, Chile; C. Arriagada, Universidad de Concepción, Concepción, Chile

PRODUCTION OF SUSTAINABLE AVIATION FUELS (SAF) FROM SAPONIFIED WASTE FRYING OILS THROUGH INTEGRATED CATALYTIC PYROLYSIS/HYDROGENATION PROCESS

ORAL SESSION 3BO.3

09.00 - 10.00

Flexible bioenergy in the energy transition
ROOM: Room A

The session considers the integration of bioenergy in the energy system, with focus on flexible approaches.

CHAIRPERSONS:**Bert VAN DE BELD**

BTG Biomass Technology Group, THE NETHERLANDS

Matthias JORDAN

Helmholtz Centre for Environmental Research - UFZ, GERMANY

3BO.3.1

Daniela THRÄN

Helmholtz Center for Environmental Research, GERMANY

Co-authors: M. Nevander, VTT, Espoo, Finland; N. Lange, C. Hennig, DBFZ, Leipzig, Germany; F. Schipfer, IIASA, Laxenburg, Austria; T. Schildhauer, PSI, Villingen, Switzerland; J. Kiel, TNO, Petten, The Netherlands; M. Dotzauer, ddc, Leipzig, Germany; T. Schleker, European Commission, DG Ral, Brussels, Belgium

FLEXIBLE BIOENERGY PROVISION AND SYSTEM INTEGRATION - CONCEPTS, EXAMPLES AND THE EXPECTED CONTRIBUTION IN NET ZERO ENERGY SYSTEMS

3BO.3.2

Dominik RUTZ

WIP Renewable Energies, Bioenergy & Bioeconomy Unit, GERMANY

Co-authors: D. Celik, R. Mergner, R. Janssen, WIP Renewable Energies, München, Germany; T. Pauschinger, D Heiler, AGFW, Frankfurt, Germany

SUPPORT INITIATIVES FOR SUSTAINABLE DISTRICT HEATING AND COOLING: INTEGRATING BIOMASS, OTHER RENEWABLE ENERGIES, AND WASTE HEAT IN DHC

3BO.3.3

Simon MÉTIVIER

SOLAGRO, FRANCE

Co-authors: S. Berger, C. Couturier, F. Malafosse, C. Porhel, N. Bijon, S. Doublet, F. Coulon, SOLAGRO, Toulouse, France

WHICH BIOENERGIES FOR FRENCH ENERGY TRANSITION?**3BO.3.4**

Seyyedeh Rozita EBRAHIMI

Laval University, CANADA

Co-authors: M. Rönqvist, Laval University, Quebec City, Canada; M. Ouhimmou, ETS, Montreal, Canada; P. Stuart, Polytechnique Montreal, Montreal, Canada

COLLABORATIVE INTEGRATION OF FORESTRY, AGRICULTURAL, AND MSW VALUE CHAINS: A SUSTAINABLE APPROACH TO BIOMASS-TO-BIOENERGY LOGISTICS IN QUEBEC**ORAL SESSION IBO.1****09.00 - 10.00****Sustainable biomass production and carbon management for industrial applications****ROOM: Room B****CHAIRPERSONS:****Myrsini CHRISTOU**

Center for Renewable Energy Sources and Saving, GREECE

Kyriakos MANIATIS

Kyriakos Maniatis, BELGIUM

IBO.1.1

Themistoklis NEOKOSMIDIS

Concawe, BELGIUM

SUSTAINABLE BIOMASS FEEDSTOCK SUPPLY CHAINS FOR ADVANCED BIOFUELS: A MODELLING AND TECHNO-ECONOMIC ASSESSMENT OF THE OPTIMAL SUPPLY CHAINS IN EU-27+UK TOWARDS 2050**IBO.1.2**

Martin CLEMESHA

Braskem Netherlands, External Affairs Dpt., THE NETHERLANDS

CARBON AND LAND USE IMPACT OF THE EU PLASTICS TRANSITION**IBO.1.3***Invited***IBO.1.4**

Kallappan T. PARTHIBAN

Forest College & Research Institute, Tree Breeding & Agroforestry Dpt., INDIA

Co-authors: S. Revathi, M.V.J. Vishnu, P. Kumar, Forest College & Research Institute, TNAU, Coimbatore, India; M. Debas, CIFOR-ICRAF, New Delhi, India; V. Renganatha, Biotherm Industries, Krishnagiri, India

A VALUE CHAIN ON DENDROENERGY GENERATION - STATUS AND DEVELOPMENTS IN TAMIL NADU, INDIA**VISUAL PRESENTATIONS 4BV.1****09.00 - 10.00****New approaches towards emission reduction, modelling, new fuels as well as performance optimisation. Advances in biomass and waste gasification technologies****ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 6BV.2****09.00 - 10.00****Innovations in biogas and biochar production****ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Break****10.00 - 10.15****09.30 - 11.30****The Clean Tech Revolution: pathways to scale-up renewable gas in Europe****ROOM: Parallel 1***This workshop aims to showcase a range of innovative solutions designed to accelerate the rollout of renewable gases across Europe in the coming years.**As Europe works towards enhancing its sustainability goals, renewable gases present a crucial opportunity to reduce emissions, promote energy security, and foster economic growth.*

PLENARY SESSION BP.1

10.15 - 11.30 **Policies and Sustainability**
ROOM: Auditorium 1

These research summaries focus on the crucial aspects of sustainability and accountability within the bio-based industry, particularly concerning biofuels and growing media.

CHAIRPERSONS:**Rocio DIAZ-CHAVEZ**

Imperial College London, UNITED KINGDOM

Martin JUNGINGER

Utrecht University, THE NETHERLANDS

BP.1.1

David CHIARAMONTI

Politecnico di Torino, DENERG Dpt., ITALY

BIOMASS TO CARBON ACCOUNTING: EXPLOITING EU POLICIES TOWARDS A COMMON APPROACH ON SUSTAINABLE BIOFUELS

BP.1.2

Julia OSTROWSKI

Meo Carbon Solutions, GERMANY

Co-authors: M. Bockholt, K. Jäger, N. Schmitz, MEO Carbon Solutions, Köln, Germany

INTERNATIONAL CERTIFICATION FOR SUSTAINABLE GROWING MEDIA

BP.1.3

Suani COELHO

University of São Paulo, GBIO/Institute of Energy and Environment, BRAZIL

Co-authors: D. Perecin, D.A. Gandelman, M.D.B. Ribeiro, R.M. Henriques, R.B. Araujo, Brazil's Energy Research Office - EPE, Rio de Janeiro, Brazil

REVISITING ENERGY TRANSITION: HOW BRAZIL'S BIOENERGY SUCCESSES DEFY CONVENTIONAL TIMELINES

Break**11.30 - 11.45**

ORAL SESSION 1BO.4

11.45 - 12.45 **Modelling and mapping tools to identify areas for sustainable integrated cropping systems**
ROOM: Auditorium 1

This session focuses on the crucial intersection of soil monitoring, bioenergy crop farming, and land remediation within the European context.

CHAIRPERSON:**Efthymia ALEXOPOULOU**

CRES - Center for Renewable Energy Sources and Saving, GREECE

1BO.4.1

Calogero SCHILLACI

European Commission, Joint Research Centre, ITALY

Co-authors: M. Buffi, N. Scarlat, A. Jones, European Commission, Joint Research Centre, Ispra, Italy

SOIL MONITORING AND ITS IMPLICATIONS FOR BIOENERGY CROP FARMING IN EUROPE: CHALLENGES, EUROPEAN MISSIONS, AND LEGAL FRAMEWORKS

1BO.4.2

Recep Irfan NAZLI

University of Cukurova, Field Crops Dpt., TURKEY

Co-author: A.S. Cavdar, University of Cukurova of Cukurova, Adana, Turkey

ASSESSMENT OF BULBOUS CANARY GRASS (PHALARIS AQUATICA L.) GENOTYPES FOR BIOENERGY PRODUCTION POTENTIAL IN SEMI-ARID MEDITERRANEAN CLIMATE

1BO.4.3

Stefania SOLE

University of Sassari, Agricultural Sciences Dpt., ITALY

Co-authors: G. Urracci, M. Canu, G. Carboni, Agris Sardegna, Cagliari, Italy; M. Caria, G. Todde, University of Sassari, Italy

TURNING CONTAMINATED AREAS INTO RESOURCES: MAPPING, PHYTOREMEDIATION AND ENERGY ASSESSMENT OF BIOMASS FOR BIOENERGY PRODUCTION

1BO.4.4

Mariana ABREU

NOVA School of Science and Technology, PORTUGAL

Co-authors: A. Monti, Alma Mater Studiorum, Università di Bologna, Portugal;

A. Reis, National Laboratory of Energy and Geology, I.P., Lisbon, Portugal;

A.L. Fernando, NOVA School of Science and Technology, Caparica, Portugal

STUDY, IMPLEMENTATION AND CHARACTERIZATION OF THREE ENERGY CROPS IN MARGINAL/DEGRADED/CONTAMINATED (MDC) SOILS**ORAL SESSION 6BO.5****11.45 - 12.45****Advances in the production of value-added compounds from biomass****ROOM: Auditorium 2***This session will discuss the most recent advances and developments in biomass conversion to high value compounds.***CHAIRPERSON:****María Teresa GARCÍA-CUBERO**

Universidad de Valladolid, SPAIN

6BO.5.1

Guillem TOMAS TENES

AINIA, Industrial Biotechnology Dpt., SPAIN

Co-authors: G. Tomas, G. Vivo, A. Escrich, A. Valles, A. Torrejon, AINIA, Valencia, Spain

2,3-BUTANEDIOL PRODUCTION FROM SACCHARIFIED AGRI FOOD MIXED-BIOWASTE BY RECOMBINANT ESCHERICHIA COLI STRAIN**6BO.5.2**

Sanyam JAIN

Indian Institute of Technology Roorkee, Chemical Engineering Dpt., INDIA

Co-author: S. Kumar, Indian Institute of Technology Roorkee, Haridwar, India

SUSTAINABLE VALORIZATION OF LIGNIN WASTE FROM 2G BIOETHANOL PRODUCTION: PRODUCTION OF HIGH-VALUE SILICA AND PHENOLIC BIO-OIL FOR MATERIAL APPLICATION**6BO.5.3**

Cristian BLANCO TIRADO

Universidad Industrial de Santander, Chemistry Dpt., COLOMBIA

Co-authors: M. Combariza Montanez, O. Saavedra Sanabria, S. Mendez Sanchez,

S. Suárez Rodríguez, M. Quintero, Universidad Industrial de Santander,

Bucaramanga, Colombia

OPTIMIZATION AND SCALE-UP OF PROCESSES FOR BIOPRODUCTS DERIVED FROM CACAO MUCILAGE EXUDATE**6BO.5.4**

Carlos MORIANA HERRAIZ

Instituto Tecnología Química UPV-CSIC, SPAIN

Co-authors: K.S. Arias Carrascal, M.J. Climent Olmedo, S. Iborra Chornet, A. Corma

Canos, Instituto Tecnología Química UPV-CSIC, Valencia, Spain

CHEMOENZYMATIC SYNTHESIS OF AMINO-ESTERS AS PRECURSORS FOR AMMONIUM SALT-BIOBASED SURFACTANTS USING BATCH AND CONTINUOUS REACTORS**ORAL SESSION 3BO.6****11.45 - 12.45****Low-carbon and hybrid heating systems****ROOM: Room A***This session focuses on integrated approaches for renewable heat, integrating bioenergy with other renewables or the flexible use of different inputs.***CHAIRPERSONS:****Heinz A. OSSENBRINK**

Former Head of Unit of European Commission, Joint Research Centre, ITALY

Romain BESSEAU

European Commission JRC, ITALY

3BO.6.1

Joachim KELZ

AEE - Institute for Sustainable Technologies, Cities and Networks Dpt., AUSTRIA

Co-authors: X. Zhupani, I. Leusbrock, AEE - Institute for Sustainable Technologies,

Gleisdorf, Austria; A. Hammerschmid, BIOS Bioenergiesysteme, Graz, Austria;

C. Halmdienst, Pink GmbH, Langenwang, Austria; C. Hochenauer, Institute of

Thermal Engineering, Graz University of Technology, Graz, Austria

DEVELOPMENT OF AN "INTER-MUNICIPAL DISTRICT HEATING NETWORK" WITHIN AUSTRIA'S REAL-WORLD LABORATORY WEIZPLUS

3BO.6.2

Michel DELANAYE
MITIS, BELGIUM

Co-authors: S. Capaccioli, A. Grassi, ETA-Florence Renewable Energies, Florence, Italy; D. Rehman, MITIS, Hannut, Belgium; S. Løkke, Aalborg University, Denmark; E. Leijenhorst, B. van de Beld, BTG-Biomass Technology Group, Enschede, The Netherlands; H. Korteweg, A. Tudoroiu, S. Minett, COGEN Europe, Brussels, Belgium; W. De Paepe, University of Mons, Belgium; G. Földner, Fraunhofer ISE, Freiburg, Germany; S. Harboe-Minwegen, OWI Science for Fuels, Herzogenrath, Germany
FIT4MICRO SOLUTION FOR A MICROCHCP HYBRID HEATING SYSTEM RUNNING ON BIOFUELS

3BO.6.3

Marco BARATIERI

Free University of Bolzano, Faculty of Science and Technology, ITALY
Co-authors: L. Menin, G. Borelli, G. Pernigotto, A. Gasparella, Free University of Bozen-Bolzano, Italy; A. Prada, University of Trento, Italy
DECARBONIZATION OF DOMESTIC HEAT IN THE ITALIAN ALPINE CONTEXT: THERMO-ECONOMIC ASSESSMENT OF THE LEVELIZED ENERGY COST OF HEATING UNDER BIOENERGY AND PV SCENARIOS

3BO.6.4

María GONZÁLEZ MARTÍNEZ
IMT Mines Albi, FRANCE

Co-authors: M. Poser, M. Gonzalez Martinez, IMT Mines Albi, Albi, France; A. Anca Counce, A. Soria-Verdugo, UC3M, Madrid, Spain; R. Scharler, TU Graz, Graz, Austria
FUEL SWITCHING IN A PORTABLE COOKSTOVE: IMPACT OF THE USE OF AGRICULTURAL RESIDUE PELLETS ON PARTICULATE MATTER EMISSIONS

ORAL SESSION IBO.2

11.45 - 12.45 **Sustainability, GHG performance and socioeconomics aspects in industrial applications for advanced biofuels**
ROOM: Room B

CHAIRPERSON:

Kyriakos MANIATIS

Kyriakos Maniatis, BELGIUM

IBO.2.1

Invited

IBO.2.2

Invited

IBO.2.3

Invited

IBO.2.4

Invited

VISUAL PRESENTATIONS 1BV.3

11.45 - 12.45 **Biomass resource potentials and mobilisation**
ROOM: Poster Area A

Detailed information on this session is presented in the section entitled "Visual Presentations".

VISUAL PRESENTATIONS 5BV.4

11.45 - 12.45 **Thermochemical processes for synthetic fuels from biomass and hydrogen**
ROOM: Poster Area B

Detailed information on this session is presented in the section entitled "Visual Presentations".

Networking Lunch **12.45 - 13.45**

11.45 - 12.45 **Experts meeting to discuss the LCA for SUN-PERFORM project**
ROOM: Parallel 3

The event is organized by POLITO and IN srl, within the framework of the EU-supported project SUN-PERFORM.

The aim of the workshop is to discuss with specialists the details of the Life Cycle Assessment (LCA) scenarios for the project. The identified full value chains will be presented, outlining key assumptions for the SUN-PERFORM technologies and LCA study. After an introduction by IN and a presentation of the proposed LCA methodology by POLITO (WP4), participants will engage in an open discussion to refine the proposed LCA approach.

11.45 - 12.45 **Innovative Technologies for Wood Biomass Valorisation: Insights from the NewWave Project**
ROOM: Exhibition Forum

This event showcases innovative technologies developed under the European-funded NewWave project, focusing on the sustainable valorisation of wood waste and other biomass streams.

The technologies highlighted include thermochemical fractionation for producing pyrolytic sugars, bio-oils, lignin, and char, as well as their subsequent use in producing polyols, polyurethane foams, and furfural derivatives such as MeTHF and THFA.

PLENARY SESSION BP.2

13.45 - 14.45 **Recent trends on developing intermediate bioenergy carriers and sustainable biofuels**
ROOM: Auditorium 1

This set of research presentations focuses on sustainable fuel production and the valorization of waste streams, with a strong emphasis on integrating different technologies for maximum efficiency.

CHAIRPERSONS:

Francisco GIRIO

LNEG - Laboratório Nacional de Energia e Geologia, PORTUGAL

Dimitrios SIDIRAS

University of Piraeus, GREECE

BP.2.1

Marzouk BENALI

Natural Resources Canada, CanmetENERGY, CANADA

Co-authors: G. Bele, C. Difo Teguia, M. Shokrollahi, N. Teymouri, N. Navarri, Natural Resources Canada, Varennes, Canada

HYBRID SUSTAINABLE AVIATION FUEL PRODUCTION: INTEGRATING E-SAF AND BIO-SAF PATHWAYS TO MAXIMIZE CARBON EFFICIENCY

BP.2.2

Edoardo TITO

Politecnico di Torino, Disat Dpt., ITALY

Co-authors: D. Landi, F. Demichelis, G. Pipitone, S. Bensaid, R. Pirone, Politecnico di Torino, Turin, Italy

VALORIZATION OF DIGESTATE FROM OFMSW THROUGH HYDROTHERMAL LIQUEFACTION

BP.2.3

Alberto FERNÁNDEZ-ARROYO NARANJO

Instituto Tecnología Química, SPAIN

Co-author: M.E. Domine, Instituto Tecnología Química, Valencia, Spain

NOVEL SN, TI, AND NB CONTAINING MIXED OXIDES AS CATALYSTS FOR THE VALORIZATION OF BIOREFINERY AQUEOUS SIDE STREAMS

Break

14.45 - 15.00

13.45 - 16.15 **The role of biomass in the Decarbonization of the European Metallurgical Industry and visit of an industrial pilot plant for Hydrothermal Carbonization**
ROOM: Exhibition Forum

This workshop aims to illustrate the transition of the European metallurgical industry and the role biomass and biomass-derived products can play.

Issues may be related to the volatility of biomass and biocarbon, economic feasibility of biocarbon utilization, key properties of biocarbon for the metal industry, supply chain of biocarbon, biocarbon storage, handling and transportation and ISO standards.

ORAL SESSION 1BO.7

15.00 - 16.00

Sustainable feedstocks for clean biofuels production
ROOM: Auditorium 1

These presentations highlight research focused on the sustainable use of biomass feedstocks and the production of biofuels.

CHAIRPERSONS:

Ana Luisa FERNANDO

Universidade Nova de Lisboa, PORTUGAL

Moritz VON COSSEL

University of Hohenheim, GERMANY

1BO.7.1

Efthymia ALEXOPOULOU

CRES - Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE

BRIDGING THE GAP BETWEEN PHYTOREMEDIATION SOLUTIONS ON GROWING ENERGY CROPS ON CONTAMINATED LANDS AND CLEAN BIOFUEL PRODUCTION

1BO.7.2

Markus ORTNER

ITS, AUSTRIA

Co-authors: S. Capaccioli, A. Grassi, ETA-Florence Renewable Energies, Florence, Italy; L. Brunbauer, ITS, Wien, Austria; C. Kick, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany; M. Eschen, Aurubis, Hamburg, Germany; A. Catalán Merlos, Leitat, Terrassa, Spain; T. Zeremski, Institute of Field and Vegetable Crops, Serbia; A. Szlek, K. Petela, Silesian University of Technology, Gliwice, Poland; M. Perisic, Hasselt University, Belgium; B. Young, INTA, Buenos Aires, Argentina; S. Maletic, University of Novi Sad, Faculty of Science Department of Chemistry, Serbia; O. Gavrilovic, Public Water Management Company Vode Vojvodine, Novi Sad, Serbia; Z. Kidikas, Biovala, Rietavas, Lithuania; N. Blázquez-Pallí, M. Bosch Cartoixa, Litoclean, Barcelona, Spain; D. López Cabornero, Exolum, Madrid, Spain; C. Jaggi, PRO UMWELT, Hoort, Germany; S. Riegg, Trägerverein Umwelttechnologie-Cluster Bayern, Augsburg, Germany

**PHY2CLIMATE LINKS PHYTOREMEDIATION TO BIO-BASED PRODUCTS
CONTRIBUTING TO GLOBAL INITIATIVES**

1BO.7.3

Hans LANGEVELD

Research4Life, THE NETHERLANDS

Co-authors: A. Lazarus, J.W.A. Langeveld, M. Lamichhane, G. Ghaffari, Biomass Research, Wageningen, The Netherlands

**EVALUATING SUSTAINABILITY IMPACTS OF NO-ILUC SAF FEEDSTOCK
PRODUCTION IN EXISTING CROPPING SYSTEMS**

1BO.7.4

Alessandra PICCITTO

University of Catania, Di3A Dpt., ITALY

Co-authors: B.R. Ciaramella, S. Giannoccaro, V.N. Panebianco, C. Patania, S.L. Cosentino, G. Testa, University of Catania, Italy; C. Patanè, CNR-Istituto per la BioEconomia (IBE), Catania, Italy

**RICINUS COMMUNIS L.: A POTENTIAL BIOREFINERY CROP FOR HEAVY METALS
CONTAMINATED SOILS**

ORAL SESSION 6BO.8**15.00 - 16.00**

**Biomass utilization for purification purposes
ROOM: Auditorium 2**

This session will discuss the most recent developments on the utilization of biomass for purification purposes.

CHAIRPERSONS:*Invited***Kenichi FURUHASHI**

The University of Tokyo, JAPAN

6BO.8.1

Izabela MICHALAK

Wroclaw University of Science and Technology, Advanced Material Technologies Dpt., POLAND

Co-authors: T. Agbebunmi, K. Czajka, Wroclaw University of Science and Technology, Wroclaw, Poland; A. Kisiela-Czajka, Wroclaw University of Science and Technology, Wroclaw, Poland

**CLOSED CYCLE—FROM THE PRODUCTION OF BIOCHAR FROM FOOD WASTE TO
SO₂ ADSORPTION AND THE USE OF SULPHUR-ENRICHED BIOCHAR AS A SOIL
ADDITIVE**

6BO.8.2

Ashma PARWEEN

Indian Institute of Technology, Civil Engineering Dpt., INDIA

Co-author: P. Bose, Indian Institute of Technology, Kanpur, India

**PHOSPHORUS RECOVERY FROM SEWAGE SLUDGE BIOCHAR WITH POTASSIUM
MODIFICATION**

6BO.8.3

João Vinicius PEREIRA SANTIAGO

CNRS - RAPSODEE UMR 5302, FRANCE

Co-authors: A.C. Couvert, D. Wolbert, S. Giraudet, ENSCR, Rennes, France; M. Gonzalez Martinez, E. Weiss-Hortala, Ecole de Mines Albi-Carmaux, Albi, France

**TRANSFORMING PRINTED ELECTRONIC PAPER WASTE INTO ECO-FRIENDLY
ADSORBENTS FOR GAS EFFLUENTS PURIFICATION**

6BO.8.4

Julia GONZÁLEZ-ÁLVAREZ

Universidade de Santiago de Compostela, Chemical Engineering Dpt., SPAIN

Co-authors: V. Rahimi, C.H. Pimentel, D. Gómez-Díaz, M.S. Freire, M. Lazzari,

Universidade de Santiago de Compostela, Spain

ALMOND SHELL-BASED ACTIVATED CARBONS FOR THE REMOVAL OF PB2+ FROM AQUEOUS SOLUTIONS**ORAL SESSION 3BO.9****15.00 - 16.00****Biogas in biorefineries
ROOM: Room A**

Biorefinery concepts for biogas, renewable methane and bio based products. Anaerobic digestion and renewable methane biorefineries for producing biogases and bio based products are illustrated.

CHAIRPERSONS:**Antti KARHUNEN**

Lappeenranta-Lahti University of Technology, FINLAND

Maurizio COCCHI

ETA-Florence Renewable Energies, ITALY

3BO.9.1

Philipp KNOETIG

DBFZ-Deutsches Biomasseforschungszentrum gemeinnützige, GERMANY

Co-author: K. Naumann, DBFZ, Leipzig, Germany

OPERATION OF A PILOT SCALE BIOREFINERY FOR RENEWABLE METHANE AND VALUE ADDING BY-PRODUCTS**3BO.9.2**

Rajas SHINDE

University College Cork, IRELAND

Co-authors: S. Barth, Teagasc, Carlow, Ireland; J.D. Murphy, D.M. Wall, University

College Cork, Ireland

ANAEROBIC DIGESTION-BASED BIOREFINERY TO PRODUCE BIOBASED PRODUCTS AND BIOGAS**3BO.9.3**

Filippo BISOTTI

SINTEF Industry, Process Technology Dpt., NORWAY

Co-authors: M. Gilardi, B. Wittgens, SINTEF Industry, Trondheim, Norway

DESIGN AND ASSESSMENT OF A NOVEL HYBRID LOW-TEMPERATURE PROCESS FOR THE UPGRADING OF BIOGAS**3BO.9.4**

Stefano TROTTA

CRPA, ITALY

Co-authors: M. Soldano, M. Garuti, Centro Ricerche Produzioni Animali - CRPA,

Reggio Emilia, Italy

BIOGAS AND BEYOND: ORGANIC ACIDS WITH THE TWO-PHASE ANAEROBIC DIGESTION**ORAL SESSION IBO.3****15.00 - 16.00****Biomethane production
ROOM: Room B****CHAIRPERSONS:****Myrsini CHRISTOU**

Center for Renewable Energy Sources and Saving, GREECE

Kyriakos MANIATIS

Kyriakos Maniatis, BELGIUM

IBO.3.1

Pablo MOLINA

European Biogas Association, BELGIUM

Co-author: F. Lamon, European Biogas Association, Bruxelles, Belgium

BUILDING A MORE RESILIENT, COMPETITIVE, AND SUSTAINABLE EUROPE WITH BIOGASES**IBO.3.2**

Erland NYLUND

Swetim, SWEDEN

Co-authors: A. Fahlén Hammar, Luleå University of Technology, Sweden; L. Engstam,

A. Tayebi, SLU Swedish University of Agricultural sciences, Uppsala, Sweden

SUPPLY POTENTIAL OF BIOGENIC GASES FROM AGRICULTURE TO DE-FOSSILISE THE SWEDISH STEEL INDUSTRY

IBO.3.3*Invited***IBO.3.4**

Michael KOETTNER

IBBK Fachgruppe Biogas, GERMANY

Co-authors: K. Kayser, IBBK Fachgruppe Biogas, Kirchberg, Germany; T. Hauan, R.R. Nair, SEID, Stavanger, Norway

PRODUCTION OF SOLID CARBON AND HYDROGEN FROM BIOMETHANE USING NON-THERMAL PLASMA**VISUAL PRESENTATIONS 4BV.5****15.00 - 16.00****Clean biomass-based syngas generation
ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 5BV.6****15.00 - 16.00****Biogenic feedstocks and biological processes
for synthetic fuels from biomass and hydrogen
ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Break****16.00 - 16.15****ORAL SESSION 1BO.10****16.15 - 17.15****Production processes of waste into biofuels
and bioproducts
ROOM: Auditorium 1****CHAIRPERSONS:****Michael DARAMOLA**

University of Pretoria, SOUTH AFRICA

Stefano CAPACCIOLI

ETA-Florence Renewable Energies, ITALY

1BO.10.1*Invited***1BO.10.2**

Mohammad RASHEED

University College London, Chemical Engineering Dpt., UNITED KINGDOM

Co-author: M. Materazzi, University College London, London, United Kingdom

SUSTAINABLE AVIATION FUEL PRODUCTION FROM WASTE WITH CARBON CAPTURE AND STORAGE AND GREEN HYDROGEN INTEGRATION: A TECHNO-ECONOMIC ANALYSIS OF DIFFERENT PRODUCTION PATHWAYS IN THE UK**1BO.10.3**

Tim SCHULZKE

Fraunhofer UMSICHT, Low Carbon Technologies Dpt., GERMANY

BIOTECHNOLOGICAL CO₂ UTILIZATION IN REGIONAL VALUE CHAINS - RECO₂NWERT**1BO.10.4**

Niccolò PEZZATI

RE-CORD, Raw Materials and carbon recycling, ITALY

Co-authors: A. Salimbeni, A. Miniati, RE-CORD, Scarperia e San Piero, Italy

OPTIMIZATION AND SCALING UP VALIDATION OF AAN INTEGRATED SLOW PYROLYSIS AND LEACHING PROCESS ADDRESSING STEEL SECTOR DECARBONIZATION THROUGH BIOCOAL PRODUCTION FROM GREEN WASTE AND OFMSW**ORAL SESSION 6BO.11****16.15 - 17.15****Co-production of biofuels and biochemicals
ROOM: Auditorium 2***Co-production of biofuels and biochemicals.***CHAIRPERSON:****Bernd WITTEGENS**

SINTEF Industry, NORWAY

6BO.11.1

Ali AWAD

Green Carbon Research Center, Korea Research Institute of Chemical Technology, KRICT, Korea, Advanced Materials and Chemical Engineering, University of Science and Technology, UST, Korea, SOUTH KOREA

Co-authors: K.-R. Oh, Y.-K. Hwang, Green Carbon Research Center, Korea Research Institute of Chemical Technology, Daejeon 34114, Repub, Daejeon, South Korea

SIMULTANEOUS COPRODUCTION OF XYLONIC ACID AND XYLITOL: LEVERAGING IN SITU HYDROGEN GENERATION AND UTILIZATION FROM XYLOSE

6BO.11.2

Vuyolwethu TOKOYI

Durban University of Technology, Chemistry Dpt., SOUTH AFRICA

Co-authors: N. Deenadayalu, B. Kabane, L.D. Mthembu, Durban University of Technology, South Africa

PRODUCTION OF 5-HMF AND LA IN A CYRENE-1-ALLYL-3-MIM BASED BIPHASIC SYSTEM: SYNTHESIS, CHARACTERIZATION, THERMODYNAMICS, AND CATALYSIS EVALUATION

6BO.11.3

Agata MLONKA-MEDRALA

AGH University of Krakow, Faculty of Energy and Fuels, POLAND

Co-authors: W. Jerzak, M. Sieradzka, A. Madziarz, AGH University of Krakow, Poland

PRODUCTION AND APPLICATIONS OF ACTIVATED CARBON FROM FOOD WASTE: A SUSTAINABLE APPROACH TO WASTE VALORIZATION

6BO.11.4

Lorenzo BONALDI

University of Pisa, DICI Dpt., ITALY

Co-authors: S. Fulignati, M. Francesconi, S. Frigo, A.M. Raspolli Galletti, University of Pisa, Italy

FROM WASTE BIOMASS TO BIO-FUEL: AN INNOVATIVE AND SUSTAINABLE APPROACH TO ETHYL LEVULINATE PRODUCTION

ORAL SESSION 3BO.12**16.15 - 17.15**

**Resource efficient approaches to bioeconomy solutions
ROOM: Room A**

Options are presented for making biobased approaches more circular. This provides opportunities to enhance GHG mitigation and/or economically viable.

CHAIRPERSON:*Invited***3BO.12.1**

Cristian PEREZ HERNANDEZ

Ghent University, Sustainable Systems Engineering Dpt., BELGIUM

Co-authors: P. Nachtergaele, S. Huysveld, J. Dewulf, Ghent University, Belgium

TOWARDS EFFECTIVE CIRCULARITY ASSESSMENT IN BIO-BASED PRODUCT SYSTEMS: A CRITICAL REVIEW AND RECOMMENDATIONS FOR INDICATOR DESIGN

3BO.12.2

Valeria MAGNOLFI

European Commission, JRC, D.1 Forests and Bioeconomy, ITALY

Co-authors: P. Harmsen, Wageningen University and Research, The Netherlands; M. Skrifvars, Faculty of Textiles, Engineering and Business, University of Borås, Sweden; M.T. Borzacchiello, A. Camia, European Commission, JRC, Ispra, Italy

BIO-BASED TEXTILES IN THE SUSTAINABLE AND CIRCULAR BIOECONOMY

3BO.12.3

Marielle TRENKNER

University of Hohenheim, Biobased Resources in the Bioeconomy Dpt., GERMANY

Co-authors: B. Müller, Umwelttechnik Geltz, Mühlacker, Germany; I. Lewandowski, A. Bauerle, University of Hohenheim, Stuttgart, Germany

UPCYCLING OF BIOGENIC WASTE MATERIALS TO PRODUCE A SUSTAINABLE BIO-BASED PEAT SUBSTITUTE FOR BIOMASS PRODUCTION

3BO.12.4*Invited*

ORAL SESSION IBO.4

16.15 - 17.15 **Mass balancing in the bioeconomy**
ROOM: Room B

Sustainability certification along complex supply chains in the chemical industry: the mass balance approach.

CHAIRPERSON:

Invited

IBO.4.1

Invited

IBO.4.2

Invited

IBO.4.3

Invited

IBO.4.4

Invited

VISUAL PRESENTATIONS 2BV.7

16.15 - 17.15 **Biomass strategies and policies**
ROOM: Poster Area A

Detailed information on this session is presented in the section entitled "Visual Presentations".

VISUAL PRESENTATIONS 5BV.8

16.15 - 17.15 **Applied pyrolysis**
ROOM: Poster Area B

Detailed information on this session is presented in the section entitled "Visual Presentations".

Break **17.15 - 17.30**

ORAL SESSION 4BO.13

17.30 - 18.30 **New combined concepts and gas cleaning
and upgrading towards clean hydrogen-rich syngas**
ROOM: Auditorium 1

This session focusses on new combined concepts and gas cleaning as well as upgrading towards clean hydrogen-rich syngas.

CHAIRPERSONS:

Vittoria BENEDETTI

University of Trento, ITALY

María Victoria GIL MATELLANES

Institute of Carbon Science and Technology, SPAIN

4BO.13.1

Wolfgang GEBHARD

Fraunhofer UMSICHT ATZ, ACCT Dpt., GERMANY

Co-authors: A. Apfelbacher, R. Daschner, Fraunhofer UMSICHT ATZ, Sulzbach-Rosenberg, Germany

ENHANCED CARBON-TO-X-OUTPUT TECHNOLOGY—AN ADVANCED TECHNOLOGY COMBINING PYROLYSIS AND GASIFICATION OF BIOGENIC RESIDUES FOR THE PRODUCTION OF HYDROGEN-RICH SYNGAS

4BO.13.2

Invited

4BO.13.3

Michael KOLM

BEST - Bioenergy and Sustainable Technologies, Sub-Area 2.2 Automation and Control Dpt., AUSTRIA

Co-authors: T. Reiter-Nigitz, H. Niederwieser, M. Gelles, BEST - Bioenergy and Sustainable Technologies, Graz, Austria; F. Benedikt, BOKU - University, Institute of Chemical and Energy Engineering, Vienna, Austria; C. Aichernig, AICHERNIG Engineering, Vienna, Austria; M. Horn, Institute for Automation and Control, Graz University of Technology, Graz, Austria

MODEL-BASED ONLINE-ESTIMATION OF PRODUCT GAS PROPERTIES IN A DUAL FLUIDIZED BED STEAM GASIFICATION PLANT USING MEASUREMENTS FROM THE COARSE GAS CLEANING SECTION

4BO.13.4

Felipe TORRES

Technische Hochschule Köln, GERMANY

Co-authors: P. Beuel, L. Föhlisch, P. Barnert, C. Werner, C. Malek, P. Stenzel, Technische Hochschule Köln, Cologne, Germany

FLEXIBLE SYNGAS PRODUCTION FROM OXY-STEAM BIOMASS GASIFICATION WITH ELECTROLYSIS AND WATER-GAS SHIFT**ORAL SESSION 5BO.14****17.30 - 18.30****Biochar production and decarbonisation
ROOM: Auditorium 2**

This session is about the generation of biochar and decarbonization methods. The session deals with saving carbon dioxide in steel industry and several other technologies where biochar is used for carbon sequestration.

CHAIRPERSONS:**Yukihiko MATSUMURA**

Hiroshima University, JAPAN

Andrés ANCA-COUCÉ

University Carlos III Madrid, SPAIN

5BO.14.1

Gabriele FAMBRI

Politecnico di Torino, DENERG Dpt., ITALY

Co-authors: P. Danesh, A. Riorda, M. Prussi, D. Chiaramonti, Politecnico di Torino, Italy

DESIGN OF A ROTARY KILN PYROLIZER FOR BIOCHAR PRODUCTION**5BO.14.2***Invited***5BO.14.3**

Peter KRATOCHWILL

BIOS Bioenergiesysteme, AUSTRIA

Co-authors: M. Blank, I. Obernberger, BIOS Bioenergiesysteme, Graz, Austria

TRANSIENT ADVANCED CFD MODEL FOR BIOCHAR PRODUCTION IN A BATCH REACTOR AND ITS VALIDATION**5BO.14.4**

Marco COLOMBI

Politecnico di Milano, Energy Dpt., ITALY

Co-authors: M.A. Ahsan, Politecnico di Milano, Milano, Pakistan; M.C. Romano, Politecnico di Milano, Piacenza, Italy; M. Binotti, Politecnico di Milano, Lodi, Italy

NEGATIVE EMISSION SOLAR-DRIVEN BIOMASS PYROLYSIS PLANT FOR BIO-FUEL AND BIOCHAR COPRODUCTION: TECHNO-ECONOMIC COMPARISON OF DIFFERENT PARTICLE HEAT CARRIERS**ORAL SESSION 3BO.15****17.30 - 18.30****Biobased solutions to de-fossilize the economy
ROOM: Room A**

Biobased options to exchange fossil based materials and to store biogenic carbon.

CHAIRPERSONS:**Valeria MAGNOLFI**

European Commission, JRC, ITALY

Berien ELBERSEN

Wageningen Environmental Research, THE NETHERLANDS

3BO.15.1

Martin JUNGINGER

Utrecht University, Copernicus Institute, THE NETHERLANDS

Co-authors: C.G. Daniel, E.T.A. Hoefnagels, B.C. Corona Bellostas, H.M. Junginger, Utrecht University, The Netherlands

ENVIRONMENTAL ASSESSMENT OF BIO-BASED FEEDSTOCKS AS FOSSIL-BASED BITUMEN ALTERNATIVE FOR THE ROAD CONSTRUCTION INDUSTRY IN THE NETHERLANDS**3BO.15.2**

Malgorzata BORCHERS

Helmholtz Centre for Environmental Research - UFZ, GERMANY

Co-authors: R. Wollnik, Deutsches Biomasseforschungszentrum gemeinnützige - DBFZ, Leipzig, Germany; J. Förster, D. Otto, N. Matzner, D. Thrän, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

TWO BIRDS WITH ONE STONE? HARVESTING SYNERGIES WITHIN BIO-BASED CARBON DIOXIDE REMOVAL IN GERMANY

3BO.15.3

Alicia BAÑÓN GOIRIZ

FUNDACIÓN CETIM, Advanced Materials Dpt., SPAIN

Co-authors: C. Antuña Nieto, ENSO Innovation, Culleredo, Spain; C. Herreros Lucas, R. Noguerol Cal, CETIM, Culleredo, Spain; M. Castro López, NANOCEL Technology, Culleredo, Spain

CARBONACEOUS MATERIALS FROM ABUNDANT LIGNOCELLULOSIC SOURCES IN GALICIA AND ITS USE AS ANODES IN LITHIUM-ION BATTERIES**3BO.15.4**

Dimitrios SIDIRAS

University of Piraeus, Industrial Management and Technology Dpt., GREECE

Co-authors: K. Tzourmanas, G. Giakoumakis, University of Piraeus, Greece

MULTICRITERIA ANALYSIS OF INNOVATIVE AND CONVENTIONAL METHODS FOR MICROCRYSTALLINE CELLULOSE PRODUCTION USING LIGNOCELLULOSIC BIOMASS**ORAL SESSION 6BO.16****17.30 - 18.30****New developments related to lignin depolymerisation
ROOM: Room B**

Presentations describe the sustainable utilization of lignin, a complex polymer found in lignocellulosic biomass, for the production of bio-based monomers and materials.

CHAIRPERSONS:**Jaap KIEL**

TNO, THE NETHERLANDS

Themistoklis NEOKOSMIDIS

Concawe, BELGIUM

6BO.16.1

Brigita HOCEVAR

National Institute of Chemistry, Catalysis and Chemical Reaction Engineering Dpt., SLOVENIA REPUBLIC

Co-authors: R. Pogorevc, M. Gabric, A. Jakob, B. Pomeroy, M. Zula, Z. Lavric, T. Rocnik Kozmelj, E. Jasiukaityte Grojzdek, M. Hus, M. Grilc, B. Likozar, National Institute of Chemistry, Slovenia, Ljubljana, Slovenia Republic

SUSTAINABLE UTILIZATION OF LIGNOCELLULOSIC BIOMASS: FROM WASTE TO BIO-BASED MONOMERS AND MATERIALS**6BO.16.2**

Paul JUSNER

VITO, BELGIUM

Co-authors: B. Sridharan, B. Daelemans, E. Feghali, K. Vanbroekhoven, VITO, Mol, Belgium

A COMPARATIVE STUDY: CONTINUOUS REDUCTIVE CATALYTIC DEPOLYMERIZATION OF HARDWOOD LIGNIN SOURCED FROM DIFFERENT BIOREFINERIES**6BO.16.3**

Lucía CAMARENA PEIRÓ

ITQ (UPV-CSIC), SPAIN

Co-authors: A. Fernández-Arroyo Naranjo, C. Fernández de la Pena, M. Domine Maccari, ITQ (UPV-CSIC), Valencia, Spain

RU-SUPPORTED CATALYSTS FOR C-O AND C-C CLEAVAGE IN LIGNIN MODEL COMPOUNDS**6BO.16.4**

Bhukrit RUENGRICHAIYA

Technical University of Denmark, DENMARK

Co-author: S. Mussatto, Technical University of Denmark, University of Denmark, Kongens Lyngby, Denmark

OPTIMIZING KRAFT LIGNIN DEPOLYMERIZATION AND SOLUBILIZATION USING DEEP EUTECTIC SOLVENTS FOR ENHANCED BIOCONVERSION**VISUAL PRESENTATIONS 2BV.9****17.30 - 18.30****Modelling and decision making in bioenergy systems
ROOM: Poster Area A**

Detailed information on this session is presented in the section entitled "Visual Presentations".

VISUAL PRESENTATIONS 6BV.10**17.30 - 18.30****Co-production of biofuels and biochemicals
ROOM: Poster Area B**

Detailed information on this session is presented in the section entitled "Visual Presentations".

EUBCE Dinner**19.30 - 23.30**

ORAL SESSION 5CO.1

09.00 - 10.00 **Thermochemical processes for synthetic fuels from biomass and hydrogen**
ROOM: Auditorium 1

These research initiatives focus on advanced thermochemical processes for converting waste and biomass into valuable energy carriers, particularly hydrogen and syngas.

CHAIRPERSONS:

Guillaume BOISSONNET

Commissariat à l'Énergie Atomique et aux Énergies Alternatives, FRANCE

Covadonga PEVIDA

CSIC, SPAIN

5CO.1.1

Pierre-André MAITRE

CEA, FRANCE

Co-authors: S. Quenard, CEA, Grenoble, France; E. Philippe, S. Dupuis, GRDF, Paris, France

HYDROTHERMAL GASIFICATION OF SEWAGE SLUDGE AS AN ALTERNATIVE TO SPREADING, LANDFILLING AND INCINERATION, WHAT IS THE BEST DOWNSTREAM SYNGAS PREPARATION TO ENSURE ECONOMIC FEASIBILITY?

5CO.1.2

Abdenour ACHOUR

Aalborg University, Energy Dpt., DENMARK

Co-authors: D. Castello, M.S. Haider, L.A. Rosendahl, Aalborg University, Denmark

CATALYTIC HYDROTREATING OF HTL BIOCRUDE: IMPACT OF TEMPERATURE AND SPACE VELOCITY

5CO.1.3

Veronica GUBIN

TU Wien, AUSTRIA

Co-authors: T. Hejze, S. Zheng, T. Reichmann, GLOCK Technology, Ferlach, Austria; J. Zeitlhofer, A. Bartik, H. Hofbauer, S. Müller, TU Wien, Vienna, Austria

DEMONSTRATION OF DECENTRALIZED HIGH-PURITY HYDROGEN PRODUCTION FROM WOOD CHIPS FOR PEM-FC APPLICATION

5CO.1.4

Isabel MARTÍNEZ

Spanish National Research Council, Instituto de Carboquímica, SPAIN

Co-authors: I. Martínez, L. La Calle, M.S. Callén, J.M. López, R. Murillo, Spanish National Research Council, Zaragoza, Spain

HIGH PURITY HYDROGEN PRODUCTION FROM REESIDUAL BIOMASS THROUGH SORPTION-ENHANCED GASIFICATION AT TRL-5

ORAL SESSION 1CO.2

09.00 - 10.00 **From municipal bio-waste and sewage sludge to renewable chemicals**
ROOM: Auditorium 2

Advances in the pretreatment and conversion of municipal bio-waste and sewage sludge to enhanced efficiency and material recovery.

CHAIRPERSON:

Pedro HARO

Universidad de Sevilla, SPAIN

1CO.2.1

Heleen BALLEMANS

Wageningen Research, THE NETHERLANDS

Co-authors: I. Vural Gursel, B. Elbersen, Wageningen Research, The Netherlands

TOWARDS CIRCULAR BIOBASED CHEMICALS: UNLOCKING THE POTENTIAL OF THE WASTE-TO-METHANOL VALUE CHAIN

1CO.2.2

Marta DI BIANCA

Renewable Energy Consortium for Research and Demonstration, ITALY

Co-authors: A. Salimbeni, Renewable Energy Consortium for Research and Demonstration, Scarperia e san Piero, Italy; T. Lotti, R. Campo, University of Florence, Italy

INTEGRATION OF SLOW PYROLYSIS AND CHEMICAL LEACHING FOR ADSORBENTS PRODUCTION AND PHOSPHORUS RECOVERY FROM AEROBIC GRANULAR SLUDGE

1CO.2.3

Íthalo ABREU

Federal University of Pernambuco, DEN Dpt., BRAZIL

Co-authors: Í.B.S. de Abreu, E.G.M. Silva, M.H. de Sousa, S.M.C.B. Washington, T.C.M.A. Correa, A.M. Muller, R.S.C. Menezes, E.D. Dutra, Federal University of Pernambuco, Recife, Brazil; R.B de Souza, University of Pernambuco, Recife, Brazil

ANAEROBIC CO-DIGESTION CELLULOSE CAKE RESIDUE AND FOOD WASTE AS A DECARBONIZATION STRATEGY FOR THE CHLORINE AND SODA PRODUCTION INDUSTRY

1CO.2.4*Invited***ORAL SESSION 3CO.3****09.00 - 10.00**

Biorefinery processes
ROOM: Room A

Processes and steps as part of a biorefinery. Parts of a biorefinery such as individual processes or units are illustrated.

CHAIRPERSON:**James SPAETH**

Former Bioenergy Technologies Office DOE - US, USA

3CO.3.1*Invited***3CO.3.2**

Gianfrancesco RUSSO

Università degli studi di Perugia, ITALY

Co-authors: G. Fabbri, N. Ascani, T. Galmacci, C. Buratti, F. Fantozzi, M. Gelosia, A. Nicolini, Università degli studi di Perugia, Italy

LOW-DOSAGE ENZYMATIC HYDROLYSIS OF OLIVE TREE PRUNINGS: A COMPARATIVE STUDY OF STEAM EXPLOSION, ORGANOSOLV, AND SEQUENTIAL PRETREATMENT

3CO.3.3

Franziska MÜLLER-LANGER

DBFZ Deutsches Biomasseforschungszentrum, Biorefineries Dpt., GERMANY

Co-author: R. Brödner, DBFZ-German Biomass Research Centre, Leipzig, Germany

BIOMASS AS A CARBON SOURCE FOR RENEWABLE REFINERIES**3CO.3.4**

Philipp PETERMEIER

AEE INTEC, AUSTRIA

Co-authors: J. Buchmaier, T. Plesch, B. Muster-Slawitsch, AEE - Institute for Sustainable Technologies, Gleisdorf, Austria

ENZYMATIC CELLULOSE SACCHARIFICATION AT HIGH SOLID LOADINGS IN AN OSCILLATORY FLOW BIOREACTOR USING IN-LINE PRODUCT REMOVAL FOR BIOREFINING CONCEPTS OF BIOMASS WASTES

ORAL SESSION ICO.1**09.00 - 10.00**

Circular bio-based alternative materials and ingredients from algae
ROOM: Room B

Projects dealing with algae as aquatic biomass.

CHAIRPERSON:*Invited***ICO.1.1***Invited***ICO.1.2***Invited***ICO.1.3***Invited***ICO.1.4***Invited*

VISUAL PRESENTATIONS 5CV.1

09.00 - 10.00 **New trends in hydrothermal liquefaction**
ROOM: Poster Area A

Detailed information on this session is presented in the section entitled "Visual Presentations".

VISUAL PRESENTATIONS 1CV.2

09.00 - 10.00 **Biomass availability and logistics**
ROOM: Poster Area B

Detailed information on this session is presented in the section entitled "Visual Presentations".

Break **10.00 - 10.15**

PLENARY SESSION CP.1

10.15 - 11.30 **Biogas & Biomethane**
ROOM: Auditorium 1

CHAIRPERSON:

Kyriakos MANIATIS

Kyriakos Maniatis, BELGIUM

CP.1.1

Velina DENYSENKO

DBFZ Deutsches Biomasseforschungszentrum, GERMANY

Co-author: J. Daniel-Gromke, DBFZ Deutsches Biomasseforschungszentrum, Leipzig, Germany

VALORISATION OF BIOGENIC CO₂ FROM BIOGAS AND BIOMETHANE PLANTS IN EUROPE: CURRENT STATE AND FUTURE PROSPECTS

CP.1.2

Invited

CP.1.3

Invited

Break **11.30 - 11.45**

ORAL SESSION 1CO.4

11.45 - 12.45 **Algae and aquatic biomass production systems**
ROOM: Auditorium 1

The session will focus on the cultivation and selection of microalgae for effluent treatment and the production of biofuels.

CHAIRPERSONS:

Nurhan DUNFORD

Oklahoma State University, USA

Sebastian SANCHEZ VILLASCLARAS

University of Jean, SPAIN

1CO.4.1

Önder UYSAL

Isparta University of Applied Sciences, TURKEY

Co-authors: O. Uyssal, F.O. Uysal, Isparta University of Applied Sciences, Turkey; F. Gurbuz, Aksaray University, Turkey

MICROALGAE-PROCESSED AGRO-INDUSTRIAL WASTEWATER REUSE FOR IRRIGATION, ENERGY ANALYSIS AND REDUCING WATER FOOTPRINT

1CO.4.2

Christos CHATZIDOUKAS

Aristotle University of Thessaloniki, Chemical Engineering Dpt., GREECE

Co-authors: A. Karousis, T. Laskos, G. Papapanagiotou, C. Samara, A. Biziouras, Aristotle University of Thessaloniki, Greece

COMPARATIVE BIOPROSPECTING OF HIGHLY EFFICIENT OLEAGINOUS MICROALGAE FROM THE SCENEDESMACEAE FAMILY VIA A TWO-STAGE CULTIVATION UNDER BOTH ARTIFICIAL AND NATURAL LIGHT

1CO.4.3

Matteo FRANCAVILLA

University of Foggia, Agriculture, Food and Environmental Science Dpt., ITALY

Co-authors: D. Racca, P. Marasco, M. Marone, A. Carnevale, G.E. Paziienza, University of Foggia-STAR*Facility Centre, Foggia, Italy

ADVANCING BLUE BIOREFINERY DEVELOPMENT IN THE ADRIATIC SEA: THE BIOBASED PROJECT

1CO.4.4

Anita SANTANA SANCHEZ

NORCE, Biotechnology and Circular economy Dpt., NORWAY

Co-author: D. Kleinegris, NORCE Norwegian Research Centre, Bergen, Norway

ALGAESOL: SUSTAINABLE AVIATION AND SHIPPING FUELS FROM MICROALGAE AND DIRECT SOLAR BES TECHNOLOGIES**ORAL SESSION 2CO.5****11.45 - 12.45****Bioenergy and carbon capture technologies: social implications****ROOM: Auditorium 2**

This session focus on the stakeholder and public participation and acceptance of technologies related to carbon capture and ILUC within the bioenergy.

CHAIRPERSONS:**Suani COELHO**

University of Sao Paulo - Julio Romano Meneghini - PROCESSO FAPESP 2020/15230-5, BRAZIL

Rocio DIAZ-CHAVEZ

Imperial College London, UNITED KINGDOM

2CO.5.1

Alicia NEWTON

Drax Group, UNITED KINGDOM

Co-authors: G. Johnson, E. Persson, E. Forster, Drax Group, London, United Kingdom

BECCS DONE WELL: A MULTI-STAKEHOLDER APPROACH TO DEVELOPING A PARTICIPATORY DECISION-MAKING FRAMEWORK FOR BIOENERGY WITH CARBON CAPTURE AND STORAGE**2CO.5.2**

Karen MASCARENHAS

FAPESP Proc 20/15230-5 RCGI - Research Centre for Greenhouse Gas Innovation at University of São Pau, Human Resources & Institutional Communication Dpt., BRAZIL

Co-authors: S. Coelho, J. Meneghini, RCGI - Research Centre for Greenhouse Gas Innovation, São Paulo, Brazil

SOCIAL PERCEPTION OF BIOENERGY AND BECCS IN BRAZIL: CHALLENGES AND OPPORTUNITIES FOR STAKEHOLDER ENGAGEMENT**2CO.5.3**

Thi Huyen Trang DAM

Leibniz-Institut für Agrartechnik und Bioökonomie, Technology Assessment Dpt., GERMANY

Co-authors: P. Grundmann, R. Orozco, N. Reyhani, Leibniz-Institut für Agrartechnik und Bioökonomie, Potsdam, Germany

STAKEHOLDER PERSPECTIVES ON BIOMASS PRODUCTION FROM MARGINAL LANDS: A MIXED-METHODS APPROACH TO POLICY-DRIVEN, SUSTAINABLE VALUE CHAINS**2CO.5.4**

Yara EVANS

Imperial College London, Centre for Environmental Policy, UNITED KINGDOM

Co-author: R. Diaz-Chavez, Imperial College London, London, United Kingdom

SOCIAL SUSTAINABILITY ASSESSMENT OF CCUS**2CO.5.5**

Jesús LASARTE LÓPEZ

Joint Research Centre, SPAIN

Co-authors: P. Gurría Albusac, Seidor Consulting, Sevilla, Spain; R. M'barek, Joint Research Centre, Sevilla, Spain

MEASURING BIOMASS VALORISATION IN THE EU: ANALYSIS OF QUANTITY OF BIOMASS PROCESSED AND VALUE ADDED GENERATED BY SECTOR**ORAL SESSION 5CO.6****11.45 - 12.45****Technico-economic assessments of synthetic fuels from biomass and hydrogen****ROOM: Room A**

Presentations focus on techno-economic and environmental assessments of bioenergy and biofuel production pathways, particularly emphasizing hydrogen, biomethane, and sustainable aviation fuel (SAF).

CHAIRPERSONS:**Oliver HURTIG**

European Commission, JRC, ITALY

Sharon VELASQUEZ-ORTA

Newcastle University, UNITED KINGDOM

5CO.6.1

Stefano PIAZZI

Free University of Bozen-Bolzano, Faculty of Engineering, ITALY

Co-authors: L. Menin, J. Ress, M. Baratieri, Free University of Bozen-Bolzano, Italy

TECHNO-ECONOMIC MODELING OF HYDROGEN AND BIOMETHANE PRODUCTION VIA BIOMASS GASIFICATION**5CO.6.2**

Isaac SOUSA MARTINS

Queensland University of Technology, AUSTRALIA

Co-authors: G. Fraga, J. Ramirez, I. O'Hara, Queensland University of Technology, Brisbane, Australia

TECHNO-ECONOMIC ANALYSIS OF STEAM REFORMING OF BIOGAS WITH CARBON CAPTURE IN THE SUGARCANE INDUSTRY**5CO.6.3**

Giuseppe PIPITONE

Politecnico di Torino, DISAT Dpt., ITALY

Co-authors: G. Pipiton, G. Zoppi, R. Pirone, S. Bensaid, Politecnico di Torino, Italy

A TECHNO-ECONOMIC-ENVIRONMENTAL ASSESSMENT ON THE SUSTAINABLE AVIATION FUEL PRODUCTION ASSISTED BY AQUEOUS PHASE REFORMING**5CO.6.4**

Hamidreza HEYDARI

Politecnico di Milano, Energy Dpt., ITALY

Co-author: G. Guandalini, Politecnico di Milano, Milano, Italy

MULTI-PRODUCT FLEXIBLE BIOMASS-TO-FUEL PLANTS INTEGRATION: SIMULATION OF PARALLEL DME AND SNG PRODUCTION**ORAL SESSION ICO.2****11.45 - 12.45****Transforming biomass into high-value products: Bio-based and Sustainable Packaging
ROOM: Room B***Projects dealing different biomass and providing high TRL solutions in the packaging sector among others.***CHAIRPERSON:***Invited***ICO.2.1***Invited***ICO.2.2***Invited***ICO.2.3***Invited***ICO.2.4***Invited***VISUAL PRESENTATIONS 4CV.3****11.45 - 12.45****Biomass pre-treatment and production of intermediates
ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 3CV.4****11.45 - 12.45****Biorefinery concepts and processes I
ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Networking Lunch****12.45 - 13.45****PLENARY SESSION CP.2****13.45 - 14.45****Biomass pre-treatment and production of intermediates
ROOM: Auditorium 1****CHAIRPERSON:****Ingwald OBERNBERGER**

BIOS Bioenergiesysteme, AUSTRIA

CP.2.1

Invited

CP.2.2

Invited

Break

14.45 - 15.00

ORAL SESSION 5CO.7

15.00 - 16.00

Biofuels processes
ROOM: Auditorium 1

Presentations are on the efficient conversion of biomass and waste into biofuels and valuable products, emphasizing advanced bioprocessing and thermochemical technologies.

CHAIRPERSON:**Dimitrios SIDIRAS**

University of Piraeus, GREECE

5CO.7.1

Leah Kristen Rai LAJAPATHI RAI

Aalborg University, Energy Dpt., DENMARK

Co-authors: A. Achour, D. Castello, Aalborg University, Denmark

UPGRADING HYDROTHERMAL LIQUEFACTION BIOCRUDE: A COMPARATIVE STUDY OF DIRECT HYDROTREATING VERSUS OXYCRACKING FOLLOWED BY HYDROTREATING OF MANURE-STRAW BLENDS

5CO.7.2

Isabela ZAMBELLO

UNICAMP, BRAZIL

Co-authors: J.P. Borsoni, Unicamp, Campinas, Brazil; E. Holwerda, L. Lynd, Dartmouth College, Hanover, Usa

CHARACTERIZATION OF SUGARCANE BAGASSE SOLUBILIZATION AND UTILIZATION USING CONSOLIDATED BIOPROCESSING AT HIGH SOLID LOADINGS

5CO.7.3

Ecrin EKICI

Karlsruhe Institute of Technology, GERMANY

Co-authors: N. Costa de Telis, F. del Frari, K. Raffelt, N. Dahmen, Karlsruhe Institute of Technology, Germany

HIGH PRESSURE CONTINUOUS FLOW HYDRODEOXYGENATION OF BIO-OIL

5CO.7.4

Jayakrishnan KALIYARMATTOM RAVINDRAN

Universidade de Aveiro, Mechanical Engineering Dpt., PORTUGAL

Co-authors: J.K. Ravindran, D.P. Fagg, M.C. Coelho, Universidade de Aveiro, Portugal

LIFE CYCLE ASSESSMENT OF FT-FUEL PRODUCTION FROM MUNICIPAL SOLID WASTE: COMPARING ENVIRONMENTAL IMPACTS OF DIRECT VS. INDIRECT GASIFICATION

ORAL SESSION 2CO.8

15.00 - 16.00

Advancing sustainability: environmental impacts and innovations in biofuel and hydrogen systems
ROOM: Auditorium 2

This session explores cutting-edge research on the environmental implications of sustainable energy systems, with a focus on biofuel and hydrogen production.

CHAIRPERSON:**Christian DE GROMARD**

Retraité, consultant indépendant, FRANCE

2CO.8.1

Oliver HURTIG

European Commission, JRC, ITALY

Co-authors: R. Besseau, A. Bouter, N. Scarlat, European Commission, JRC, Ispra, Italy

TOWARD A RESTRUCTURED JRC BIOFUELS IMPACT ASSESSMENT DATABASE FOR EU REGULATIONS—MODULAR, PARAMETRIZED AND ACCESSIBLE

2CO.8.2

Konstantina VASILAKOU

University of Antwerp, BELGIUM

Co-authors: P. Nimmegeers, P. Billen, S. Van Passel, University of Antwerp, Belgium

GLOBAL WATER SCARCITY FOOTPRINT OF SUSTAINABLE AVIATION FUEL PRODUCTION UNDER CLIMATE CHANGE

2CO.8.3

Richard PADI

Utrecht University, Copernicus Institute of Sustainable Development, THE NETHERLANDS

Co-author: M. Junginger, Utrecht University, The Netherlands

COMPARATIVE LIFE CYCLE ASSESSMENTS OF STAND-ALONE AND INTEGRATED GREEN HYDROGEN AND BIOFUEL VALUE CHAINS: CASE STUDY OF BIOCRUDE, BIO-HYDROGEN AND BIO-METHANOL PRODUCTION SYSTEMS

2CO.8.4

Jan KLENNER
Lomartov, SPAIN

Co-authors: P. Monzó, M. Mirea, L. Bernard, I. Herráiz Cardona, Lomartov, Burjassot, Spain

ENVIRONMENTAL ASSESSMENT OF AN INTEGRATED HYDROTHERMAL CARBONISATION-AQUEOUS PHASE REFORMING-GASIFICATION PLANT USING BIOGENIC FEEDSTOCK

ORAL SESSION 3CO.9**15.00 - 16.00**

How consistent policies can shape markets for fuels and biobased products
ROOM: Room A

Markets for biobased applications depend on consistent policies. In this session different approaches will be presented and compared for the implementation of biofuels and biobased products, leading to recommendations for improved policies for creating markets.

CHAIRPERSONS:**Rainer JANSSEN**

WIP Renewable Energies, GERMANY

Daniela THRÄN

Helmholtz Center for Environmental Research, GERMANY

3CO.9.1

Duygu CELIK

WIP Renewable Energies, Smart Cities, Social Innovations and Networks Dpt., GERMANY

Co-authors: O. Birgu, R. Janssen, WIP Renewable Energies, Munich, Germany; D. Augustyniak-Wysocka, E. Leszczyszyn, D. Janiszewska-Latterini, Lukaszewicz Research Network - Poznan Institute of Technology, Poznan, Poland; M.O. Akca, I. Dellal, O.C. Turgay, Ankara University, Ankara, Turkey; O. Alves, B. Garcia, CoLAB BIOREF - Collaborative Laboratory for the Biorefineries, S. Mamede Infesta, Portugal; G.B. Braghin, K. Engvall, KTH Royal Institute of Technology, Stockholm, Sweden; C. Nobre, VALORIZA - Portalegre Polytechnic University, Portalegre, Portugal; A.F.P. Longo, VALORIZA - Portalegre Polytechnic University, Potalegre, Portugal; P.J. Arauzo, K.P. Sangam, Universität Hohenheim, Hohenheim, Germany

MARKET ASSESSMENT OF PYROLYSIS PRODUCTS**3CO.9.2**

Jose Vitor BOMTEMPO
UFRJ, BRAZIL

Co-authors: F.A. Oroski, UFRJ, Rio de Janeiro, Brazil; M. MAaturana, SBM Offshore, Rio de Janeiro, Brazil

STRATEGIC DILEMMAS IN THE DIFFUSION OF NEW BIO-BASED PRODUCTS**3CO.9.3**

Vida HARDJONO

Aalto University School of Chemical Engineering, FINLAND

Co-authors: L. Dessbesell, Aalto University School of Chemical Engineering, Espoo, Finland; B. Ginting-Szczesny, Aalto University School of Business, Espoo, Finland

SCALING UP INNOVATIVE BIO-BASED PRODUCTS: THE CASE OF SPIN-OFFS FROM AALTO UNIVERSITY

3CO.9.4

Mathieu POMINVILLE-RACETTE

Université Sherbrooke, CANADA

Co-authors: M. Abatzoglou, I. Achouri, Université Sherbrooke, Canada

FOSTERING SUSTAINABLE DEVELOPMENT WITH DATA—RECENT ADVANCEMENT

ORAL SESSION ICO.3**15.00 - 16.00**

Innovative biorefineries: production of bioproducts & biochemicals
ROOM: Room B

CHAIRPERSONS:**Kees KWANT**

Netherlands Enterprise Agency, Ministry of Economic Affairs, THE NETHERLANDS

Kyriakos MANIATIS

Kyriakos Maniatis, BELGIUM

ICO.3.1

Nehru CHEVANAN

Altex Technologies Corporation, USA

Co-authors: J.T. Kelly, Altex Technologies Corporation, San Jose, Usa; S.A. Hawkins, University of Tennessee, Knoxville, Usa

ENHANCED BIOCHAR FOR CARBON SEQUESTRATION AND CROP GROWTH IN CONTROLLED ENVIRONMENT AGRICULTURE AND OPEN FIELD

ICO.3.2*Invited***ICO.3.3**

Belén MONJE MARTÍNEZ

AIMPLAS · Plastics Technology Centre, Sustainable Chemistry Dpt., SPAIN

Co-author: B. Sancho, AIMPLAS · Plastics Technology Centre, Spain

DECARBONIZATION STRATEGIES AND BIOMASS CONVERSION TO PRODUCE HIGH-ADDED VALUE BIOPOLYMERS, BIOCHEMICALS AND BIOFUELS**ICO.3.4**

Martin HITZL

INGELIA, SPAIN

SIMPLIFYING BIOREFINERY WITH HOMOGENIZED AND UPGRADED BIOMASS FEED BY MEANS OF INGELIA'S HTC PROCESS**VISUAL PRESENTATIONS 4CV.5****15.00 - 16.00****Biogas and biomethane
ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 6CV.6****15.00 - 16.00****Developments in biomass conversion to chemicals
and materials
ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Break****16.00 - 16.15****ORAL SESSION 5CO.10****16.15 - 17.15****Fuel production by pyrolysis
ROOM: Auditorium 1***This session deals with the production of fuels via pyrolysis. Furthermore, the upgrading of pyrolysis liquids is shown. The generation of oils out of microalgae is feedstock will be presented and biorefinery concepts will be discussed.***CHAIRPERSON:****Ralph P. OVEREND**

Biomass & Bioenergy Journal, CANADA

5CO.10.1

Moritz BÖHME

Danish Technical University, Chemical Engineering Dpt., DENMARK

Co-authors: B. Baser, P.A. Jensen, A.D. Jensen, Danish Technical University, Kgs.

Lyngby, Denmark; M.Z. Stummann, Topsoe AS, Kgs. Lyngby, Denmark

MILD UPGRADING OF PYROLYSIS OILS FROM POST CONSUMER WASTE WITH LOW-COST MATERIALS—TOWARDS RENEWABLE MARITIME FUELS**5CO.10.2**

Gabriela FERREIRA

Cardiff University, UNITED KINGDOM

Co-author: J. Bartley, Cardiff University, United Kingdom

ENHANCED BIO-OIL YIELD FROM MICROALGAE BIOMASS PYROLYSIS: A COMPARATIVE STUDY OF CATALYTIC AND MICROWAVE-ASSISTED REACTION CONFIGURATIONS**5CO.10.3**

Tamara Alejandra MENARES TAPIA

Ghent University, BELGIUM

Co-authors: L.E. Arteaga Perez, Universidad del Biobio, Concepcion, Chile;

D.C. Concha, Universidad del Biobio University, Concepcion, Chile; F. Ronsse, Ghent

University, Belgium

INTEGRATED SOLVOLYSIS-HYDROPYROLYSIS OF BLACK POPLAR FOR HIGH-AROMATIC YIELD IN PYROLYSIS OILS

5CO.10.4

Christopher KICK

Fraunhofer UMSICHT, Advanced Carbon Cycle Technologies Dpt., GERMANY
 Co-authors: T. Li, A. Apfelbacher, R. Daschner, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany

INNOVATIVE UPGRADING OF TCR® INTERMEDIATES: PATHWAYS TO SUSTAINABLE BIOFUELS**ORAL SESSION 2CO.11**

16.15 - 17.15

Balancing bioeconomy development: land use, biodiversity, and environmental impacts of bio-based products and biofuels
ROOM: Auditorium 2

This session explores the intersection of bioeconomy development and environmental stewardship, focusing on the land use, biodiversity, and ecological impacts of bio-based products and biofuels. Presentations will examine life cycle assessments, optimal land use modeling, biofuel cultivation on contaminated soils, and the biodiversity implications of using forestry biomass, offering insights into sustainable pathways for the bioeconomy.

CHAIRPERSONS:**Mirjam ROEDER**

Aston University, UNITED KINGDOM

Jesús LASARTE LÓPEZ

Joint Research Centre, SPAIN

2CO.11.1

Katja OEHMICHEN

DBFZ-German Biomass Research Centre, Bioenergy Systems Dpt., GERMANY
 Co-authors: B. Schumacher, S. Majer, DBFZ-German Biomass Research Centre, Leipzig, Germany

PEAT SUBSTITUTES AND BIOMETHANE FROM POPLAR WOOD—COMPREHENSIVE LIFE CYCLE ASSESSMENT**2CO.11.2**

Sjaak J.G. CONIJN

Wageningen Plant Research, Agrosystems Research, THE NETHERLANDS
 Co-author: P. Post, Wageningen Plant Research, The Netherlands

MODELLING OPTIMAL LAND USE AND CARBON STORAGE FOR THE BIOECONOMY**2CO.11.3**

Ana Luisa FERNANDO

Universidade Nova de Lisboa, Chemistry Dpt., PORTUGAL

Co-authors: B. Barbosa, Universidade Nova de Lisboa, Caparica, Portugal; J. Costa, ISEC, Lisboa, Portugal; E.G. Papazoglou, Agricultural University of Athens, Greece; E. Alexopoulou, CRES, Athens, Greece

PRODUCTION OF SELECTED INDUSTRIAL CROPS TO BIOFUELS—ASSESSING THE LOCAL ENVIRONMENTAL IMPACTS OF ITS CULTIVATION IN CONTAMINATED SOILS**2CO.11.4**

Themistoklis NEOKOSMIDIS

Concawe, BELGIUM

BIODIVERSITY IMPACT OF BIOFUEL PRODUCTION FROM FORESTRY BIOMASS**ORAL SESSION 4CO.12**

16.15 - 17.15

Pretreatment of varied feedstocks and their characterization
ROOM: Room A

This session covers the pretreatment of varied feedstock for use as solid biofuel and their characterisation for use as solid biofuel and adsorbent.

CHAIRPERSONS:**Johan VAN DYK**

GTI Energy, USA

Stella BEZERGIANNI

Centre for Research & Technology Hellas, GREECE

4CO.12.1

Luis Saúl ESTEBAN PASCUAL

CEDER-CIEMAT, CIEMAT, SPAIN

Co-authors: I. Mediavilla, M.J. Fernández, R. Barro, R. Corredor, L.S. Esteban, CEDER-CIEMAT, Luvia, Spain; C. Palaghianu, Stefan cel Mare, University of Suceava, Suceava, Romania; W. Gerwin, D. Freese, Brandenburg University of Technology Cottbus-Senftenberg, Cottbus, Germany

ASSESSMENT OF THE QUALITY AS SOLID BIOFUELS OF BIOMASS FLOWS PRODUCED IN THE CASCADE USE OF UNDERUTILISED TREE AND SHRUB SPECIES

4CO.12.2

Longinus Ifeanyi IGBOJIONU

Aston University Birmingham, Energy and Bioproducts Research Institute, UNITED KINGDOM

Co-authors: E. Binner, Y. Mao, University of Nottingham, United Kingdom; A. Fernandez-Castane, Aston University Birmingham, Birmingham, United Kingdom
MICROWAVE-ASSISTED DEEP EUTECTIC SOLVENT PRETREATMENT APPLIED TO RICE STRAW TO IMPROVE ENZYMATIC DIGESTIBILITY**4CO.12.3**

Flora CHITALU

University of Leeds, Chemical and Process Engineering Dpt., UNITED KINGDOM

Co-authors: J.M. Jones, A.B. Ross, University of Leeds, United Kingdom
CHARACTERISATION AND UTILISATION OF SOLID FUELS FROM FAECAL SLUDGE IN EASTERN AND SOUTHERN AFRICA**4CO.12.4**

Yao Guy Landry KOFFI

CIRAD, FRANCE

Co-authors: P. Rousset, J.M. Commandre, CIRAD, Montpellier, France; C Dupont, S. Sharma, A. Gyasi, IHE Delft, Delft, The Netherlands

INFLUENCE OF PYROLYSIS CONDITIONS ON THE PHYSICO-CHEMICAL PROPERTIES OF COCOA POD SHELL BIOCHARS FOR THE ADSORPTION OF CADMIUM IN AQUEOUS SOLUTION**ORAL SESSION ICO.4****16.15 - 17.15****EABA - Algae
ROOM: Room B****CHAIRPERSON:***Invited***ICO.4.1***Invited***ICO.4.2***Invited***ICO.4.3***Invited***ICO.4.4***Invited***VISUAL PRESENTATIONS 6CV.7****16.15 - 17.15****Biomass valorization for different applications
ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 3CV.8****16.15 - 17.15****Innovative biobased applications
ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Break****17.15 - 17.30****ORAL SESSION 5CO.13****17.30 - 18.30****Plant operation and modelling
ROOM: Auditorium 1***The session includes presentation about pilot scale operation, CFD modelling, methane cracking over bio char in the influence of the biomass for hydrogen production.***CHAIRPERSONS:****Andreas APFELBACHER**

Fraunhofer-Institut UMSICHT, GERMANY

Luís TARELHO

Universidade de Aveiro, PORTUGAL

5CO.13.1*Invited***5CO.13.2**

Pablo COMENDADOR MORALES

University of the Basque Country, Chemical Engineering Dpt., SPAIN

Co-authors: I. Garcia, P. Comendador, M. Suarez, S. Orozco, L. Santamaria, M. Artexte, M. Amutio, University of the Basque Country, Leioa, Spain

BIOMASS SOURCE INFLUENCE ON HYDROGEN PRODUCTION THROUGH PYROLYSIS AND IN LINE OXIDATIVE STEAM REFORMING

5CO.13.3

Mireia MORA SANJUAN

Forest Science and Technology Centre of Catalonia, Chemistry Dpt., SPAIN

Co-authors: A. Canals-Calderón, N. Puy Marimon, Centre de Ciència i Tecnologia Forestal de Catalunya, Solsona, Spain; J. Candàliga Casas, F. Céspedes Mulero, E. Fàbregas Martínez, Universitat Autònoma de Barcelona, Cerdanyola del Vallès, Spain

BIOREFINERY APPROACHES FOR TRANSFORMING FORESTRY BIOMASS INTO HIGH-VALUE CHEMICALS VIA PYROLYSIS**5CO.13.4**

Nicholas CANABARRO

SINTEF, Process Technology Dpt., NORWAY

Co-authors: J.H.C. Cloete, S.C. Cloete, R.M.J. Jayathilake, SINTEF Industry, Trondheim, Norway; L. Wang, A.S.L. Lysne, J.B. Bakken, SINTEF Energy, Trondheim, Norway; R.T. Tao, L.L. Lin, G.X. Xin, WAI Environmental Solutions, Tønsberg, Norway

EXPERIMENTAL AND TECHNO-ECONOMIC INVESTIGATION OF THE POTENTIAL OF METHANE CRACKING OVER BIOCHAR CATALYSTS**ORAL SESSION 2CO.14****17.30 - 18.30****Sustainability and GHG performance
ROOM: Auditorium 2***This session will focus on the carbon intensity of alternative fuels and energy carriers, including regulatory aspects.***CHAIRPERSONS:****Matteo PRUSSI**

Politecnico di Torino, ITALY

Nils RETTENMAIER

IFEU - Institute for Energy and Environmental Research Heidelberg, GERMANY

2CO.14.1

Doris MATSCHEGG

BEST - Bioenergy and Sustainable Technologies, AUSTRIA

Co-authors: S.A. Varghese, M. Fuhrmann, C. Strasser, C. Dißbauer, BEST - Bioenergy and Sustainable Technologies, Graz, Austria; P. Krobath, Wien Energie, Vienna, Austria

ENVIRONMENTAL IMPACT OF PLANT (DE)CONSTRUCTION ON SYNGAS PRODUCTION VIA BIOMASS GASIFICATION**2CO.14.2**

Benyamin KHOSHNEVISAN

University of Southern Denmark, DENMARK

Co-authors: S. Khademi, University Department of Biosystems Engineering, College of Agriculture, Isfahan University of Technology, Isfahan, Iran; M. Sommer Schjønberg, H. Marami, M. Birkved, University of Southern Denmark, Odense M, Denmark

PROSPECTIVE LIFE CYCLE ASSESSMENT: A FRAMEWORK FOR SUSTAINABLE BIOREFINERY MODELING IN MICROBIAL PROTEIN PRODUCTION**2CO.14.3**

Karin PETTERSSON

Research Institutes of Sweden, SWEDEN

Co-author: C. Wickman, Research Institutes of Sweden (RISE), Gothenburg, Sweden

CLASSIFICATION AND SUSTAINABILITY CRITERIA FOR RENEWABLE FUELS IN THE EU—WHAT ACTUALLY APPLIES?**2CO.14.4**

Aapo TIKKA

University of Eastern Finland, FINLAND

Co-authors: T. Mielonen, Finnish Meteorological Institute, Kuopio, Finland; H. Kokkola, Finnish Meteorological Institute, University of Eastern Finland (UEF), Kuopio, Finland; I. Muhammed, A. Hartikainen, O. Sippula, University of Eastern Finland, Kuopio, Finland; A. Kilpeläinen, University of Eastern Finland, Joensuu, Finland

AEROSOL EMISSIONS FROM ALTERNATIVE USE OF FOREST BIOMASS**ORAL SESSION 4CO.15****17.30 - 18.30****Hydrothermal pretreatment for the production of intermediates
ROOM: Room A***This session covers the hydrothermal pretreatment for the production of intermediates from lab to industrial scale and techno-economic analysis.***CHAIRPERSONS:****Martin HITZL**

INGELIA, SPAIN

Capucine DUPONT

The Delft Institute for Water Education, THE NETHERLANDS

4CO.15.1

Esperanza MONEDERO

Castilla La-Mancha University, Renewable Energy Research Institute, SPAIN

Co-authors: M. Chiocchini, C. Antonetti, D. Licursi, University of Pisa, Italy;

J.J. Hernández, Castilla La-Mancha University, Albacete, Spain

POTENTIAL OF HYDROTHERMAL CARBONIZATION ROUTE TO ENHANCE THE COMBUSTION-RELATED PROPERTIES OF BAMBOO**4CO.15.2**

Michael RENZ

Universitat Politècnica de Valencia, Institute of Chemical Technology, SPAIN

Co-author: I. Zafrilla, Instituto de Tecnología Química, Universitat Politècnica de

València – Consejo Superior de Inv, Spain

SYNERGIES FOR PHOSPHORUS RECOVERY AND THE DECARBONIZATION OF THE EUROPEAN STEEL INDUSTRY BY VALORIZATION OF RESIDUAL BIOMASS**4CO.15.3**

Diani MUHANDIRAM

University of Agder, NORWAY

Co-author: S. Rudra, University of Agder, Grimstad, Norway

TECHNO ECONOMIC ANALYSIS OF HYDRODYNAMIC CAVITATION COUPLED WITH HYDROTHERMAL SEPARATION FOR PRODUCTION OF BIOPOLYMERS**4CO.15.4**

Stella BEZERGIANNI

Centre for Research & Technology Hellas, Chemical Process & Energy Resources Institute, GREECE

Co-authors: L. Chrysikou, D. Liakos, I. Kosma, CERTH Centre for Research and

Technology Hellas, Thessaloniki, Greece

HYDROTHERMAL LIQUEFACTION OF AGRICULTURAL WASTES: TOWARDS STABILITY ASSESSMENT AND REFINERY INTEGRATION**ORAL SESSION 2CO.16****17.30 - 18.30****Social perspectives in the bioenergy****ROOM: Room B***Governance and sustainability of biomass utilization, particularly concerning climate protection and certification.***CHAIRPERSONS:****Yara EVANS**

Imperial College London, UNITED KINGDOM

Karen MASCARENHAS

FAPESP Proc 20/15230-5 RCGI - Research Centre for Greenhouse Gas Innovation at University of São Pau, BRAZIL

2CO.16.1*Invited***2CO.16.2**

Dan TAYLOR

Energy and Bioproducts Research Institute, Aston University, UNITED KINGDOM

Co-authors: K. Chong, M. Roeder, Energy and Bioproducts Research Institute, Aston University, Birmingham, United Kingdom

DISTRIBUTING THE BENEFITS OF BIOMASS—THE POLYCRISIS, THE PUBLIC, AND THE POLITICAL BIOECONOMY**2CO.16.3**

Nils MATZNER

Technical University Munich, Science and Technology Studies Dpt., GERMANY

Co-authors: D. Otto, C. Christine Polzin, Helmholtz Centre for Environmental Research/UFZ, Leipzig, Germany; D. Siedschlag, Technical University Munich Helmholtz Centre for Environmental Research/UFZ, Leipzig, Germany; D. Thrän, Technical Helmholtz Centre for Environmental Research/UFZ, Leipzig, Germany

REGIONAL CLIMATE PROTECTION WITH BIOMASS: STAKEHOLDER PERSPECTIVES ON REGIONAL GOVERNANCE OF BIOMASS-BASED CDR

2CO.16.4

Beike SUMFLETH

DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Bioenergy Systems Dpt., GERMANY

Co-authors: S. Majer, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Leipzig, Germany; D. Thrän, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

HOW TO ASSESS TRADE-OFFS IN SUSTAINABILITY CERTIFICATION OF LOW-ILUC-RISK BIOMASS—A DECISION SUPPORT SCHEME**2CO.16.5**

Rocio DIAZ-CHAVEZ

Imperial College London, Centre for Environmental Policy, UNITED KINGDOM

AI-POWERED FRAMEWORK FOR GENDER ASSESSMENT IN BIOENERGY AND BIOECONOMY SECTORS**VISUAL PRESENTATIONS 6CV.9****17.30 - 18.30****New approaches for the production of bio-based platform chemicals and polymers
ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 3CV.10****17.30 - 18.30****Examples of implementation in different countries and sectors: biobased, biochar and bioheat
ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***ORAL SESSION 3DO.1****09.00 - 10.00****Biorefinery concepts and assessments
ROOM: Auditorium 1***Feasibility and assessment of the biorefinery concept. Aspects of TEA, safety and assessments of the biorefinery concept are illustrated.***CHAIRPERSON:****Maria GEORGIADOU**

European Commission, DG RTD, BELGIUM

3DO.1.1

Georgiana BELE

Natural Resources Canada, CANADA

Co-authors: M. Benali, C. Diffo Tégua, Natural Resources Canada, Varennes, Canada

DRIVING SUSTAINABLE INDUSTRY TRANSFORMATION: THE ROLE OF NEXT-GENERATION INTEGRATED BIOREFINERIES IN DECARBONIZATION**3DO.1.2**

Esther HEGEL

RSB, SWITZERLAND

Co-authors: A. Baldo, A. Canovas, RSB, Châtelaine, Switzerland

FAST-TRACK TO FEASIBILITY: SIMPLIFIED TEA TOOL FOR SAF PATHWAY ANALYSIS**3DO.1.3**

Fernando RAMONET MARQUES

CSIC, DAEND Dpt., SPAIN

Co-authors: F. Ramonet, CSIC, Madrid, Spain; M. Cabrera-Gonzalez, M. Harasek, TU Wien, Vienna, Austria

PROMOTING SAFE OPERATIONS IN BIOREFINERIES: A COMPREHENSIVE SAFE-BY-DESIGN FRAMEWORK**3DO.1.4***Invited*

ORAL SESSION 2DO.2

09.00 - 10.00 **Climate impacts and GHG performance**
ROOM: Auditorium 2

This session will focus on BECCS and carbon accounting in general, including new potential relevant aspects.

CHAIRPERSON:**Guido REINHARDT**

IFEU-Institut Heidelberg, GERMANY

2DO.2.1

Romain BESSEAU

European Commission JRC, ITALY

Co-authors: O. Hurtig, M. Buffi, N. Scarlat, European Commission JRC, Ispra, Italy; V. Motola, European Commission JRC, Ispra, Usa

FROM BIOGENIC CARBON TO E-FUELS USING GRID ELECTRICITY: THE GHG ABATEMENT COST OR THE PRICE OF COMBINING ECONOMIC AND GHG PERFORMANCES

2DO.2.2

Vanessa NAVA

ICAMCYL Foundation, SPAIN

Co-authors: C. Pevida García, M.V. Gil Matellanes, F. Rubiera González, Institute of Carbon Science and Technology, Oviedo, Spain; J.V. Nava R., Fundación ICAMCYL, León, Spain

CURRENT STATUS OF BIOENERGY WITH CARBON CAPTURE AND STORAGE (BECCS) AS A CARBON DIOXIDE REMOVAL (CDR) TECHNOLOGY

2DO.2.3*Invited***2DO.2.4**

Olivia CINTAS

RISE Research Institutes of Sweden, SWEDEN

Co-authors: K. Pettersson, RISE Research Institutes of Sweden, Goteborg, Sweden; S. Mesfun, RISE Research Institutes of Sweden, Stockholm, Sweden; G. Berndes, Chalmers Univeristy of Technology, Gothenburg, Sweden

INCREASED CARBON EFFICIENCY IN FOREST-BASED VALUE CHAINS: UNLOCKING GREATER CLIMATE BENEFITS

ORAL SESSION 5DO.3

09.00 - 10.00 **Biological processes for synthetic fuels from biomass and hydrogen**
ROOM: Room A

This session addresses biohydrogen and biofuel production from waste biomass through advanced bioprocessing and integrated technologies, with a particular emphasis on dark fermentation and circular carbon approaches.

CHAIRPERSONS:**Iker AGUIRREZABAL**

Universidad del País Vasco, SPAIN

Pierre-André MAITRE

CEA, FRANCE

5DO.3.1

Natascha EGGERS

Fraunhofer IFF, GERMANY

Co-authors: T. Birth-Reichert, HAW Hamburg, Hamburg, Germany; J. Wiese, P. Komarnicki, Hochschule Magdeburg-Stendal, Magdeburg, Germany

OPTIMIZING BIOGAS PLANTS—MODELING AND SIMULATION OF DARK FERMENTATION FOR ENHANCED HYDROGEN PRODUCTION

5DO.3.2

Ariadna VIDAL I HERRERA

Newcastle University, Natural Sciences Dpt., UNITED KINGDOM

Co-authors: O. Mohiuddin, E. Chance, S. Serrano-Blanco, T. Howard, S. Velasquez-Orta, Newcastle University, Newcastle Upon Tyne, United Kingdom;

L. Rios-Solis, University College London, United Kingdom; J. Muñoz-Muñoz, Northumbria University, Newcastle Upon Tyne, United Kingdom

BIOHYDROGEN PRODUCTION THROUGH DARK FERMENTATION OF AGRICULTURAL WASTE: NOVEL STRAIN AND FEEDSTOCK CHARACTERISATION

5DO.3.3

Renston Jake FERNANDES

King Abdullah University of Science and Technology, Clean Energy Research Platform, SAUDI ARABIA

Co-authors: M.R. Shakeel, J.W.G. Turner, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia; D. Nguyen, Norwegian University of Science and Technology, Trondheim, Norway

ANALYSIS OF CIRCULAR CARBON BIOFUEL AND E-FUEL PRODUCTION FROM SAUDI ARABIAN DATE PALM FRUIT AND PALM WASTE THROUGH INTEGRATED FERMENTATION, GASIFICATION, AND CO₂ CAPTURE**5DO.3.4***Invited***ORAL SESSION IDO.1****09.00 - 10.00****Thermochemical biomass conversion
ROOM: Room B****CHAIRPERSON:****Kyriakos MANIATIS**

Kyriakos Maniatis, BELGIUM

IDO.1.1

Theresa SIEGMUND

Technical University Hamburg, GERMANY

Co-authors: C. Gollmer, M. Kaltschmitt, Technical University Hamburg, Germany

ADDITIVATION OF KAOLIN DURING THE SOLID BIOFUEL COMBUSTION WITHIN A LARGE-SCALE CHP UNIT**IDO.1.2**

Jaroslaw ZUWALA

Institute of Energy and Fuel Processing Technology, POLAND

Co-authors: M. Rejdak, M. Wojtaszek-Kalaitzidi, B. Mertas, Institute of Energy and Fuel Processing Technology, Zabrze, Poland; M. Ksiazek, SINTEF, Trondheim, Norway; S. Yngve Larsen, Eramet Norway, Trondheim, Norway; P. Szecowka, Koksownia Czestochowa Nowa, Czestochowa, Poland

BIO-COKE AS A NEXT STEP TOWARDS DECARBONISATION OF METALLURGICAL INDUSTRY**IDO.1.3**

Viviana NEGRO

Politecnico di Torino, ITALY

Co-authors: A. Riorda, D. Chiaramonti, Politecnico di Torino, Italy

TECHNO-ECONOMIC ASSESSMENT OF BIOMETHANE PYROLYSIS FOR THE PRODUCTION OF BIOANTHRACITE AND GREEN HYDROGEN IN THE FRAMEWORK OF THE METALLURGY SECTOR**IDO.1.4**

Werner BOTHA

Bara Consultants, Engineering Dpt., SOUTH AFRICA

Co-author: C. van Tonder, Bara Consultants, Moscow, Usa

INDUSTRIAL ASSESSMENT AND INTEGRATED DESIGN OF PYROLYSIS SYSTEM UTILISING THE RESIDUAL WASTE OF A SUGAR MILL AND TANNIN EXTRACTION PLANT IN SOUTH AFRICA**IDO.1.5**

Dongsoo LEE

Hyundai-steel, Hydrogen Reduction Technology Development Team, SOUTH KOREA

Co-author: J.S. Lim, Hyundai-steel, Dangin, South Korea

A PRELIMINARY STUDY ON THE REDUCTION OF HYDROGEN GAS CONSUMPTION THROUGH BIOMASS CHARGING IN THE DRP PROCESS**VISUAL PRESENTATIONS 1DV.1****09.00 - 10.00****Municipal and industrial bio-wastes
ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 5DV.2****09.00 - 10.00****New trends in hydrothermal gasification
and carbonization
ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Break****10.00 - 10.15**

PLENARY SESSION DP.1

10.15 - 11.30 **SAF & maritime**
ROOM: Auditorium 1

CHAIRPERSONS:**Maria GEORGIADOU**

European Commission, DG RTD, BELGIUM

Heinz A. OSSENBRINK

Former Head of Unit of European Commission, Joint Research Centre, ITALY

DP.1.1

Jonas ZETTERHOLM

RISE, Energy Systems Analysis, SWEDEN

Co-authors: O. Cintas, J. Torén, L. Lundberg, RISE, Gothenburg, Sweden

BIOFUEL INFRASTRUCTURE IN TRANSITION: ADDRESSING COMPETING DEMANDS FROM ROAD, AVIATION, AND MARITIME SECTORS**DP.1.2***Invited***DP.1.3***Invited***Break****11.30 - 11.45****ORAL SESSION 4DO.4**

11.45 - 12.45 **Recent advances in biogas research**
ROOM: Auditorium 1

*This session gives an overview on current topics of interest in biogas research.***CHAIRPERSONS:****Belén MONJE MARTÍNEZ**

AIMPLAS · Plastics Technology Centre, SPAIN

George Osei OWUSU

European Biogas Association, BELGIUM

4DO.4.1

Pamela PRINCIPI

SUPSI DACD IM BET, Bio-Environmental Technologies Lab, SWITZERLAND

Co-authors: C. Perego, M. Cappa, S. Olivo, J. Diaz-Miyar, SUPSI DACD IM BET, Mendrisio, Switzerland; F. Fischer, HES-SO Valais, Sion, Switzerland

CONDUCTIVE MATERIAL ADDITION TO OPTIMIZE SEMI-CONTINUOUS BIOGAS PRODUCTION**4DO.4.2**

Jana SCHULTZ, Hamburg University of Technology, GERMANY

Co-authors: M. Scherzinger, M. Kaltschmitt, Hamburg University of Technology, Hamburg, Germany

VAPOTHERMAL AND HYDROTHERMAL PRETREATMENT TO ENHANCE THE ANAEROBIC DIGESTIBILITY OF RECALCITRANT SUBSTRATES**4DO.4.3**

Alberto MEOLA

DBFZ-Deutsches Biomasseforschungszentrum gemeinnützige, Biochemical Conversion Dpt., GERMANY

Co-author: S. Weinrich, FH Münster, Steinfurt, Germany

OPTIMIZING BIOGAS PRODUCTION: HYBRID MODELS FOR DYNAMIC ANAEROBIC DIGESTION WITH NEURAL NETWORKS AND BMP MEASUREMENTS**4DO.4.4**

Gema ARJONA

AINIA, Biomass and Bioenergy Dpt., SPAIN

Co-authors: A. Pacherres, A. Torrejón, G. Arques, AINIA, Paterna, Spain; J.C. López, Genia Bioenergy, Valencia, Spain; J.P. López-Gómez, AINIA, Valencia, Spain

ANAEROBIC MONODIGESTION OF OLIVE POMACE: POLYPHENOL BIOADAPTATION AND BIOREMEDIATION PRODUCT DEVELOPMENT

ORAL SESSION 2DO.5

11.45 - 12.45 **Biomass strategies and policies**
ROOM: Auditorium 2

These titles point to a collection of studies or reports focusing on the complex and evolving landscape of bioenergy, bioeconomy and sustainability, particularly in the context of climate change mitigation.

CHAIRPERSONS:

Birger KERCKOW

FNR - Agency for Renewable Resources, GERMANY

Martin JUNGINGER

Utrecht University, THE NETHERLANDS

2DO.5.1

Anne BOUTER

European Commission JRC, ITALY

Co-authors: O. Hurtig, N. Scarlat, European Commission JRC, Ispra, Italy

NAVIGATING THE CHALLENGES OF CALCULATING INTERNATIONAL LIFE-CYCLE GHG EMISSIONS. THE CORSIA FRAMEWORK AND THE USE CASE OF ANIMALS' FATS TO PRODUCE SUSTAINABLE AVIATION FUELS (SAF)

2DO.5.2

Matthias JORDAN

Helmholtz Centre for Environmental Research - UFZ, Bioenergy Dpt., GERMANY

Co-authors: S. Günther, R. Wollnik, L.S. Röder, K.-F. Cyffka, T. Karras, K. Meisel, H. Schindel, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Leipzig, Germany; D. Thrän, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

SCENARIOS FOR THE OPTIMAL USE OF BIOMASS IN THE FUTURE GERMAN ENERGY AND BIOECONOMY SYSTEM UNTIL 2050

2DO.5.3

Anna DUDEN

Utrecht University, Copernicus Institute of Sustainable Development, THE NETHERLANDS

Co-authors: S. Alvarado Cummings, Delft University, The Netherlands; O. Valenti, M. Junginger, Utrecht University, The Netherlands

THE PATCHWORK POLICY CONTEXT FOR BIOELECTRICITY WITH CARBON CAPTURE AND STORAGE IN EUROPE

2DO.5.4

Olgu BIRGI

WIP Renewable Energies, Biomass Dpt., GERMANY

Co-author: D. Rutz, WIP Renewable Energies, Munich, Germany

BIOMASS TECHNOLOGICAL TRENDS: RESULTS OF THE SURVEY OF EUROPEAN TECHNOLOGY AND INNOVATION PLATFORM ON RENEWABLE HEATING AND COOLING (RHC-ETIP)

ORAL SESSION 5DO.6

11.45 - 12.45 **Hydrothermal liquefaction**
ROOM: Room A

Chemical and engineering aspects of processing biomass, specifically using hydrothermal methods, to produce biofuels and other valuable products.

CHAIRPERSONS:

David BAUDOIN

PSI - Paul Scherrer Institut, SWITZERLAND

Marzouk BENALI

Natural Resources Canada, CANADA

5DO.6.1

Carolin Eva SCHUCK

Aarhus University, Biological and Chemical Engineering Dpt., DENMARK

Co-authors: K. Anastasakis, P. Biller, Aarhus University, Denmark

INFLUENCE OF REACTION PARAMETERS ON CONTINUOUS WET OXIDATION OF HTL AQUEOUS PHASE DERIVED FROM MIXTURE OF STRAW AND CATTLE MANURE

5DO.6.2

Fiona RIGAL

Aix Marseille Université, FRANCE

Co-authors: O. Boutin, J.-H. Ferrasse, Aix Marseille Université, Marseille, France

MODIFICATION OF REACTION PATHWAYS BY PARTIAL OXIDATION IN HYDROTHERMAL PROCESS

5DO.6.3

Alessandro AMADEI

Sapienza University of Rome, Chemical Engineering Dpt., ITALY

Co-authors: M. Damizia, B. de Caprariis, Sapienza University of Rome, Italy;

J.H. Ferrasse, Aix Marseille Univ, CNRS, Marseille, France

EFFECT OF HEATING RATE ON HYDROTHERMAL LIQUEFACTION OF MODEL COMPOUNDS FOR CARBOHYDRATES, PROTEINS AND LIPIDS**5DO.6.4**

Marcos LARRIBA

Universidad Complutense de Madrid, SPAIN

Co-authors: P. Suárez-Rodríguez, A. Pinzolas-Rubio, J.A. Delgado-Dobladez,

V.I. Águeda-Maté, Universidad Complutense de Madrid, Spain; D. Martín-Gutiérrez,

Universidad Complutense de Madrid Complutense de Madrid, Spain; G. Becker,

G. de Freitas Batista, University of Hohenheim, Stuttgart, Germany

RECOVERY OF VOLATILE FATTY ACIDS (VFAS) FROM AQUEOUS STREAMS GENERATED IN THE HYDROTHERMAL LIQUEFACTION AND WET OXIDATION (HTL-WO) PROCESS FOR THE PRODUCTION OF AVIATION BIOFUELS**ORAL SESSION IDO.2****11.45 - 12.45****India****ROOM: Room B****CHAIRPERSON:***Invited***IDO.2.1***Invited***IDO.2.2***Invited***IDO.2.3***Invited***IDO.2.4***Invited***VISUAL PRESENTATIONS IDV.3****11.45 - 12.45****Industry topics****ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 1DV.4****11.45 - 12.45****Sustainable integrated agricultural management practices****ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Networking Lunch 12.45 - 13.45****ORAL SESSION 4DO.7****13.45 - 14.45****Combining biogas with termal / thermo-chemical processes****ROOM: Auditorium 1***This session deals with the combination of biogas processes with termal or thermo-chemical processes.***CHAIRPERSON:****Bernhard DROSG**

BEST - Bioenergy and Sustainable Technologies, AUSTRIA

4DO.7.1

Francesco PATUZZI

Free University of Bolzano, Faculty of Engineering, ITALY

Co-authors: P. Postacchini, L. Menin, M. Baratieri, Free University of Bolzano-Faculty of Engineering, Italy; A. Grimalt-Aleman, P. Ghofrani-Isfahani, I. Angelidaki, DTU, Copenhagen, Denmark

TOWARDS SYNGAS BIOMETHANATION IN AD REACTORS: PROCESS MODELING AND PLANT-WIDE ANALYSIS

4DO.7.2

Viviana NEGRO

Politecnico di Torino, ITALY

Co-authors: M. Noussan, G. Talluri, D. Chiamonti, Politecnico di Torino, Italy

ANALYSIS OF EMISSION SAVINGS AND PERFORMANCE OF DIFFERENT ENERGY APPLICATIONS OF BIOGAS**4DO.7.3**

Leyanet ODALES BERNAL

Ghent University, BELGIUM

Co-authors: L. López González, E. Barrera Cardoso, Sancti Spiritus University, Cuba;

S. Ghysels, V. Lobanov, J. De Vrieze, F. Ronsse, Ghent University, Belgium

ANAEROBIC DIGESTION OF PROCESS WATER OBTAINED FROM HYDROTHERMAL CARBONIZATION OF CHICKEN MANURE**4DO.7.4**

Lukas KNOLL

DBFZ-Deutsches Biomasseforschungszentrum gemeinnützige, Biochemical Conversion Dpt., GERMANY

Co-authors: J. Matlach, N. Engler, DBFZ, Leipzig, Germany

TOWARDS ACCURATE GHG EMISSIONS QUANTIFICATION: HIGH-RESOLUTION DATA FROM OPEN DIGESTATE STORAGE**ORAL SESSION 2DO.8****13.45 - 14.45****Overall supply chain analysis
ROOM: Auditorium 2**

This session points to research and development efforts that prioritize a holistic and sustainable approach to the bioeconomy, focusing on the broader, systemic evaluation and development of bio-based industries.

CHAIRPERSON:*Invited***2DO.8.1**

Athanasios RENTIZELAS

National Technical University of Athens, Mechanical Engineering Dpt., GREECE

Co-authors: P. Georgiou, University of Patras, Greece; F. Psathas, D. Giannopoulos,

National Technical University of Athens, Zografou, Greece

A COMPREHENSIVE SYSTEM ANALYSIS OF BIOFUEL VALUE CHAINS PERFORMANCE AGAINST ECONOMIC, ENVIRONMENTAL AND SOCIAL SUSTAINABILITY CRITERIA**2DO.8.2**

Antonietta PIZZA

ENCO, ITALY

Co-authors: M. de la Feld, M.A. Torres Serrano, ENCO, Napoli, Italy

SYMBA—SECURING LOCAL SUPPLY CHAINS VIA THE DEVELOPMENT OF NEW METHODS TO ASSESS THE CIRCULARITY AND SYMBIOSIS OF THE BIO-BASED INDUSTRIAL ECOSYSTEM ENHANCING THE EU COMPETITIVENESS AND RESOURCE INDEPENDENCE**2DO.8.3***Invited***2DO.8.4**

Amit KUMAR

University of Alberta, Mechanical Engineering Dpt., CANADA

Co-authors: M.M. Billal, A. Mukherjee, P. Rosa, University of Alberta, Canada

DEVELOPMENT OF A FRAMEWORK FOR THE ASSESSMENT OF BIOHUBS**ORAL SESSION 5DO.9****13.45 - 14.45****Hydrothermal carbonization and gasification
ROOM: Room A**

Advanced thermochemical processes for converting biomass and waste streams into valuable gaseous fuels, with a strong emphasis on catalyst development and optimization.

CHAIRPERSONS:**Abdenour ACHOUR**

Aalborg University, DENMARK

Hary DEMEY

Commissariat à L'Énergie Atomique et aux Énergies Alternatives, FRANCE

5DO.9.1

Julie MICHEL

CEA, FRANCE

Co-authors: A. Chappaz, H. Demey Cedeno, CEA, Grenoble, France

INFLUENCE OF THE INORGANICS ON CATALYST DURING SUPERCRITICAL WATER GASIFICATION OF BIOMASS

5DO.9.2

Robin MOCHEL

CEA, FRANCE

Co-authors: H. Demey, A. Chappaz, CEA, Grenoble, France; L. Vilcocq, P. Fongarland, CP2M, Lyon, France

COMPARATIVE STUDY OF CATALYTIC SUPERCRITICAL WATER GASIFICATION OF SUGAR BEET VINASSE**5DO.9.3**

David BAUDOUIIN

PSI - Paul Scherrer Institut, Bioenergy and Catalysis Dpt., SWITZERLAND

Co-authors: A. Qunet, X. Li, F. Vogel, PSI - Paul Scherrer Institut, Villigen PSI, Switzerland

METAL OXIDE-SUPPORTED RUTHENIUM CATALYSTS IN HYDROTHERMAL GASIFICATION: COMPARABLE ACTIVITY TO STATE-OF-THE-ART RU/C CATALYSTS AND EFFICIENT COKE REMOVAL VIA CALCINATION**5DO.9.4**

Alessandro CASCIOLI

Free University of Bozen-Bolzano, Faculty of Science and Technology, ITALY

Co-authors: S. Moradi, S. Piazzzi, M. Baratieri, F. Patuzzi, Free University of Bolzano, Italy; D. Basso, HBI, Bolzano, Italy

VALORIZING HTC HYDROCHAR: GASIFICATION AND HEAVY METAL VOLATILIZATION THROUGH CHLORINATION**ORAL SESSION IDO.3****13.45 - 14.45****China****ROOM: Room B****CHAIRPERSON:***Invited***IDO.3.1***Invited***IDO.3.2***Invited***IDO.3.3***Invited***IDO.3.4***Invited***VISUAL PRESENTATIONS 1DV.5****13.45 - 14.45****Sustainable integrated agricultural management practices and algae
ROOM: Poster Area A***Detailed information on this session is presented in the section entitled "Visual Presentations".***VISUAL PRESENTATIONS 3DV.6****13.45 - 14.45****Biorefinery concepts and processes II
ROOM: Poster Area B***Detailed information on this session is presented in the section entitled "Visual Presentations".***Break****14.45 - 15.00****13.45 - 16.00****ICARUS/BioTheRoS Workshop "International R&I Cooperation on Sustainable Aviation and Maritime Fuels
ROOM: Parallel 1***This workshop will present and discuss results from the two Horizon Europe projects ICARUS and BioTheRoS with scientists, industry representatives and policy makers interested in the field of Sustainable Aviation Fuels (SAF). Thereby, focus will be placed on international Research & Innovation collaboration opportunities and challenges with the aim to support market uptake of SAF and bring novel SAF production routes to global industrial scale.***PLENARY SESSION DP.2****15.00 - 16.00****Advances in biochemical and biomaterials
ROOM: Auditorium 1****CHAIRPERSON:***Invited*

DP.2.1

Kathleen MEISEL
 DBFZ-Deutsches Biomasseforschungszentrum gemeinnützige, Bioenergy Systems
 Dpt., GERMANY
 Co-authors: I.K. Götz, L.S. Röder, N. Dögnitz, DBFZ-Deutsches
 Biomasseforschungszentrum gemeinnützige, Leipzig, Germany
HIGH DEMAND BIOPOLYMERS—TECHNOLOGY, ECONOMY & SUSTAINABILITY

DP.2.2

Invited

**16.00 - 17.00 Roundtables / Panel Discussions
 ROOM: Auditorium 1**

**17.00 - 18.00 Closing Session
 ROOM: Auditorium 1**

VISUAL PRESENTATIONS 2AV.1

**15.00 - 16.00 Perspectives of sustainability enhancing socio-economic and policies assessments
 ROOM: Poster Area A**

This session focus on synergies in bioenergy on sustainability and socio-economic and policies assessments.

CHAIRPERSON:

Suani COELHO
 University of Sao Paulo - Julio Romano Meneghini - PROCESSO FAPESP 2020/15230-5, BRAZIL

2AV.1.2

Rocio DIAZ-CHAVEZ
 Imperial College London, Centre for Environmental Policy, UNITED KINGDOM
 Co-authors: Y. Evans, S. Giarola, P. Basterrechea, Imperial College London, United Kingdom

INTEGRATED SUSTAINABILITY ASSESSMENT OF BIOLOGICAL CO₂ CAPTURE FOR THE CIRCULAR ECONOMY

2AV.1.7

Özge MUTLU
 DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Thermochemical Conversion Dpt., GERMANY
 Co-authors: M. Müller, W. Wedekind, D. Krüger, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Leipzig, Germany
LEAVE NO ONE BEHIND: BARRIERS AND LESSONS LEARNED FROM DEVELOPMENT OF BIOMASS-BASED CLEAN COOKING SOLUTIONS IN TOGO AND ETHIOPIA

2AV.1.11

Olgu BIRGI
 WIP Renewable Energies, Biomass Dpt., GERMANY
 Co-authors: R. Mergner, R. Janssen, WIP GmbH & Co Planungs, Munich, Germany; D. Rutz, WIP Renewable Energies, Munich, Germany
GENERATING EQUITY, NURTURING DIVERSITY, ENERGISING RESILIENCE FOR POWER AGAINST ENERGY POVERTY

2AV.1.12

Michelle GIAN
 AMIBM, Maastricht University, THE NETHERLANDS
 Co-authors: S.V. Obydenkova, Y. van der Meer, AMIBM, Geleen, The Netherlands
ASSESSMENT OF SOCIAL HOTSPOTS IN EMERGING BIOFUEL VALUE CHAINS

2AV.1.13

Blanca DE ULIBARRI
 RSB, Sustainability Dpt., SWITZERLAND
 Co-author: E. Hegel, RSB, Châtelaine, Switzerland
ADVANCING SUSTAINABILITY: CERTIFICATION OF BIO-BASED PRODUCTS THROUGH RSB STANDARDS

2AV.1.14

Martin JUNGINGER
 Utrecht University, Copernicus Institute, THE NETHERLANDS
 Co-authors: M. Khairani, L. Shen, Utrecht University, The Netherlands
A METHODOLOGICAL APPROACH TO MONITOR OUTCOMES OF SUSTAINABILITY CERTIFICATION SCHEMES AND LABELS IN THE BIO-BASED SECTOR

2AV.1.17

Myrsini CHRISTOU
 Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE
 Co-author: M. Cocchi, ETA-Florence Renewable Energies, Florence, Italy
ENHANCING THE UPTAKE OF BIOMETHANE IN EUROPE—THE GREENMEUP PROJECT

2AV.1.19

Madhumita GOGOI SAIKIA
 Free University of Bozen-Bolzano, Faculty of Engineering, ITALY
 Co-authors: M. Baratieri, Free University of Bozen-Bolzano, Bolzano, Italy; L. Menin, BiSTEMS, Bolzano, Italy
BALANCING PURSUIT: FURTHERING THE QUEST FOR SUSTAINABILITY IN THE REALM OF SUSTAINABLE AVIATION FUELS (SAF)

2AV.1.23

Inma SÁNCHEZ CANTERO
 Leitac, Circular Economy and Descarbonisation Dpt., SPAIN
 Co-author: D. Wilde, Leitac Technological Center, Terrassa, Spain
SOCIAL SUSTAINABILITY IN BIOMASS VALORISATION: INSIGHTS FROM THE C4B PROJECT

2AV.1.25

Lusine ARAMYAN
 Wageningen University and Research, THE NETHERLANDS
 Co-authors: S. Wang, K. Logatcheva, M. Van Galen, M. De Jong, Wageningen University and Research, The Netherlands
INTEGRATING SUSTAINABILITY AND FAIRNESS INTO BUSINESS MODELS: A FRAMEWORK FOR THE BIO-BASED SECTOR

VISUAL PRESENTATIONS 5AV.2

15.00 - 16.00 **Biofuels and renewable hydrocarbons**
ROOM: Poster Area B

This visual session is concerned new advances on biofuels and renewable fuels production.

CHAIRPERSON:

Dimitrios SIDIRAS
 University of Piraeus, GREECE

5AV.2.2

Beethoven NARVÁEZ-ROMO
 University of São Paulo, BRAZIL
 Co-authors: T. Lopes, S.T.Coelho, J.R. Meneghini, University of São Paulo, Brazil
DIRECT ETHANOL SOFC FOR MARITIME TRANSPORT APPLICATIONS

5AV.2.3

Raymond ATUGHWE
 University of Surrey, Chemical and Process Engineering Dpt., UNITED KINGDOM
 Co-authors: M. Short, S. Gadkari, University of Surrey, Guilford, United Kingdom
COMPREHENSIVE TECHNO-ECONOMIC ANALYSIS OF DIFFERENT PRODUCTION TECHNOLOGIES OF MULTIPLE ENERGY VECTORS: A SUB-SAHARAN AFRICA OUTLOOK

5AV.2.4

Juan Daniel DÍAZ SANTIBÁÑEZ
 Universidad Católica de la Santísima Concepción, Centro de Energía, CHILE
 Co-authors: R. Muñoz González, R. Cabezas Cornejo, M. Coronado Ortega, L. Azócar Ulloa, Universidad Católica de la Santísima Concepción, Concepción, Chile
EFFICIENT PRODUCTION OF RENEWABLE LIQUID GAS (RLG) VIA CATALYTIC PYROLYSIS OF WASTE COOKING OIL CARBOXYLATES USING NI-CO/ZSM-5 NANOCATALYSTS

5AV.2.6

Myrsini CHRISTOU

Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE

Co-authors: F. Girio, LNEG, Lisbon, Portugal; B. Vreugdenhil, TNO, Amsterdam, The Netherlands; B. Guell Matas, SINTEF, Trondheim, Norway; M. Watanabe, NTNU, Trondheim, Norway; R. Janssen, WIP, Munich, Germany; F. Müller-Langer, Center for Renewable Energy Sources and Saving, Leipzig, Germany; W. Zegada Lizarazu, UNIBO, Bologna, Italy; A. Rodrigues, BIOREF, Lisbon, Portugal; I. Aguirrezabal, EHU/EUS, Bilbao, Spain; J. Thevelein, NovelYeast, Brussels, Belgium; K. Maniatis, KM-IIC, Brussels, Belgium; F. Borges, PETROGAL, Porto, Portugal; B. de Ulibarri, RSB, Vernier, Switzerland; L. Ampatzis, NEVIS, Athens, Greece

INTERNATIONAL COOPERATION FOR SUSTAINABLE AVIATION BIOFUELS**5AV.2.8**

Vitória RICARDO DA ROCHA

UFPE, BRAZIL

Co-authors: E. Barbosa, E. Dutra, A. Albuquerque, J. Sonego, UFPE, Recife, Brazil

EVALUATION OF ETHANOL EXTRACTION BY GASEOUS ENTRAINMENT IN BIODIESEL PRODUCTION BY THE ETHYL ROUTE**5AV.2.12**

Andreas APFELBACHER

Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY

Co-authors: P. Schwarz, R. Daschner, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany

DEMONSTRATION PROJECT SEFAIRER: THE DEMONSTRATION OF A VERTICAL THERMOCATALYTIC PYROLYSIS REACTOR FOR IMPROVED INTERMEDIATE AND DROP-IN BIOFUEL PRODUCTION**5AV.2.13**

Electo Eduardo SILVA LORA

UNIFEI / FAPEPE, BRAZIL

Co-authors: A.Z. Turan, M. Ünsal, G. Kayali, A. Sayar, Ö. Atac, G. Behmenyar, TUBITAK Marmara Research Center, Kocaeli, Turkey

SUSTEPS AN ADVANCED MICROALGAE-TO-BIOFUEL PROCESS**5AV.2.17**

José GARCÍA-BÉJAR

Centro de Investigacion y Asistencia en Tecnologia y Diseño del Estado de Jalisco CIA760825SU4, Industrial Biotechnology Dpt., MEXICO

Co-author: L. Amaya-Delgado, Center for Research and Assistance in Technology and Design of the State of Jalisco, Guadalajara, Mexico

COMPLETE INTEGRATION OF TEQUILA INDUSTRY WASTES TO PRODUCE CELLULOSIC ETHANOL AT PILOT SCALE**5AV.2.18**

Matteo FRANCAVILLA

University of Foggia, Agriculture, Food and Environmental Science Dpt., ITALY

Co-authors: A. Carnevale, P. Marasco, D. Soldo, M. Marone, D. Racca, University of Foggia-STAR*Facility Centre, Italy

OPTIMIZING MICROALGAE BIOREFINERIES: SUSTAINABLE BIOFUEL PRODUCTION VIA CHEMICAL CONVERSION OF ANAEROBIC DIGESTATE AND MICROWAVE-ASSISTED HYDROTHERMAL LIQUEFACTION**5AV.2.20**

Yukihiko MATSUMURA

Hiroshima University, Graduate School of Advanced Science and Engineering, JAPAN

Co-authors: K. Furuta, M. Zhang, S. Kindaichi, Hiroshima University, Higashi-Hiroshima, Japan

BENCH-SCALE BIOFUEL PRODUCTION APPARATUS USING SUPERCRITICAL METHANO**5AV.2.22**

Maria Cristina GONZÁLEZ-FERNÁNDEZ

University of Valladolid, Biotechnology Dpt., SPAIN

Co-authors: M. Levío-Raimán, C. González-Fernández, University of Valladolid, Spain

PH RELEVANCE ON LIPID PRODUCTION WHEN USING A MICROBIAL CONSORTIUM FED WITH VOLATILE FATTY ACIDS FROM WASTE STREAMS AS A LOW-COST CARBON SOURCE**5AV.2.25**

Nihar RANJAN

Forest College and Research Institute, Tamil Nadu Agricultural University, INDIA

Co-author: P. KT, Forest College and Research Institute, Tamil Nadu Agricultural University, Coimbatore, India

TBOS AS A FEEDSTOCK FOR SUSTAINABLE BIOFUEL GENERATION IN INDIA—STATUS, CHALLENGES & OPPORTUNITIES**5AV.2.26**

Deog-Keun KIM

Korea Institute of Energy Research, Bioenergy and Resources Upcycling Research Laboratory Dpt., SOUTH KOREA

Co-authors: J. Cho, J. Park, S. Kim, H. Kim, Korea institute of energy research, Daejeon, South Korea

EVALUATING THE OPTIMUM OPERATING CONDITIONS AND STABILITY OF TRANSESTERIFICATION REACTION OVER NA/GCN

5AV.2.28

Akhil MOHAN

KTH Royal Institute of Technology, Chemical Engineering Dpt., SWEDEN

Co-authors: A. Al-Wandi, Å. Emmer, K. Engvall, M. Jonsson, KTH Royal Institute of Technology, Stockholm, Sweden

A SEPARATION STRATEGY FOR REFINING CRUDE BIOGENIC OIL USING PHASE SEPARATION**5AV.2.29**

Marcos LATORRE

PERSEO Biotechnology, R&D, SPAIN

Co-authors: C. Coll, M. Ozaez, PERSEO Biotechnology, Alcudia, Spain

SUSTAINABLE ON-SITE AND INNOVATIVE TECHNOLOGIES FOR ADVANCED TRANSPORT BIOFUELS FROM MICROALGAE (FUELGAE PROJECT)**VISUAL PRESENTATIONS 2AV.3**

16.15 - 17.15

Life cycle thinking and environmental assessments in bio-based innovations: from materials to energy systems**ROOM: Poster Area A**

This session gives a broad overview of environmental impacts of bio-based innovations. Visual presentations analyse complete life cycles and specific life cycle stages of various products from materials to fuels for their implications. This provides a forum for exchange on a wide range of pathways towards environmental sustainability.

CHAIRPERSONS:**Karen MASCARENHAS**

FAPESP Proc 20/15230-5 RCGI - Research Centre for Greenhouse Gas Innovation at University of São Pau, BRAZIL

Mirjam ROEDER

Aston University, UNITED KINGDOM

2AV.3.1

Mariana OCHODKOVA

KU Leuven Research & Development, BELGIUM

Co-authors: A. van Vuure, K. Van Acker, KU Leuven, Leuven, Belgium

FULL LIFE CYCLE ASSESSMENT FRAMEWORK FOR EMERGING BIO-COMPOSITES**2AV.3.2**

Giorgos KARDARAS

CPERI/CERTH, GREECE

Co-authors: V. Proskinitopoulou, A. Vourros, P. Dimopoulos Toursidis, S. Lorentzou, K. Panopoulos, CPERI/CERTH, Themi, Thessaloniki, Greece

ENVIRONMENTAL ASPECTS OF NOVEL FOOD PROCESSING RESIDUE VALORISATION PATHWAYS FOR SOIL IMPROVERS**2AV.3.3**

Jenny LAZEBNIK

Wageningen Research, THE NETHERLANDS

Co-authors: G.A. de Groot, B. Elbersen, D. Lammertsma, Wageningen Environmental Research, The Netherlands; G. van Duijvendijk, Wageningen University, The Netherlands; L.S. Esteban, C. Martin, S. Soria Franco, M. Sanz, C. Sixto Ciria, J. Perez, CEDER-CIEMAT, Luvia, Spain; A. Monti, F. Zanetti, A. Ferreira, A. Parenti, Department of Agricultural and Food Sciences, University of Bologna, Italy; A. Marjanovic Jeromela, Z. Milovac, F. Franeta, Institute of Field and Vegetable Crops, Novi Sad, Serbia

MONITORING INSECT BIODIVERSITY IN MARGINAL LAND STRIP-CROPPING SYSTEMS COMPARED TO ADJACENT MONOCULTURAL CROPS**2AV.3.4**

Inma SÁNCHEZ CANTERO

Leitat, Circular Economy and Descarbonisation Dpt., SPAIN

Co-authors: I. Sánchez, D. Checa, Leitat, Terrassa, Spain

LIFE CYCLE ASSESSMENT APPROACH IN BIOINSOUTH PROJECT**2AV.3.5**

Costantinos SIOUTAS

University of Southern California, Sonny Astani Department of Civil and Environmental Engineering, USA

Co-authors: Y. Aghaei, M. Badami, R. Tohidi, University of Southern California, Los Angeles, Usa

MILAN'S AIR QUALITY DEGRADES DUE TO RESIDENTIAL BIOMASS USE DURING ENERGY CRISIS**2AV.3.6**

Carlos BERNÁRDEZ CASÁS

AIMEN, Sustainability Dpt., SPAIN

Co-author: R. Pena Rois, AIMEN, O Porriño, Spain

LIFE CYCLE ASSESSMENT FOR 3 DIFFERENT INNOVATIVE BIO-BASED SOLUTIONS

2AV.3.8

Ana María GARCÍA GARCÍA
CEDER-CIEMAT, SPAIN

Co-authors: M. Gómez Gómez, R. Ramos Casado, E. Borjabad García, CEDER-CIEMAT, Lubia, Spain

INFLUENCE OF TECHNOLOGY ON PARTICULATE MATTER EMISSIONS IN BIOMASS COMBUSTION**2AV.3.9**

Martin JUNGINGER

Utrecht University, Copernicus Institute, THE NETHERLANDS

Co-authors: K.M.A. Osman, B. Corona, R. Hoefnagels, H.M. Junginger, Utrecht university, The Netherlands

LIFE CYCLE ASSESSMENT OF A NOVEL COMBINED GASIFICATION AND COMBUSTION TECHNOLOGY FROM LOW-VALUE BIOMASS FOR INDUSTRIAL APPLICATIONS. PRELIMINARY ASSESSMENT**2AV.3.11**

Clara AKL

Laboratoire Gestion des Risques et Environnement, FRANCE

Co-authors: J. Cottineau, J. Schobing, G. Leyssens, Université de Haute Alsace, Mulhouse, France; F. Cazier, Université du Littoral Côte d'Opale, Dunkerque, France; D. Dewaele, Université du Littoral Côte d'Opal, Dunkerque, France

MODIFICATION OF THE PARAMETERS OF A PELLET STOVE: IMPACT ON GASEOUS AND PARTICULATE EMISSIONS**2AV.3.14**

Polina YASENEVA

University of Cambridge, UNITED KINGDOM

Co-author: Z. Hao, University of Cambridge, United Kingdom

IDENTIFICATION OF PATHWAYS FOR SUSTAINABLE CELLULOSE NANOCRYSTALS PRODUCTION**2AV.3.15**

Leandro MAGALHÃES

IDMEC - Instituto Superior Técnico, Mechanical Engineering Dpt., PORTUGAL

Co-author: A. Ferreira, IDMEC - Instituto Superior Técnico, Lisbon, Portugal

LIFE CYCLE ANALYSIS OF DEEP REMOVAL CARBON CAPTURE PROCESSES**2AV.3.16**

Dominik RUTZ

WIP Renewable Energies, Bioenergy & Bioeconomy Unit, GERMANY

Co-authors: C. Ma, R. Janssen, WIP Renewable Energies, München, Germany; C.P. Hernández, P. Nachtergaele, Gent University, Belgium; L. Shen, M. De Jong, M.A. Rondón Villabona, Utrecht University, The Netherlands; G. Weber-Blaschke, M.Z. Khan, Technical University Munich, München, The Netherlands; C. Rodrigues, F. Freire, University of Coimbra, Portugal; H. Pihkola, VTT Technical Research Centre of Finland, Helsinki, Finland; A. Morée, GROWN Bio, Heerewarden, The Netherlands; T. Matiz, Lenzing AG, Lenzing, Austria; R. Driessens, Unilin, Wielsbeke, Belgium; A. Coulon, F. Zhang, Quantis, Renens, Switzerland

ENVIRONMENTAL SUSTAINABILITY AND CIRCULARITY ASSESSMENT METHODOLOGIES FOR INDUSTRIAL BIO-BASED SYSTEMS**2AV.3.17**

Inese SKAPSTE

Latvia University of Life Sciences and Technologies, LATVIA

Co-authors: G. Grinberga-Zalite, A. Zvirbule, I. Vircava, Latvia University of Life Sciences and Technologies, Jelgava, Latvia

LIFE CYCLE ANALYSIS OF ALGAL BIOSTIMULANTS' PRODUCTION FROM THE BALTIC SEA FURCELLARIA LUMBRICALIS**2AV.3.19**

Thomas GOETZ

Wuppertal Institute for Climate, Environment and Energy, GERMANY

Co-authors: B. Schnurr, J. Kaselofsky, Wuppertal Institute for Climate, Environment and Energy, Wuppertal, Germany; I. Obernberger, T. Brunner, A. Horn, BIOS Bioenergiesysteme, Graz, Austria; K. Osman, Utrecht University, The Netherlands

PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT OF A NOVEL FUEL FLEXIBLE HIGHLY EFFICIENT AND CLOSE-TO-ZERO EMISSION COMBINED BIOMASS GASIFICATION AND COMBUSTION TECHNOLOGY FOR INDUSTRIAL APPLICATIONS**2AV.3.22**

Johann GORGENS

Stellenbosch University, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: S. Gamor, Stellenbosch University, South Africa; E. Dogbe, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

ECONOMIC AND ENVIRONMENTAL PERFORMANCES OF BIO-BASED CHEMICALS PRODUCED WITH GREEN HYDROGEN AS A REAGENT IN A SUGARCANE BIOREFINERY

2AV.3.24

Edgar A. SILVEIRA

University of Brasilia, Mechanical Engineering Dpt., BRAZIL

Co-author: M.C. Rodrigues, University of Brasilia, Brazil

IMPACT OF LCA METHODOLOGICAL CHOICES ON BIODIESEL SUSTAINABILITY**CLASSIFICATION: A REVIEW****VISUAL PRESENTATIONS 5AV.4**

16.15 - 17.15

Fundamental investigation in pyrolysis**ROOM: Poster Area B**

The poster session is about fundamental investigations in pyrolysis. The topics are kinetic investigations, modelling and laboratory scaled experiments.

CHAIRPERSONS:**Abdenour ACHOUR**

Aalborg University, DENMARK

Andreas APFELBACHER

Fraunhofer-Institut UMSICHT, GERMANY

5AV.4.1

Sabah MARIYAM

Hamad Bin Khalifa University, Division of Sustainable Development, QATAR

Co-authors: M. Alherbawi, G. McKay, T. Al-Ansari, Hamad Bin Khalifa University,

Doha, Qatar

ASSESSING BIOMASS CO-PYROLYSIS: SENSITIVITY ANALYSIS AND ECONOMIC FEASIBILITY OF MULTI-FEEDSTOCK VALORISATION**5AV.4.3**

Andreas APFELBACHER

Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY

Co-authors: I.T. Suleiman, S. Hölzl, R. Daschner, Fraunhofer Institute for

Environmental Safety and Energy technology., Sulzbach-Rosenberg, Germany

EVALUATING THE HYDROGENATION EFFICIENCY OF THERMO-CATALYTIC REFORMING (TCR®) AND FAST PYROLYSIS OILS DERIVED FROM BIOWASTE FOR SUSTAINABLE FUEL PRODUCTION**5AV.4.6**

Andreas APFELBACHER

Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY

Co-authors: H.O. Onyshi, J. Neidel, R. Daschner, Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Sulzbach-Rosenberg, Germany; M. Renner, Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Oberhausen, Germany

INFLUENCE OF POST-REFORMER TEMPERATURE ON THE YIELDS AND QUALITIES OF THE PRODUCTS FROM THE TCR® PROCESS**5AV.4.7**

Andreas APFELBACHER

Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY

Co-authors: H.O. Onyshi, J. Neidel, R. Daschner, Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Sulzbach-Rosenberg, Germany; M. Renner, Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Oberhausen, Germany

INFLUENCE OF SELECTED SECONDARY CATALYSTS ON THE THERMO-CATALYTIC REFORMING (TCR®) OF WOODY BIOMASS**5AV.4.8**

Rafiandy Dwi PUTRA

DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Thermochemical Conversion Dpt., GERMANY

Co-authors: A. Schedl, O. Mutlu, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Leipzig, Germany

OPTIMIZATION OF BIOCHAR PRODUCTION PROCESS USING DESIGN OF EXPERIMENT FOR THE UTILIZATION IN STEELMAKING**5AV.4.9**

Natalia NIEDZBALA

Wroclaw University of Science and Technology, Advanced Material Technologies Dpt., POLAND

Co-authors: P. Rutkowski, I. Michalak, Wroclaw University of Science and Technology, Poland

BIOCHAR OBTAINED FROM WASTE AS A POTENTIAL BIOSORBENT FOR CU(II) AND ZN(II) IONS**5AV.4.11**

Omololu FAGBIELE

Heriot-Watt University, Chemical Engineering Dpt., UNITED KINGDOM

Co-author: A. Ozel, Heriot-Watt University, Edinburgh, United Kingdom

TOWARDS SUSTAINABLE BIOMASS PROCESSING: REACTIVE MOLECULAR DYNAMICS PATHWAY

5AV.4.12

Gert VAN TONDER

Regen Biofuels, Engineering Dpt., USA

Co-author: W. Botha, Bara Consultants, Moscow, Usa

INOCULATED BIOCHAR FERTILISER PRODUCTION WITH BIO-OIL DERIVED HERBICIDE, PESTICIDE AND NEMATICIDE PROPERTIES**5AV.4.16**

Heeyoon KIM

Sungkyunkwan University, School of Mechanical Engineering, SOUTH KOREA

Co-authors: S. Park, C. Ryu, Sungkyunkwan University, Suwon, South Korea

ANALYSIS OF PYROLYSIS KINETICS AND LIGNOCELLULOSIC COMPOSITION FROM BIOMASS THERMOGRAM USING CONVOLUTIONAL NEURAL NETWORK**VISUAL PRESENTATIONS 2AV.5****17.30 - 18.30****Climate impacts and GHG performance
ROOM: Poster Area A**

This collection of research topics centers around the assessment and optimization of bio-based processes for climate change mitigation and circular economy goals.

CHAIRPERSON:*Invited***2AV.5.2**

Akshat SUDHESHWAR

Empa, SWITZERLAND

UNRAVELING THE CLIMATE NEUTRALITY OF WOOD DERIVATIVES AND BIOPOLYMERS**2AV.5.3**

Doris MATSCHEGG

BEST - Bioenergy and Sustainable Technologies, AUSTRIA

Co-authors: M. Fuhrmann, C. Strasser, C. Dissauer, BEST, Graz, Austria

CONTRIBUTION OF BIOENERGY TO THE DECARBONIZATION OF THE ENERGY SYSTEM**2AV.5.5**

Kyungil CHO

Korea Institute of Industrial Technology, SOUTH KOREA

Co-author: Y.W. Lee, Korea Institute of Industrial Technology, Cheonan-si, South Korea

LIFE CYCLE PERSPECTIVE CARBON DIOXIDE EMISSION CHARACTERISTICS OF PELLETIZE AND TORREFIED RESIDUAL WOOD CO-FIRING IN COAL-FIRED POWER PLANT**2AV.5.6**

Samuel SOGBESAN

Energy and Bioproducts Research Institute, UNITED KINGDOM

Co-author: M. Röder, Energy and Bioproducts Research Institute, Birmingham, United Kingdom

LIFECYCLE ASSESSMENT ON RICE RESIDUE MANAGEMENT**2AV.5.7**

Abhishek SINGHAL

The Netherlands Organisation for Applied Scientific Research, Biobased and Circular Technologies Group, THE NETHERLANDS

Co-authors: H. Wray, The Netherlands Organisation for Applied Scientific Research (TNO)nds Organisation for A, Petten, The Netherlands; S. Luzzi, CM. Van der Meijden, The Netherlands Organisation for Applied Scientific Research (TNO), Petten, The Netherlands; P. Nanou, TORWASH, Burgerbrug, The Netherlands
LIFE CYCLE ASSESSMENT OF AN INTEGRATED MILD HYDROTHERMAL CARBONIZATION (TORWASH®) SYSTEM FOR SEWAGE SLUDGE VALORIZATION**2AV.5.9**

Lukas KNOLL

DBFZ-Deutsches Biomasseforschungszentrum gemeinnützige, Biochemical Conversion Dpt., GERMANY

Co-author: J. Matlach, Deutsches Biomasseforschungszentrum, Leipzig, Germany

GHG EMISSIONS FROM THE COMPOSTING AND POST-ROTTING PROCESS OF DIGESTATE: FINDINGS AND REDUCTION POTENTIAL OF CLIMATE-IMPACTING GASES**2AV.5.10**

Aneta MAGDZIARZ

AGH University of Krakow, POLAND

Co-authors: A. Mlonka-Medrala, W. Jerzak, AGH University of Krakow, Poland

BIOCHAR FROM FOOD WASTE: ASSESSING MATERIAL UTILITY AND SUSTAINABILITY THROUGH THERMOCHEMICAL CONVERSION PROCESSES IN A CIRCULAR ECONOMY GOAL

2AV.5.11

Elisa FISCHETTI
CREA, ITALY

Co-authors: A. Suardi, A. Assirelli, A. Scarfone, E. Santangelo, M. Pagano, R. Tomasone, C. Cedrola, V. Civitaresse, A. Del Giudice, A. Acampora, CREA- Council for Agricultural Research and Economics, Monterotondo, Italy

SUSTAINABILITY OF HEMP OIL PRODUCTION**2AV.5.12**

Carolina COLVÉE BOSCH

AINIA, Environmental Biotechnology Dpt., SPAIN

Co-authors: C. Colvée, A. Valles, M. Gauchía, AINIA, Valencia, Spain

CHEERS PROJECT: MICROBIAL CONVERSION OF RESIDUAL CH₄ INTO HIGH-QUALITY SINGLE CELL PROTEIN (SCP) FOR PET FOOD PRODUCTION**2AV.5.13**

Mateusz PRONIEWICZ

Silesian University of Technology, Thermal Technology Dpt., POLAND

Co-authors: K. Petela, A. Szlek, Silesian University of Technology, Gliwice, Poland

PRELIMINARY LCA OF THERMO-CATALYTIC REFORMING COUPLED WITH OXYFUEL COMBUSTION AND BIO-ELECTROCHEMICAL METHANATION**2AV.5.14**

Wei LI

University of Nottingham, Faculty of Engineering, UNITED KINGDOM

Co-authors: L. Stevens, C. Uguna, D. Gamaralalage, J. McKechnie, C. Snape, University of Nottingham, United Kingdom; A. Gill, Invica Industries Group Limited, Sheffield, United Kingdom

THE POTENTIAL OF PRODUCING LARGE-SCALE BIOCHAR FROM ANAEROBIC DIGESTION FOOD WASTE BY POST CARBONISATION**2AV.5.15**

Eilidh FORSTER

Drax, UNITED KINGDOM

Co-authors: M. Workman, Foresight Transitions, London, United Kingdom;

A. Newton, Drax, London, United Kingdom

PROPOSING A FOREST CARBON APPRAISAL FRAMEWORK FOR ROBUST DECISION-MAKING IN BIOMASS SOURCING**2AV.5.16**

Julia OSTROWSKI

Meo Carbon Solutions, GERMANY

Co-author: J. Bolther, PNO Innovation, Barcelona, Spain

HARMONIZED ENERGY-BASED GHG EMISSION FACTORS FOR ENHANCED CLIMATE IMPACT ASSESSMENT IN TRANSPORT**2AV.5.17**

Sethulakshmy JAYAKUMARI

SINTEF, Process Metallurgy and Raw Materials Dpt., NORWAY

Co-authors: M. Ksiazek, E. Ringdalen, SINTEF, Trondheim, Norway

REDUCING CO₂ EMISSIONS IN METALLURGY WITH RENEWABLE BIOCARBON**2AV.5.19**

Anna DUDEN

Utrecht University, THE NETHERLANDS

Co-authors: S. Alvarado Cummings, H.M. Junginger, F. van der Hilst, Utrecht

University, The Netherlands; S. Hanssen, Radboud University, Nijmegen,

The Netherlands

RESIDUE-BASED BECCS CAN RAPIDLY ACHIEVE NEGATIVE EMISSIONS OVER OTHER BIOMASS USES**VISUAL PRESENTATIONS 3AV.6**

17.30 - 18.30

Integration of flexible bioenergy: biomethane, hybrid heating and flexible gasification systems
ROOM: Poster Area B

This set of research summaries focuses on advancing the use of bioenergy, particularly biomethane and biomass, in heating and other energy applications, with a strong emphasis on efficiency, standardization, and sustainability.

CHAIRPERSON:

Heinz A. OSSENBRINK

Former Head of Unit of European Commission, Joint Research Centre, ITALY

3AV.6.3

Tamara SARAC

The European Gas Research Group - GERG, BELGIUM

Co-authors: A. Kostereva, R. Judd, GERG, Brussels, Belgium; F. Huet, G. Bouteau, Engie, Paris, France

REMOVING TECHNICAL BARRIERS TO BIOMETHANE STANDARDISATION

3AV.6.4

Tamara SARAC

The European Gas Research Group - GERG, BELGIUM

Co-authors: A. Kostereva, GERG, Brussels, Belgium; K. Arrhenius, S. Hultmark, RISE, Göteborg, Sweden

DEVELOPMENT OF AN INFRASTRUCTURE FOR BIOMETHANE QUALITY ASSESSMENT: VALIDATION PROTOCOL TO ENSURE RELIABLE RESULTS FOR VOC DETERMINATION IN BIOMETHANE

3AV.6.6

Joachim KELZ

AEE - Institute for Sustainable Technologies, Cities and Networks Dpt., AUSTRIA

Co-authors: S. Retschitzegger, I. Leusbrock, AEE - Institute for Sustainable Technologies, Gleisdorf, Austria; C. Pugl-Pichler, A. Bernhofer, Salzburg AG, Salzburg, Austria

INTEGRATING HYDROPOWER WASTE HEAT FOR SUSTAINABLE DISTRICT HEATING—A BM RETROFIT DEMONSTRATION SITE

3AV.6.7

Vittoria BENEDETTI

University of Trento, Civil, Environmental and Mechanical Engineering Dpt., ITALY

Co-authors: M. Danovska, A. Prada, University of Trento, Italy

MODELING AND OPTIMIZATION OF HYBRID HEAT PUMP SYSTEMS WITH BIOMASS BOILERS FOR ENHANCED BIOENERGY INTEGRATION IN BUILDING HEATING

3AV.6.8

Mika LAIHANEN

Lappeenranta-Lahti University of Technology, LUT School of Energy Systems - Bioenergy, FINLAND

Co-authors: A. Karhunen, T. Ranta, Lappeenranta-Lahti University of Technology, Lappeenranta, Finland

NEW TECHNOLOGIES AND USE OF BIOMASS IN DISTRICT HEATING IN THE FINLAND

3AV.6.9

Electo Eduardo SILVA LORA

UNIFEI / FAPEPE, BRAZIL

Co-authors: O.O. Opeoluwa Adeoye, R.V. Vieira Andrade, L.P. Peña Pupo, R.L. Lesme Jaén, O.J. José Venturini, Federal University of Itajubá, Brazil

POTENTIAL CONTRIBUTION OF BIOMASS GASIFICATION-BASED TECHNOLOGY IN ENERGY TRANSITION: A REVIEW BASED ON BIBLIOMETRIC STUDIES

3AV.6.10

Théodore GRAUL

Universidad Carlos III de Madrid, SPAIN

Co-authors: A. Anca-Couce, L.M. García-Gutiérrez, E. Cano-Pleite, J.F. Guil-Pedrosa, A. Soria-Verdugo, Universidad Carlos III de Madrid, Leganés, Spain; M. Poser, M. González-Martínez, RAPSODEE Research Center UMR CNRS 5302, Albi, France
FUEL FLEXIBILITY AND OPERATING CONDITIONS IN GASIFIER TECHNOLOGIES: ISOLATED BEHAVIOR STUDY BY MODULAR BIOENERGY SYSTEM

3AV.6.11

Jascha KEIFENHEIM

BEST- Bioenergy and Sustainable Technologies, AUSTRIA

Co-authors: S. Martini, BEST-Bioenergy and Sustainable Technologies, Graz, Austria; J. Krüger, G. Widmann, SynCraft Engineering, Schwaz, Austria; F. Ortner, M. Pichler, Dumag, Austria, Austria

GREEN HEAT FOR INDUSTRY—150 KW TESTS OF A NOVEL LEAN GAS BURNER WITH WASTE WOOD GASIFICATION DERIVED GREEN FUEL GAS INCLUDING CO₂-SEPARATION

3AV.6.14

Adriano ENSINAS

Federal University of Lavras, Engineering Dpt., BRAZIL

Co-authors: J. Vileva Oliveira, H. Khalid, Federal University of Lavras, Lavras, Brazil; V.F. Garcia, Federal University of ABC, Santo André, Brazil

COMPARISON OF BIOMASS SOURCES IN THE PRODUCTION OF RENEWABLE HYDROGEN: TECHNICAL AND ECONOMIC ANALYSIS

3AV.6.17

Alberto ASSIRELLI

CREA - Research Center for Engineering & Agro-Food Processing, ITALY

Co-authors: C. De Francesco, T. Gasperini, E. Leoni, N. Bartolini, Marche Politecnich University, Ancona, Italy; G. Toscano, Marche Politecnich University, Ancona, Italy

PREDICTIVE ANALYSIS OF STRAWBERRY BIOMASS HARVEST IN AN AGRIVOLTAIC FIELD USING MACHINE LEARNING

3AV.6.19

Stefano CARBONI

RSE, ITALY

Co-authors: M. Nordio, A. Rossetti, Ricerca sul sistema energetico, Milan, Italy

THE INFLUENCE OF OPERATIONAL PARAMETERS ON BIOLOGICAL METHANATION IN TRICKLE-BED REACTORS

VISUAL PRESENTATIONS 4BV.1

09.00 - 10.00 **New approaches towards emission reduction, modelling, new fuels as well as performance optimisation. Advances in biomass and waste gasification technologies**
ROOM: Poster Area A

The session covers the topics of emission reduction, modelling, application of new fuels as well as performance optimisation. This session explores innovative solutions and key challenges in biomass and waste gasification, providing an overview of recent advancements in micro-CHP systems, syngas production from waste and improvements in fluidized bed gasifiers. The session also addresses fuel cell performance, ash management, and strategies for cleaner and more efficient energy production.

CHAIRPERSONS:

Ingwald OBERNBERGER
 BIOS Bioenergiesysteme, AUSTRIA

Marco BARATIERI
 Free University of Bolzano, ITALY

4BV.1.1
 Maximilian STEINER
 Institute of Thermal Engineering, Graz University of Technology, AUSTRIA
 Co-authors: P. Nowak, M. Buchmayr, Hargassner, Weng, Austria; A. Anca-Couce, Universidad Carlos III de Madrid, Thermal and Fluids Engineering Department, Spain; C. Hochenauer, R. Scharler, Institute of Thermal Engineering, Graz University of Technology, Austria
STEPWISE DEVELOPMENT OF AN ULTRA-LOW NOX CONCEPT WITH PRIMARY AND SECONDARY MEASURES IN MULTI-FUEL BIOMASS GRATE FURNACES

4BV.1.4
 Chuan MA
 WIP Renewable Energies, GERMANY
 Co-authors: R. Mergner, WIP Renewable Energies, Munich, Germany; N. Striugas, R. Skvorcinskiene, Lithuanian Energy Institute, Kaunas, Lithuania; M. Seemann, Chalmers Tekniska Hoegskola, Goteborg, Sweden; S. Bastek, Technische Universitaet Muenchen, Munich, Germany; A. Pazeraitė, Vytautas Magnus University, Kaunas, Lithuania; R. Stancikiene, AB Panevezio stiklas, Panevezys, Lithuania; P. Bingham, Sheffield Hallam University, Sheffield, United Kingdom; W. Schmidbauer, SCOTT, Mainz, Germany; B. Glocker, PlasmaAir AG, Weil der Stadt, Germany
SUSTAINABLE GLASS MANUFACTURING THROUGH FUEL-FLEXIBLE TECHNOLOGIES—THE GIFFT PROJECT

4BV.1.5
 David SCHOBEL
 University of Technology Graz, AUSTRIA
 Co-authors: L. von Berg, C. Hochenauer, R. Scharler, University of Technology Graz, Austria; A. Anca-Couce, Carlos III University of Madrid, Spain; D. Lello, Ekasi Energy, Stellenbosch, South Africa
CFD-AIDED DEVELOPMENT OF LOW-COST MULTI-FUEL TLUD COOKSTOVES WITH EXTREMELY LOW EMISSIONS

4BV.1.6
 Paul HAZEMANN
 IFP Energies Nouvelles, FRANCE
 Co-authors: H. Ameur, W. Pelletant, J. Ravet, P. Foucault, N. Vin, S. Barale, A. Lambert, P. Font, IFP Energies Nouvelles, Solaize, France
BIOMASS COMBUSTION KINETICS IN CLC BATCH REACTOR

4BV.1.8
 Paul STUART
 Polytechnique Montreal, Chemical Engineering Dpt., CANADA
 Co-authors: R. Vaillant, Polytechnique Montreal, Canada; V. Chambost, EnVertis Consulting, Montréal, Canada
ASSESSMENT OF LEADING CARBON CAPTURE TECHNOLOGIES FOR DECARBONIZING KRAFT PULP MILLS

4BV.1.13
 Rainer JANSSEN
 WIP Renewable Energies, GERMANY
 Co-author: S. Caneva, WIP - Renewable Energies, Munich, Germany
FROM WASTE TO SYNGAS—THE APPROACH OF THE EUROPEAN PROJECT SUPREMAS

4BV.1.14
 Francesco GALLUCCI
 CREA-IT, ITALY
 Co-authors: F. Gallucci, E. Paris, B. Vincenti, M. Carnevale, A. Palma, CREA-IT, Monterotondo, Italy
STUDY OF THE PARAMETERS AFFECTING THE QUALITY OF SYNGAS IN A FLUID BED GASIFIER: EFFECT OF THE BED MATERIAL

4BV.1.15

Keng-Tung WU

National Chung Hsing University, Forestry Dpt., TAIWAN

Co-authors: C. Tsai, P. Kao, National Chung Hsing University, Taichung, Taiwan; L. Su, Y. Liou, C. Cheng, Industrial Technology Research Institute, Nantou, Taiwan

GASIFICATION OF SOLID RECOVERED FUEL WITH DECHLORINATING AGENTS IN A BUBBLING FLUIDIZED BED GASIFIER**4BV.1.16**

Beethoven NARVÁEZ-ROMO

University of São Paulo, BRAZIL

Co-authors: E. Ribeiro, G. Pasca, P. Costa, M. Souza, J. Meneghini, T. Lopes, University of Sao Paulo, Brazil

ELECTROCHEMICAL AND MORPHOLOGICAL CHARACTERIZATION OF A COMMERCIAL ANODE-SUPPORTED SOFC**4BV.1.17**

Rafiandy Dwi PUTRA

DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Thermochemical Conversion Dpt., GERMANY

SLAGGING BEHAVIOR OF PRE-TREATED STRAW AND WOODY RESIDUES IN THE GASIFICATION CONDITION**4BV.1.18**

Hans BACHMAIER

Technology & Support Centre in the Centre of Excellence for Renewable Resources, Solid Biofuels Dpt., GERMANY

Co-author: H. Hartmann, Technology & Support Centre in the Centre of Excellence for Renewable Resources, Straubing, Germany

PRACTICAL METHODS FOR REDUCING CHROMIUM (VI) IN ASHES FROM BIOMASS HEATING PLANTS**4BV.1.19**

Letizia CRETAROLA

Politecnico di Milano, Energy Engineering Dpt., ITALY

Co-authors: H. Luo, E. Larson, Princeton University, Usa; F. Viganò, S. Consonni, Politecnico di Milano, Italy

 BIOGENIC CARBON CAPTURE AT A KRAFT PULP MILL USING MOLTEN CARBONATE FUEL CELLS, A TECHNO-ECONOMIC STUDY**VISUAL PRESENTATIONS 6BV.2****09.00 - 10.00****Innovations in biogas and biochar production
ROOM: Poster Area B***This session will discuss the most recent innovations in biomass utilization for biogas and biochar production.***CHAIRPERSON:****Michael RENZ**

Universitat Politècnica de Valencia, SPAIN

6BV.2.4

Taiyo HATAGAMI

Graduate School of Agricultural and Life Sciences, The University of Tokyo, JAPAN

Co-authors: K. Furuhashi, Y. Kaizu, M. Mizoguchi, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan

IDENTIFICATION OF THE CHEMICAL AND PHYSICAL CHANGE AT THE SURFACE OF A PELLET OF POWDERED BIOCHAR FROM BIOMASS GASIFICATION WITH COMPOST**6BV.2.5**

María Magdalena PEÑA PÉREZ

Centro Tecnológico CTC, Advanced Materials and Nanomaterials Dpt., SPAIN

Co-authors: A. Yedra Martínez, C. Manteca Martínez, F. Aguirre Yagüe, L. Martínez Goyeneche, Centro Tecnológico CTC, Santander, Spain

DELIVERY SYSTEM FOR FERTILISER BASED ON BIOCHAR**6BV.2.6**

Kenichi FURUHASHI

The University of Tokyo, Graduate School of Agricultural and Life Sciences, JAPAN

Co-authors: M. Hagino, F. Hasegawa, Y. Kaizu, The University of Tokyo, Japan;

D. Hanajima, NARO, Hokkaido, Japan; S. Ishikawa, Rakuno Gakuen University, Hokkaido, Japan

DEVELOPMENT OF WEED SEED REMOVAL PROCESS FOR CONVERSION OF ANAEROBIC DIGESTATE FROM DAIRY MANURE INTO HIGH-QUALITY LIQUID FERTILIZER

6BV.2.9

Keiji JINDO

Wageningen University and Research, THE NETHERLANDS

Co-authors: M. Siegmund-Schultze, Wageningen University and Research, The Netherlands; A. Shibu, KPMG, Kerala, India

FROM WASTE TO VALUE: NUTRIENT CHARACTERISTICS OF BIOSLURRY FROM INDIAN BIOGAS FEEDSTOCKS**6BV.2.12**

José CHEEL

Institute of Microbiology, CAS, Algal Biorefinery Group, Laboratory of Algal Biotechnology, CZECH REPUBLIC

Co-authors: D. Bárcenas-Pérez, Y.Y. Salgado-Camacho, Centre Algatech, Institute of Microbiology, CAS, Trebon, Czech Republic

RECOVERY OF ASTAXANTHIN FROM RED YEAST USING COUNTERCURRENT CHROMATOGRAPHY**6BV.2.14**

Monica CORNEJO

Institute of Environmental Technology and Energy Economics, GERMANY

Co-author: M. Kaltschmitt, Institute of Environmental Technology and Energy Economics, TUHHute of Environmental Technolog, Hamburg, Germany

PROTEIN EXTRACTION FROM BIOETHANOL BY-PRODUCTS FOR HUMAN CONSUMPTION USING LIQUID HOT WATER PRETREATMENT**6BV.2.15**

Julia GONZÁLEZ-ÁLVAREZ

Universidade de Santiago de Compostela, Chemical Engineering Dpt., SPAIN

Co-authors: J.L. Lugo-Arias, A. Maturana, Universidad del Norte, Barranquilla, Colombia

REMOVAL OF NUTRIENTS FROM WATER USING BIOADSORBENTS DERIVED FROM AGRO-INDUSTRIAL WASTES**6BV.2.16**

Pyung Cheon LEE

Ajou University, Molecular Science and Technology Dpt., SOUTH KOREA

Co-authors: J.S. Kang, S. Lee, Ajou University, Suwon, South Korea

ISOLATION AND CHARACTERIZATION OF SPHINGOID BASE-PRODUCING WICKERHAMOMYCES CIFERRII MUTANTS**6BV.2.17**

Ioana IONEL

Politehnica University of Timisoara, Mechanical Engineering Dpt., ROMANIA

Co-authors: S. Farsad, N. El Alem, IBN ZOHR University, Agadir, Morocco;

I.-A. Halmaciu, Politehnica University of Timisoara, Romania; T.V. Vintila,

Universitatea de Stiintrele Vietii, Timisoara, Romania

TOWARDS ZERO WASTE: ANAEROBIC DIGESTION OF VEGETABLE WASTE AND DEVELOPMENT OF DIGESTATE-DERIVED MATERIAL AS AN EFFECTIVE PEROXYMONOSULFATE ACTIVATOR FOR ORANGE G REMOVAL**6BV.2.20**

Diana Victoria ARELLANO YASACA

Green Products Institute, TAIWAN

Co-author: C.Y. Chu, Green Products Institute, Taichung, Taiwan

AN ECONOMIC PERSPECTIVE OF VIABLE SOLUTIONS FOR NUTRIENT RECOVERY FROM FOOD WASTE DIGESTATE: A DUAL APPROACH UTILIZING STRUVITE PRECIPITATION AND NATURAL ADSORBENTS**VISUAL PRESENTATIONS 1BV.3****11.45 - 12.45****Biomass resource potentials and mobilisation
ROOM: Poster Area A***This collection of posters highlights diverse approaches to sustainability, focusing on waste management, biomass utilization, and the development of bio-based materials.***CHAIRPERSON:***Invited***1BV.3.1**

Louise AMOR-SEABROOKE

Newcastle University, Chemical Engineering Dpt., UNITED KINGDOM

Co-author: S. Velasquez-Orta, Newcastle University, Newcastle upon Tyne, United Kingdom

MAPPING FOOD WASTE DISPOSAL: IDENTIFYING GAPS AND STRATEGIES FOR SUSTAINABLE MANAGEMENT IN THE UK**1BV.3.4**

Stefany CARDENAS PEREZ

Nicolaus Copernicus University, POLAND

ASSESSING BIOMASS VARIABILITY IN SALICORNIA EUROPAEA L.**POPULATIONS: LEVERAGING COMPUTER VISION TO DISTINGUISH SALT-TOLERANCE TRAITS**

1BV.3.7

Jorge Mario MARCHETTI

Norwegian University of Life Science, Faculty of Science and Technology, NORWAY
 Co-authors: G.D. Gebre, Norwegian University of Life Science, Aas, Norway;
 S.N. Gebremariam, Wondo Genet College of Forestry & Natural Resources, Hawassa
 University, Shashamane, Ethiopia; Y.G. Keneni, Hawassa University, Ethiopia
**IMPACT OF EXTRACTION SOLVENT AND SEED PRETREATMENT ON OIL YIELD
 AND CALORIFIC VALUE OF DE-OILED RESIDUES FROM PAPAYA AND MANGO
 SEED VARIETIES**

1BV.3.8

Adriano ENSINAS

Federal University of Lavras, Engineering Dpt., BRAZIL
 Co-authors: A. Eensinas, R. Simbine, T. Ribeiro, Federal University of Lavras, Brazil
**ASSESSMENT OF SUSTAINABLE AVIATION FUEL PRODUCTION IN BRAZIL
 BASED ON JATROPHA CURCAS L. USING GEOSPATIAL DATA AND SPATIAL
 MODELING**

1BV.3.11

Adriano ENSINAS

Federal University of Lavras, Engineering Dpt., BRAZIL
 Co-authors: T.M. Ribeiro, J.V. Oliveira, Federal University of Lavras, Brazil
**MACAÚBA AS A SUSTAINABLE ALTERNATIVE: AVIATION BIOFUEL PRODUCTION
 AND CO₂ CAPTURE**

1BV.3.14

Moritz VON COSSEL

University of Hohenheim, Biobased Resources in the Bioeconomy (340b), GERMANY
 Co-authors: C. Hieber, E. Berwanger, University of Hohenheim, Stuttgart,
 Germany; F. Lebending, M. Müller, Institute of Energy and Climate Research,
 IEK-2, Forschungszentrum Jülich GmbH, Jülich, Germany; Y. Iqbal, College of
 Bioscience and Biotechnology, Hunan Agricultural University, Hunan, P.R. China;
 N.D. Jablonowski, Institute of Bio- and Geosciences, IBG-2: Plant Sciences,
 Forschungszentrum Jülich GmbH, Jülich, Germany
**PERENNIAL FLOWER-RICH WILD PLANTS FOR BIOENERGY: TWO-YEAR BIOMASS
 YIELD AND QUALITY ASSESSMENT IN COMPARISON WITH MISCANTHUS AND
 SIDA**

1BV.3.15

Andrew ROSS

University of Leeds, School of Chemical & Process Engineering, UNITED KINGDOM
 Co-authors: K. Ismail, University of Leeds, United Kingdom; S. Balachandran, Visva-
 Bharati, Santiniketan, India; G. Nahar, Defiant Renewables, Pune, India
**CHARACTERISATION OF INVASIVE AQUATIC PLANTS IN INDIA AND THEIR
 POTENTIAL CONVERSION BY ANAEROBIC DIGESTION**

1BV.3.18

Aki KADULIN

Estonian University of Life Sciences, ESTONIA
 Co-authors: M.R. Martinez, I. Melts, Estonian University of Life Sciences, Tartu,
 Estonia; M. Geetha, University of Toyama, Japan
**SUSTAINABLE MANAGEMENT OF SEMI-NATURAL GRASSLANDS IN JAPANESE
 TRADITIONAL AGRICULTURAL LANDSCAPE**

1BV.3.19

Thu NGUYEN

LUT University, Separation Sciences Dpt., FINLAND
 Co-authors: A. Ora, K. Melin, LUT University, Lahti, Finland
**GREEN EXTRACTIONS OF ANTIMICROBIAL BIOMATERIALS FROM MAPLE AND
 BIRCH LEAVES FOR SUSTAINABLE TEXTILE SOLUTIONS**

1BV.3.20

Myrsini CHRISTOU

Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE
 Co-authors: C. Za, L. Gavriil, Center for Renewable Energy Sources and Saving,
 Pikermi, Greece
**LIGNOCELLULOSIC POTENTIAL ASSESSMENT AND FEEDSTOCK
 CHARACTERIZATION**

1BV.3.23

Keiji JINDO

Wageningen University and Research, THE NETHERLANDS
 Co-authors: S. Njane Njehia, Y. Nagasaki, NARO, Nemuro, Japan
**RURAL REVITALIZATION BY PRECISION AGRICULTURE AND CIRCULAR
 ECONOMY IN SHIKAOI**

1BV.3.24

Ioana IONEL

Politehnica University of Timisoara, Mechanical Engineering Dpt., ROMANIA
 Co-authors: E.C. Dunca, S.M. Radu, L.A. Varga, C. Danciu, University of Petrosani, Romania; I.A. Halmaciu, Polytechnic University of Timisoara, Romania

ANALYSIS OF BIOMASS CROPS ON UNPRODUCTIVE LAND FOR ENERGY RECOVERY AND SOIL HEALTH RESTORATION**1BV.3.25**

Antonella IURATO

University of Catania, ITALY

Co-authors: A. Scandurra, S.A. Corinzia, B.R. Ciaramella, S.L. Cosentino, G. Testa, University of Catania, Italy; S. Calcagno, V. Cafaro, C. Patanè, CNR-Istituto per la BioEconomia (IBE), Catania, Italy

THE POTENTIAL OF MEDITERRANEAN MARGINAL LANDS FOR INDUSTRIAL CROPS PRODUCTION**VISUAL PRESENTATIONS 5BV.4**

11.45 - 12.45

Thermochemical processes for synthetic fuels from biomass and hydrogen
ROOM: Poster Area B

This group of posters focuses on various methods for producing hydrogen from biomass, emphasizing process optimization and efficiency.

CHAIRPERSON:**Oliver HURTIG**

European Commission, JRC, ITALY

5BV.4.1

Pablo COMENDADOR MORALES

University of the Basque Country, Chemical Engineering Dpt., SPAIN
 Co-authors: I. Garcia Gonzalez, L. Olazar Barona, E. Fernandez Saenz, M. Cortazar Dueñas, G. Lopez Zabalbeitia, University of the Basque Country, Leioa, Spain; M. Olazar Aurrecochea, University of the Basque Country of the Basque Country, Leioa, Spain

HYDROGEN PRODUCTION BY SORPTION ENHANCED STEAM REFORMING OF BIOMASS FAST PYROLYSIS VOLATILES: PROCESS OPTIMIZATION**5BV.4.2**

Covadonga PEVIDA GARCIA

Carbon Science and Technology Institute (INCAR) Spanish Council for Scientific Research, SPAIN

Co-authors: A. Vega Rodriguez, F. Rubiera Gonzalez, M.V. Gil Matellanes, Carbon Science and Technology Institute (INCAR) Spanish Council for Scientific Research, Oviedo, Spain

HYDROGEN PRODUCTION FROM BIOMASS-DERIVED SYNGAS VIA SORPTION-ENHANCED STEAM REFORMING: A FLEXIBLE AND EFFICIENT APPROACH FOR BIOREFINERIES**5BV.4.3**

Jun LI

University of Strathclyde, Chemical and Process Engineering Dpt., UNITED KINGDOM

Co-authors: L. MacDonald, W. Johnson, E. Brightman, University of Strathclyde, Glasgow, United Kingdom

HYDROGEN PRODUCTION VIA MEDIATED ELECTROLYSIS OF BIOMASS**5BV.4.7**

Ahmet Fatih KAYA

University of Modena and Reggio Emilia, Dipartimento di Ingegneria Enzo Ferrari, ITALY

Co-authors: S. Pedrazzi, M. Puglia, N. Morselli, G. Santunione, G. Allesina, University of Modena and Reggio Emilia, Modena, Italy

HYDROGEN FOR MOBILE APPLICATIONS FROM RESIDUAL BIOMASS: A PRELIMINARY ANALYSIS AND SIMULATION OF A HYDROGEN REFUELLING STATION**5BV.4.8**

Ihsan Nawaz KHAN

University of Tuscia, Economics, Engineering, Society and Business Organization Dpt., ITALY

Co-authors: A. Cardarelli, M. Barbanera, A.L. Facci, University of Tuscia, Viterbo, Italy
PROCESS SIMULATION OF AQUEOUS PHASE REFORMING FOR HYDROGEN PRODUCTION FROM CO-HTC DERIVED PROCESS WATER IN ASPEN PLUS

5BV.4.9

Sara RESTREPO-VALENCIA

University of Campinas, BRAZIL

Co-author: J Seabra, University of Campinas, Brazil

RENEWABLE HYDROGEN FROM SUGARCANE RESIDUES: ADVANCING BIOFUELS AND SYNTHETIC FUEL PRODUCTION THROUGH BIOMASS GASIFICATION

5BV.4.14

Juan GANCEDO VERDEJO

Instituto de Ciencia y Tecnología del Carbono, INCAR-CSIC, SPAIN

Co-authors: J. Gancedo, F. Rubiera, M.V. Gil, C. Pevida, Instituto de Ciencia y Tecnología del Carbono, INCAR-CSIC, Oviedo, Spain; C. Killmer, North Carolina State University, Raleigh, Usa

CAO-BASED SORBENT REGENERATION BY PRESSURE SWING ADSORPTION (PSA) IN CYCLIC BIOMASS SESR PROCESSES**5BV.4.18**

Marco BARATIERI

Free University of Bolzano, Faculty of Science and Technology, ITALY

Co-authors: S. Piazzzi, L. Menin, F. Patuzzi, Free University of Bolzano, Italy; D. Antolini, BiSTEMS, Bolzano, Italy

OPTIMIZATION OF SMALL-SCALE OXY-STEAM GASIFICATION AND CATALYTIC WATER-GAS SHIFT FOR RENEWABLE HYDROGEN PRODUCTION**5BV.4.20**

Pietro MELE

University of Rome Tor Vergata, Industrial Engineering Dpt., ITALY

Co-authors: L. Bartolucci, S. Cordiner, V. Mulone, University of Rome Tor Vergata, Italy

IMPACT OF THE HYDROGEN ATMOSPHERE ON THE ENERGY YIELD OF A HYDROLYSIS OF SOFTWOOD WASTE**5BV.4.21**

Osvaldo José VENTURINI

UNIFEI / FAPEPE, Instituto de Engenharia Mecânica, BRAZIL

Co-authors: T.T.G. Rezende, M.L.G. Reno, J.C.E. Palacio, D.C. Oliveira, E.E.S. Lora, D.J.S. Santos, Universidade Federal de Itajubá, Brazil

TECHNICAL, ECONOMIC, AND ENVIRONMENTAL ASSESSMENT OF HYDROGEN PRODUCTION VIA BIOMASS RESIDUE GASIFICATION IN MINAS GERAIS, BRAZIL**5BV.4.26**

Liangdong HU

Southeast University, P.R. CHINA

Co-authors: L. Xu, R. Xiao, H. Zhang, Southeast University, Nanjing, P.R. China

MLCT EFFECT ACCELERATES PHOTOCATALYTIC PREPARATION OF ALKANE FUELS FROM WASTE OILS BASED ON PT/RU(TPY)SO₃/TiO₂**VISUAL PRESENTATIONS 4BV.5****15.00 - 16.00****Clean biomass-based syngas generation
ROOM: Poster Area A***Overview of modeling approaches for biomass gasification and gas cleaning/upgrading of raw syngas.***CHAIRPERSONS:****Andrés ANCA-COUCÉ**

University Carlos III Madrid, SPAIN

Wiebren DE JONG

TU Delft, THE NETHERLANDS

4BV.5.1

Stefano PIAZZI

Free University of Bozen-Bolzano, Faculty of Engineering, ITALY

Co-authors: A. Schuh, V. Benedetti, M. Baratieri, Free University of Bozen-Bolzano, Italy; E. Arato, University of Genova, Italy

ACTIVATED CARBON DERIVED FROM BIOMASS GASIFICATION FOR HYDROGEN PRODUCTION**4BV.5.2**

Carlos ORDÓÑEZ MILLÁN

ICB-CSIC, GIM-ICB-CSIC Dpt., SPAIN

Co-authors: I. Martínez Berges, M.S. Callén Romero, J.M. López Sebastián, R. Murillo Villuendas, ICB-CSIC, Zaragoza, Spain

REFORMING OF TARS FROM A SORPTION ENHANCED GASIFICATION SYNGAS USING A NICKEL BASED CATALYST ACTIVE AT LOW TEMPERATURE**4BV.5.4**

Armando VITALE

Università degli Studi di L'Aquila, ITALY

Co-authors: A.A. Papa, M. Ragnoli, A. Di Carlo, Università degli studi di L'Aquila, Italy; B. Aydin, Walter Tosto spa, Chieti, Italy

AMMONIA PRODUCTION FROM BIOMASS: INTEGRATION OF GASIFICATION UNIT INTO AN AMMONIA PRODUCTION PLANT

4BV.5.5

Jisu LIM

Hyundai Steel, SOUTH KOREA

Co-authors: D.S. Lee, H. Kim, Hyundai Steel, Dangjin-si, Chungnam, South Korea

DEVELOPMENT OF BIO-SYNGAS FOR CARBURIZING APPLICATIONS IN STEEL INDUSTRY: CARBON NEUTRAL APPROACH**4BV.5.6**

Joo-Hyeong YOON

Korea Institute of Industrial Technology, Low-carbon Emission Control Dpt., SOUTH KOREA

Co-authors: J.S. Kim, S.H. Jeong, Korea Institute of Industrial Technology, Choenan-si, South Korea; E.E. Kwon, Hanyang University, Seoul, South Korea

CO-GASIFICATION OF CASHEW NUT SHELL AND WASTES POLYOLEFINS PYROLYSIS OIL IN A TWO-STAGE GASIFICATION SYSTEM: A STUDY ON AIR AND STEAM GASIFICATION**4BV.5.7**

Elisabetta ARATO

University of Genoa, DICCA Dpt., ITALY

Co-authors: C. Moliner, V. Carozzo, M. Curti, University of Genoa, Italy; M. Baratieri, University of Bozen, Italy

OPTIMIZATION OF A SPOUTED BED REACTOR FOR HYDROGEN PRODUCTION FROM AGRICULTURAL AND TEXTILE WASTE**4BV.5.9**

Daofeng MEI

Instituto de Carboquímica, ICB-CSIC, SPAIN

Co-authors: A. Abad, I. Adánez-Rubio, M.T. Izquierdo, F. García-Labiano, Instituto de Carboquímica, ICB-CSIC, Zaragoza, Spain

MICROALGAE CHEMICAL LOOPING GASIFICATION IN A 1.5 KWTH PILOT FOR THE THIRD-GENERATION (3RDG) BIOFUELS PRODUCTION**4BV.5.11**

Lena STEINER

TU Wien, AUSTRIA

Co-authors: A. Bartik, V. Gubin, H. Kohl, S. Müller, TU Wien, Vienna, Austria

OPTIMISING THE GAS CLEANING PROCESS DOWNSTREAM OF DUAL FLUIDIZED BED STEAM GASIFICATION**4BV.5.13**

Luís TARELHO

Universidade de Aveiro, Environment and Planning Dpt., PORTUGAL

Co-authors: M. Santos, J. Moura, J. Almeida, H. Gomes, M.A.A. Matos, Universidade de Aveiro, Portugal

CHARACTERISTICS OF THE PRODUCED GAS FROM GASIFICATION OF BIOMASS AND PLASTICS IN BUBBLING FLUIDIZED BED REACTOR**4BV.5.15**

Joaquín REINA HERDZ

Biogas & Gases Technologies, Bioenergía Dpt., SPAIN

STUDY OF THE INFLUENCE OF BIOGAS CLEANING ON THE PERFORMANCE OF THE COGENERATION SYSTEM (CHP). BTS-MPDRY TECHNOLOGY FOR BIOGAS CLEANING**4BV.5.16**

Andrés ANCA-COUCÉ

University Carlos III Madrid, Thermal and Fluids Engineering Dpt., SPAIN

Co-authors: E. Batuecas, A. Soria-Verdugo, J.F. Guil-Pedrosa, L.M. García-Gutiérrez, E. Cano-Pleite, University Carlos III Madrid, Leganés, Spain

LCA OF BIOMASS GASIFICATION TECHNOLOGIES, APPLICATIONS AND HYBRIDIZATION**4BV.5.17**

Silvia PENA MENESES

Nantes Université, FRANCE

Co-authors: J.F. Largeau, Icam, Nantes, France; K. Loubar, IMT Atlantique, Nantes, France; J. Bellettre, Nantes Université, France

MODELING THE COMPOSITION OF SYNGAS PRODUCED FROM PYROLYSIS AND GASIFICATION OF BIOMASSES FROM VARIOUS ORIGINS**4BV.5.18**

Håvard FALCH

SINTEF Energy Research, NORWAY

Co-authors: L. Riboldi, R. Anantharaman, SINTEF Energy Research, Trondheim, Norway; C. Birgen, SINTEF Ocean, Trondheim, Norway

DEVELOPMENT AND VALIDATION OF A GASIFICATION MODEL INCLUDING NON-EQUILIBRIUM METHANE PRODUCTION

4BV.5.19

María Victoria GIL MATELLANES
 Institute of Carbon Science and Technology, SPAIN
 Co-authors: M.P. González-Vázquez, F. Rubiera, C. Pevida, M.V. Gil, CSIC, Oviedo, Spain
A KINETIC MODEL APPROACH TO SIMULATE BIOMASS GASIFICATION OF DIFFERENT FEEDSTOCKS IN A FLUIDIZED BED REACTOR

4BV.5.30

Enrico BOCCI
 Università degli Studi Guglielmo Marconi, DSI Dpt., ITALY
 Co-authors: H.S. Muhammad, J.D. Palacios, Università degli Studi Guglielmo Marconi, Rome, Italy; A.A. Papa, A. Vitale, A. Di Carlo, Università degli Studi dell'Aquila, Rome, Italy
TECHNO-ECONOMIC ANALYSIS OF A PLANT ABLE TO PRODUCE SYNTHETIC NATURAL GAS OR ELECTRICITY FROM BIOGENIC WASTE: ERMES PROJECT

VISUAL PRESENTATIONS 5BV.6

15.00 - 16.00 **Biogenic feedstocks and biological processes for synthetic fuels from biomass and hydrogen**
ROOM: Poster Area B

This set of posters focuses on the production and utilization of biofuels and bio-derived hydrogen, with a particular emphasis on long-distance transportation and sustainable energy solutions.

CHAIRPERSON:

Iker AGUIRREZABAL
 Universidad del País Vasco, SPAIN

5BV.6.1

Nicolas RICARDO
 University of São Paulo, BRAZIL
 Co-authors: B. Narváez-Romo, S. Coelho, J. Meneghini, E. Rego, T. Lopes, University of São Paulo, Brazil; N. Brandon, Imperial College, London, United Kingdom
BRAZILIAN ETHANOL AS A POTENTIAL HYDROGEN ENERGY CARRIER FOR LONG DISTANCE TRANSPORTATION: A COMPREHENSIVE EVALUATION

5BV.6.3

Beethoven NARVÁEZ-ROMO
 University of São Paulo, BRAZIL
 Co-authors: D. Dionsio, I.F. Pereira, T. Lopes, E.C.N. Silva, J.R. Meneghini, RCGI, São Paulo, Brazil
CARBON VALORIZATION THROUGH ELECTROLYSIS: THE USE OF BIOGENIC CARBON AND QUANTIFICATION OF CO₂ EMISSIONS

5BV.6.4

Giampiero SACCHI
 Politecnico di Torino, Energy Dpt., ITALY
 Co-authors: D. Ferrario, A. Lanzini, Politecnico di Torino, Italy; A. Agostini, C. Carbone, A. Giaconia, C. Bassano, R. Roberto, ENEA, Roma, Italy
A COMPARISON OF THE BIOMETAVERSE PATHWAYS FOR ENHANCING BIOMETHANE PRODUCTION VIA BIOGAS UPGRADING WITH METHANATION

5BV.6.5

Beethoven NARVÁEZ-ROMO
 University of São Paulo, BRAZIL
 Co-authors: D. Dionsio, R.B. Valim, T. Lopes, E.C.N. Silva, J.R. Meneghini, RCGI, São Paulo, Brazil
ELECTROLYTIC CONCENTRATOR OF VINASSE: VALORIZATION OF BIOREFINERY CO-PRODUCT

5BV.6.11

Conall MCNAMARA
 Trinity College Dublin, School of Physics, IRELAND
 Co-authors: A. O'Shea, S. Dooley, Trinity College Dublin, Ireland
STEADY STATES OF ALKYL LEVULINATE (ADVANCED BIOFUEL) PRODUCTION FROM WASTE LIGNOCELLULOSIC BIOMASS VIA ALCOHOLYSIS

5BV.6.14

Edgar A. SILVEIRA
 University of Brasilia, Mechanical Engineering Dpt., BRAZIL
 Co-authors: G.N. Conceição, G.C. Lamas, T.S. Gonzales, S. Monteiro, University of Brasilia, Brazil
MODELING BIOHYDROGEN PRODUCTION FROM BIOMASS THROUGH DARK FERMENTATION FOR SUSTAINABLE ENERGY

5BV.6.18

Suani COELHO

University of Sao Paulo - Julio Romano Meneghini - PROCESSO FAPESP 2020/15230-5, BRAZIL

Co-authors: A.C. Gutierrez-Gomez, M.M. dos Santos, V.P. Garcilasso, D. Perecin, B. Narváez-Romo, J.R. Meneghini, K.L. Mascarenhas, M.S. Buckeridge, University of São Paulo, Brazil

EXPLORING THE ROLE OF HYDROGEN IN SUSTAINABLE AVIATION FUELS IN BRAZIL**5BV.6.20**

Bruna PICCIONE

Università di Bari, ITALY

Co-authors: F. Liuzzi, L. Bianco, F. Alagna, E. Fantini, L. Daddiego, P. Facella, L. Lopez, A. Villone, C. Fasano, F. Panara, Enea, Rotondella, Italy; G. Cangiulli, C. Montemurro, Università di Bari, Italy

IDENTIFICATION OF BIOCATALYSTS IN AN ENRICHED POPULATION OF HYDROGEN FERMENTING BACTERIA**5BV.6.22**

Michael BAMPAOU

CERTH, GREECE

Co-authors: T. Kraia, E. Koliamitra, V. Mitrousis, G. Kardaras, N. Lazaridou, T. Grekou, K. Fotiadis, A. Asimakopoulou, D. Koutsonikolas, G. Karagiannakis, K. Panopoulos, CERTH, Thessaloniki, Greece

ANALYSIS OF BIO-CO₂ STREAMS FOR METHANOL SYNTHESIS**5BV.6.23**

Michael BAMPAOU

CERTH, GREECE

Co-authors: V. Mitrousis, K. Panopoulos, CERTH, Thessaloniki, Greece; I. Matino, Scuola Superiore Sant'Anna, TECIP, Plisa, Italy; V. Colla, Scuola Superiore Sant'Anna, TECIP, Pisa, Italy; S. Haag, H. Shloesser, AIR LIQUIDE, Frankfurt, Germany

INTEGRATING BIO-CO₂ WITH RENEWABLE HYDROGEN FOR THE SYNTHESIS OF MARITIME METHANOL**VISUAL PRESENTATIONS 2BV.7****16.15 - 17.15****Biomass strategies and policies****ROOM: Poster Area A***This set of posters focuses on the socio-economic, policy, and regional impacts of bioenergy and bioeconomy initiatives, with a strong emphasis on sustainability and energy transitions.***CHAIRPERSON:****Birger KERCKOW**

FNR - Agency for Renewable Resources, GERMANY

2BV.7.6

Tapio RANTA

LUT University, School of Energy Systems, FINLAND

Co-authors: M. Laihanen, A. Karhunen, LUT University, Lappeenranta, Finland

BIOENERGY PROJECT ACTIVITIES AND THEIR REGIONAL IMPACTS THROUGH THE STRUCTURAL FUNDS PROGRAMME IN FINLAND**2BV.7.7**

Mohammad SADR

Helmholtz Zentrum für Umweltforschung, Bioenergy Dpt., GERMANY

Co-authors: D. Esmaeili Aliabadi, D. Thrän, Helmholtz Zentrum für Umweltforschung, Leipzig, Germany

EXPLORING KEY DRIVERS AND BARRIERS FOR DEPLOYING NEGATIVE EMISSION TECHNOLOGIES (NETS) IN GERMANY**2BV.7.8**

Unggung WIDHIANTORO

Indonesia University, INDONESIA

Co-authors: M. Karuniasa, A. Sodri, Indonesia University, Depok, Indonesia

OPTIMIZATION OF LOCAL BIOMASS UTILIZATION FOR A JUST ENERGY TRANSITION (A STUDY AT THE TANJUNG JATI POWER PLANT, INDONESIA)**2BV.7.9**

Jarno FÖHR

Lappeenranta-Lahti University of Technology, Energy Technology Dpt., FINLAND

Co-author: T. Ranta, Lappeenranta-Lahti University of Technology LUT, Mikkeli, Finland

IMPACT OF EU POLICY ACTIONS ON FINNISH FORESTS AND THEIR CERTIFICATION

2BV.7.10

Jesús LASARTE LÓPEZ

Joint Research Centre, SPAIN

Co-authors: N. Grassano, Universidad Loyola Andalucía, Sevilla, Spain; B. Rokicki, R. M'barek, Joint Research Centre, Sevilla, Spain

THE TERRITORIAL DIMENSION OF THE EU BIOECONOMY: APPLYING FIRM-LEVEL DATA FOR THE ANALYSIS OF REGIONAL BIO-BASED INDUSTRY**2BV.7.11**

Jonathan HEIL

Fraunhofer UMSICHT, GERMANY

METHOD DEVELOPMENT FOR THE COMMERCIALISATION OF PRODUCTS FROM A BIOGAS PLANT**2BV.7.16**

Markku PAANANEN

JAMK University of Applied Sciences, Dynamic Bioenergy, Cluster Manager, FINLAND

Co-authors: A. Aalto, H. Honkanen, Jamk University of Applied Sciences, Jyväskylä, Finland; A. Sobolewski, M. Olesiak, Pro Civis Foundation, Kielce, Poland

UNLOCKING THE CIRCULARITY POTENTIAL FOR RURAL BIOECONOMY VALUE CHAINS WITH INTER-REGIONAL SMART SPECIALIZATION CO-OPERATION**2BV.7.17**

Ana Luisa FERNANDO

Universidade Nova de Lisboa, Chemistry Dpt., PORTUGAL

Co-authors: F. Cativa, Universidade Nova de Lisboa, Caparica, Portugal; J. Costa, ISEC LISBOA, Lisboa, Portugal

THERMOCHEMICAL CONVERSION OF CROP RESIDUES IN THE PROVINCE OF HUÍLA, ANGOLA—WHAT'S THE IMPACT?**2BV.7.18**

Myrsini CHRISTOU

Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE

Co-authors: C. Tourkolias, D. Mezartasoglou, C. Zafiris, Center for Renewable Energy Sources and Saving, Pikermi, Greece

MARKET UPTAKE MEASURES FOR BIOMETHANE IN EUROPE**2BV.7.21**

Christian OBERBAUER

BEST - Bioenergy and Sustainable Technologies, Area 2.3 Microgrids and Smart Energy Communities, AUSTRIA

Co-author: S. Aigenbauer, BEST - Bioenergy and Sustainable Technologies, Wieselburg, Austria

INVESTIGATING FUTURE PROSPECTS OF BIOMASS BASED SOLID FUEL BOILERS UNDER ANTICIPATED ENERGY LABEL CHANGES**VISUAL PRESENTATIONS 5BV.8****16.15 - 17.15****Applied pyrolysis
ROOM: Poster Area B***This poster session deals with applied paralysis investigations in laboratory and pilot scale and with technological aspects in pyrolysis.***CHAIRPERSON:****Christopher KICK**

Fraunhofer UMSICHT, GERMANY

5BV.8.2

Sanjeev YADAV

Shiv Nadar Institution of Eminence, Chemical Engineering Dpt., INDIA

Co-author: M. Aggarwal, Shiv Nadar Institution of Eminence, Gautam Budha Nagar, India

HOT VAPOR RESIDENCE TIME INFLUENCE ON TWO-PHASE BIO-OIL FORMATION FROM FAST PYROLYSIS OF MIXED FOOD WASTE**5BV.8.4**

Yuya SAKURAI

Kogakuin University, JAPAN

Co-authors: M. Hiratsuka, J. Kobayashi, Kogakuin University, Tokyo, Japan

INITIAL PYROLYSIS CHARACTERISTICS OF SOFTWOOD HEMICELLULOSE BASED ON REAXFF MOLECULAR DYNAMICS SIMULATIONS**5BV.8.5**

Hyeongjin KIM

KITECH, SOUTH KOREA

Co-authors: J. Kim, S. Jeong, KITECH, Chenan-si, South Korea; S. Chun, Seoul National University of Science and Technology, Seoul-si, South Korea

PYROLYSIS OF CASHEW NUT SHELL TO PRODUCE FUEL OILS: THE EFFECT OF ADDING WASTE POLYOLEFIN FRACTIONS TO THE FEEDSTOCKS

5BV.8.6

Su-Hyeon CHOI

Korea Institute of Industrial Technology, SOUTH KOREA

Co-authors: J. Kim, J. Yoon, S. Jeong, Korea Institute of Industrial Technology, Cheonan-si, South Korea; M. Seo, University of Seoul, Cheonan-si, South Korea

TWO-STAGED CO-PYROLYSIS OF VIRGIN POLYSTYRENE (PS) FRACTION AND CASHEW NUT SHELLS (CNS): CHARACTERIZATION OF PYROLYSIS OIL**5BV.8.7**

Pedro SOUZA

KTH Royal Institute of Technology, Process Technology Dpt., SWEDEN

Co-authors: F. Rolih, Politecnico di Torino, Torino, Sweden; E. Kanterelis, KTH RoyalKTH Royal Institute of Technology Institute of Technology, Stockholm, Italy; K. Engvall, KTH Royal Institute of Technology, Stockholm, Sweden

FLUIDIZED-BED FAST PYROLYSIS OF AGRICULTURAL RESIDUES: IMPACT OF BED MATERIAL FRESHNESS ON PRODUCT DISTRIBUTION AND COMPOSITION**5BV.8.8**

Maria Lourdes MARTÍNEZ-CARTAS

University of Jaen, Chemical, Environmental and Materials Engineering Dpt., SPAIN

Co-authors: P.J. Soler Núñez, M. Cuevas Aranda, A.A. Karim, M^a L. Martínez Cartas, University of Jaen, Linares, Spain**IMPROVEMENT OF THE ENERGETIC CHARACTERISTICS OF EXHAUSTED OLIVE POMACE BY LOW TEMPERATURE PYROLYSIS AND LEACHING OF BIOCHARS****5BV.8.12**

Marco COLOMBI

Politecnico di Milano, Energy Dpt., ITALY

Co-authors: M. Binotti, Politecnico di Milano, Italy; T. García, Instituto de Carboquímica-CSIC, Zaragoza, Spain; N. Puy, Centre de Ciència i Tecnologia Forestal de Catalunya, Solsona, Spain; G. Marlair, Institut National de L Environnement Industriel et des Risques - INERIS, Verneuil en Halatte, France; C. Lorreyte, German Aerospace Center - DLR, Köln, Germany; V. Kulman, NOVA-Institut fur Politische und Okologische Innovation, Heurth, Germany; G. Lombardi, Consorzio per la ricerca e la dimostrazione sulle energie rinnovabili - RE-CORD, Scarperia e San Piero, Italy; M. Prussi, Politecnico di Torino, Italy; M. Fantini, EUCORE, Roma, Italy

PSOLO: PYROLYSIS OF BIOMASS BY CONCENTRATED SOLAR POWER**5BV.8.13**

Luís TARELHO

Universidade de Aveiro, Environment and Planning Dpt., PORTUGAL

Co-authors: M.C. Santos, C.C. Marques, T. Hauschild, F.G.C.S. Silva, M.A.A. Matos, Universidade de Aveiro, Portugal

PYROLYSIS OF RESIDUAL FOREST BIOMASS IN A PILOT-SCALE AUGER REACTOR FOR COMBINED PRODUCTION OF BIOCHAR AND PROCESS HEAT**5BV.8.15**

Hope BALOYI

University of South Africa, Chemical and Materials Engineering Dpt., SOUTH AFRICA

PYROLYSIS BEHAVIOUR OF BINARY BLENDS OF WASTE TYRE CRUMBS, MICROALGAE SCENEDESMUS SP. AND TORREFIED WOOD BY THERMOGRAVIMETRIC ANALYSIS**5BV.8.17**

Matteo FRANCAVILLA

University of Foggia, Agriculture, Food and Environmental Science Dpt., ITALY

Co-authors: T. Gull, M. Marone, P. Marasco, University of Foggia - STAR*Facility Centre, Italy; M. Fedele, M. Salvatori, Sistemi Energetici, Foggia, Italy

UPCYCLING PLASTIC WASTE INTO VALUABLE PRODUCTS VIA BIOCHAR-ENHANCED MICROWAVE-ASSISTED CO-PYROLYSIS**5BV.8.21**

Ana Catarina Miranda VILAS BOAS

University of Aveiro, Environment and Planning Dpt., PORTUGAL

Co-authors: L.C.M. Ruivo, J.M.O. Moura, M.I.S. Nunes, A.J.D. Silvestre, L.A.C. Tarelho, University of Aveiro, Portugal

SIDERITE/CONCRETE CATALYST FOR OXYGEN REDUCTION IN BIO-OIL FROM RESIDUAL BIOMASS PYROLYSIS**5BV.8.22**

YongWoon LEE

Korea Institute of Industrial Technology, Thermochemical Energy System Group, SOUTH KOREA

Co-author: K. Cho, Korea Institute of Industrial Technology, Cheonansi, South Korea
HYDROGEN PRODUCTION FROM HDPE VIA BIOCHAR CATALYSIS: INFLUENCE OF BIOCHAR TEMPERATURE ON CHAR CRACKING AND SOLID CARBON ADSORPTION

VISUAL PRESENTATIONS 2BV.9

17.30 - 18.30 **Modelling and decision making in bioenergy systems**
ROOM: Poster Area A

Presentations are dealing with modeling, simulation, and optimization of bioenergy systems, with a strong emphasis on uncertainty management and sustainability.

CHAIRPERSON:**Tapio RANTA**

LUT University, FINLAND

2BV.9.2

Eduardo CANO-PLEITE

University Carlos III Madrid, Thermal and Fluids Engineering Dpt., SPAIN

Co-authors: L. von Berg, R. Scharler, C. Hochenauer, Graz University of Technology, Austria; A. Soria-Verdugo, A. Anca-Couce, University Carlos III of Madrid, Leganés, Spain

COMPARATIVE STUDY OF PARTICLE-LEVEL BIOMASS GASIFICATION MODELING FOR A 1 MW FLUIDIZED BED REACTOR USING ANSYS FLUENT AND MFIX

2BV.9.4

Sandra GUTJAHR

Helmholtz Centre for Environmental Research, GERMANY

Co-authors: D. Aliabadi, D. Thrän, Helmholtz Centre for Environmental Research, Leipzig, Germany

TANGO OF RENEWABLES IN THE TRIANGLE OF UNCERTAINTY: A STOCHASTIC PROGRAMMING APPROACH

2BV.9.5

Georgiana BELE

Natural Resources Canada, CANADA

Co-authors: M. Moubarak, M.S. Ouali, Polytechnique Montreal, Montreal, Canada; E. Ibrahim, A. Ragab, M. Benali, C. Diffo Tégua, Natural Resources Canada, Varennes, Canada

AI-DRIVEN OPTIMIZATION OF FAST PYROLYSIS: MAXIMIZING BIO-OIL AND BIOCHAR

2BV.9.7

Ari KUISMA

Jamk University of Applied Sciences, FINLAND

Co-author: M. Paananen, Jamk University of Applied Sciences, Jyväskylä, Finland

IMPLEMENTATION OF A DISTRIBUTED DATA ACQUISITION SYSTEM IN HYBRID DISTRICT HEATING SYSTEM

2BV.9.9

Akshat SUDHESHWAR

Empa, SWITZERLAND

PROBABILISTIC MULTI-PERSPECTIVE APPLICATION SELECTION FOR SAFE AND SUSTAINABLE-BY-DESIGN: A CASE STUDY ON BIOCHAR

2BV.9.10

Brent YOUNG

University of Auckland, Chemical & Materials Engineering Dpt., NEW ZEALAND

Co-authors: R.M. Kalpage, W. Yu, University of Auckland, New Zealand

A SIMULATION-BASED EXAMINATION OF BIOMASS-ELECTRIC HYBRID ENERGY SYSTEMS ENGAGING IN DEMAND RESPONSE FOR THE DECARBONISATION OF INDUSTRIAL UTILITIES

2BV.9.12

Raja CHOWDHURY

Indian Institute of Technology, Roorkee, Civil Engineering Dpt., INDIA

Co-authors: P. Kumar, S. Kumar, Indian Institute of Technology, Roorkee, Roorkee, India

ROLE OF ROAD SECTOR FOR ACHIEVING THE NET ZERO GOAL SET BY INDIAN GOVERNMENT

VISUAL PRESENTATIONS 6BV.10

17.30 - 18.30

Co-production of biofuels and biochemicals
ROOM: Poster Area B

Research areas address critical aspects of sustainability and resource management for biofuels and biochemicals production with different approaches.

CHAIRPERSON:**Belén MONJE MARTÍNEZ**

AIMPLAS · Plastics Technology Centre, SPAIN

6BV.10.1

Filemon JALU NUSANTARA PUTRA

Kobe University, Chemical Science and Engineering Dpt., JAPAN

Co-authors: P. Kahar, A. Kondo, C. Ogino, Kobe University, Japan

INTEGRATED CHEMICAL AND BIOLOGICAL PROCESSING OF PALM WASTE (OIL PALM EMPTY FRUIT BUNCH) FOR SIMULTANEOUS LIPIDS AND LIGNIN MONOMERIC ALCOHOLS PRODUCTION

6BV.10.4

Ushna KHALID

The University of Manchester, UNITED KINGDOM

Co-authors: J. Pittman, C. Theodoropoulos, The University of Manchester, United Kingdom

ENHANCED CO-PRODUCTION OF BIOFUELS AND BIOCHEMICALS FROM OLEAGINOUS YEASTS AND MICROALGAE CO-CULTIVATION USING WASTE GLYCEROL SUBSTRATES**6BV.10.6**

Bernd WITTEGENS

SINTEF Industry, Process Technology Dpt., NORWAY

Co-authors: T. Trinh, M. Gilardi, F. Bisotti, A. Brunsvik, Sintef, Trondheim, Norway

RECOVERY OF ALCOHOLS IN AQUEOUS STREAM FROM STABILIZED PYROLYSIS OIL PROCESS**6BV.10.7**

Sungwan KWON

Korea Institute of Industrial Technology, SOUTH KOREA

Co-authors: J.H. Park, W.D. Kim, Korea Institute of Industrial Technology(KITECH), Cheonan-si, South Korea; S.H. Jeong, SungKyunKwan University(SKKU), Suwon-si, South Korea

CONTROLLING CO/H₂ SELECTIVITY IN DRY REFORMING OF METHANE BY TUNING MOLTEN METAL CATALYST COMPOSITION**6BV.10.8**

Elisa FISCHETTI

CREA, ITALY

Co-authors: A. Assirelli, M. Carnevale, F. Gallucci, CREA - Research Center for Engineering & Agro-Food Processing, Monterotondo, Italy; K. Carbone, CREA - Research Center for Olive and tree fruits, Rome, Italy

ALMOND PEEL, CHARACTERIZATION OF THE BY-PRODUCT FOR SUSTAINABLE VALORIZATION PROCESSES**VISUAL PRESENTATIONS 5CV.1****09.00 - 10.00****New trends in hydrothermal liquefaction
ROOM: Poster Area A***Advancements in Hydrothermal Liquefaction (HTL) technology, emphasizing process optimization, by-product utilization, and a deeper understanding of reaction pathways.***CHAIRPERSON:****Hary DEMEY**

Commissariat à L'Energie Atomique et aux Energies Alternatives, FRANCE

5CV.1.1

Abdollahif AREF

Free University of Bolzano, Sustainable Energy and Technologies Dpt., ITALY

Co-authors: A. Cascioli, F. Patuzzi, M. Baratieri, Free University of Bolzano, Italy; V. Benedetti, University of Trento, Italy

FAST HYDROTHERMAL LIQUEFACTION OF AMINO ACIDS AND ASSOCIATED REACTION PATHWAYS**5CV.1.4**

Vicente LOPEZ

Fundación Cener, Biomass Dpt., SPAIN

Co-authors: I. Del Capo, R. Perez-Vega, I. Funcia, M. Lopez, CENER, Sarriguren, Spain

INNOVATION IN HYDROTHERMAL LIQUEFACTION: EFFECT OF DIFFERENT WASTE ON BIOCRUDE**5CV.1.9**

Raja CHOWDHURY

Indian Institute of Technology, Roorkee, Civil Engineering Dpt., INDIA

Co-author: H. Chandola, Indian Institute of Technology, Roorkee, India

MODELING OF HYDROTHERMAL LIQUEFACTION PROCESS FOR ENERGY REQUIREMENTS AND YIELD OF DIFFERENT PRODUCTS**5CV.1.10**

Emmanuel BALA

Karlsruhe Institute of Technology, Institute for Catalysis Research and Technology, GERMANY

Co-authors: U. Hornung, N. Dahmen, Karlsruhe Institute of Technology, Germany
HYDROTHERMAL LIQUEFACTION (HTL) OF LIGNIN—A COMPUTATIONAL AND EXPERIMENTAL APPROACH TO THE ADSORPTION SEPARATION OF CATECHOL

5CV.1.11

Alejandro PINZOLAS-RUBIO

Universidad Complutense de Madrid, SPAIN

Co-authors: D. Martín-Gutiérrez, P. Suárez-Rodríguez, J.A. Delgado-Dobladez, V.I. Águeda-Maté, M. Larriba, Universidad Complutense de Madrid, Spain

HTL GAS CLEANING PHASE FOR CO₂ UTILISATION USING THE HTL SOLIDS AS AN ADSORBENT**5CV.1.12**

Alessandro CASCIOLI

Free University of Bozen-Bolzano, Faculty of Science and Technology, ITALY

Co-authors: V. Benedetti, University of Trento, Italy; A. Abdollatif, F. Patuzzi, M. Baratieri, Free University of Bozen-Bolzano, Italy; F. Bressan, Agan, Padova, Italy

FROM HTL TO FAST-HTL: UPGRADING OF A CONTINUOUS REACTOR FOR IMPROVED EFFICIENCY IN HYDROTHERMAL LIQUEFACTION**VISUAL PRESENTATIONS 1CV.2****09.00 - 10.00****Biomass availability and logistics
ROOM: Poster Area B***Assessment of the potential of biomass resources for bioenergy and biomaterial production, addressing also waste management and invasive species challenges.***CHAIRPERSONS:****Athanasios RENTIZELAS**

National Technical University of Athens, GREECE

Brian Jonathan YOUNG

INTA, ARGENTINA

1CV.2.2

Elisa FISCHETTI

CREA, ITALY

Co-authors: A. Scarfone, A. Assirelli, M. Montanari, E. Santangelo, G. Mandolino, A. Del Giudice, V. Civitarese, A. Acampora, A. Suardi, M. Pagano, R. Tommasone, C. Cedrola, Consiglio per la Ricerca e la Sperimentazione in Agricoltura, Monterotondo, Italy

TOPPING OF HEMP: EFFECTS ON PLANT GROWTH AND HARVESTING**1CV.2.3**

Elisa FISCHETTI

CREA, ITALY

Co-authors: A. Scarfone, A. Assirelli, E. Santangelo, A. Acampora, A. Suardi, G. Sperandio, V. Civitarese, CREA, Roma, Italy

HEMP FOR SEED PRODUCTION: EVALUATION AND USE OF RESIDUAL BIOMASS POST-HARVESTING**1CV.2.4**

Elisa FISCHETTI

CREA, ITALY

Co-authors: R. Tomasone, A. Scarfone, A. Assirelli, M. Montanari, E. Santangelo, G. Mandolino, A. Del Giudice, V. Civitarese, A. Acampora, A. Suardi, M. Pagano, C. Cedrola, CREA, Roma, Italy

INNOVATIVE APPROACH FOR HEMP SEED OIL EXTRACTION: PRELIMINARY RESULTS FROM THE DEVELOPMENT AND USE OF A PORTABLE FIELD PRESS**1CV.2.7**

Antonella IURATO

University of Catania, ITALY

Co-authors: V. Cafaro, C. Patanè, CNR-IBE, Catania, Italy; L. Siracusa, CNR-ICB, Catania, Italy; G. Testa, S.L. Cosentino, Università di Catania, Italy

MORPHO-PHYSIOLOGICAL RESPONSE TO WATER AND SALT STRESS IN HEMP UNDER LED LIGHT**1CV.2.8**

Sylvain MARSAC

ARVALIS, R&D Dpt., FRANCE

Co-authors: N. Dagorn, ARVALIS Institut du Végétal, Baziege, France; O. Deudon, ARVALIS Institut du Végétal, Boigneville, France; C. Richard, S. Tesseron, A. Michel, ENGIE - CRIGEN, Stains, France

IMPACT OF CLIMATE CHANGE ON THE BIOMASS POTENTIAL OF ENERGY COVER CROPS BY 2050**1CV.2.11**

Hans LANGEVELD

Research4Life, THE NETHERLANDS

Co-authors: M. Lamichhane, J.W.A. Langeveld, A. Lazarus, Biomass Research, Wageningen, The Netherlands

BIOMETHANE POTENTIAL FROM FOOD WASTE IN AFRICA

1CV.2.12

Amanda VELOSO

Airbus Defence and Space, FRANCE

Co-authors: C. Biller, M. Wolde-Mikael, Airbus Defence and Space, Toulouse, France

ESTIMATING COVER CROP BIOMASS FROM SATELLITE IMAGES TO SUPPORT DECARBONIZATION EFFORTS**1CV.2.17**

Sandor BARTHA

Ecoipar, BIO C-Romania Dpt., ROMANIA

Co-authors: F. Carvalheiro, LNEG -Bioenergy Unit, Lisbon, Portugal; L.C. Duarte,

LNEG - Bioenergy Unit, Lisbon, Portugal; N. Antal, University Babes Bolyai Cluj

Napoca, Extension Sf. Gheorghe, Sfantu Gheorghe, Romania

PRODUCTION PELLETS FROM CORN COB BIOREFINERY RESIDUE RESULTED AFTER ACID HYDROLYSIS—SUSTAINABLE SOLUTION FOR BIOENERGY PRODUCTION**1CV.2.19**

Ryan LONGLEY

University of Leeds, Chemical and Process Engineering Dpt., UNITED KINGDOM

Co-authors: A. Ross, University of Leeds, United Kingdom; O. Miria, Makerere

University Kampala, Kampala, Uganda

RESOURCE ASSESSMENT OF WATER HYACINTH ON LAKE VICTORIA: ESTIMATING RESOURCES AND OPPORTUNITIES FOR BIOENERGY AND BIOMATERIALS**1CV.2.20**

Kallappan T. PARTHIBAN

Forest College & Research Institute, Tree Breeding & Agroforestry Dpt., INDIA

Co-authors: V. Subbulakshmi, ICAR - Central Arid Zone Research Institute, Bikan,

India; P.S. Devanand, S. Revathi, M.V. Jawahar Vishnu, P. Kumar, S. Deepshikha, Forest

College & Research Institute, TNAU, Coimbatore, India

IMPROVEMENT AND UTILIZATION OF JATROPHA GENETIC RESOURCES (HYBRID CLONES) FOR SUSTAINABLE BIOFUEL PRODUCTION**1CV.2.24**

Alessandra PICCITTO

University of Catania, Di3A Dpt., ITALY

Co-authors: S.A. Corinzia, E. Crapio, P. Caruso, G.A. Cali, S.L. Cosentino, G. Testa,

Università degli Studi di Catania, Italy; C. Patanè, CRN-Istituto per la BioEconomia

(IBE), Catania, Italy

ASSESSING CROP WATER USE OF INDUSTRIAL CROPS UNDER DIFFERENT IRRIGATION INPUT USING A SUB WATER RETENTION SYSTEM**VISUAL PRESENTATIONS 4CV.3****11.45 - 12.45****Biomass pre-treatment and production of intermediates****ROOM: Poster Area A***This session covers a variety of biomass pre-treatment technologies for the production of intermediates and their characterisation.***CHAIRPERSONS:****Capucine DUPONT**

The Delft Institute for Water Education, THE NETHERLANDS

Stella BEZERGIANNI

Centre for Research & Technology Hellas, GREECE

4CV.3.4

Medya Hatun TANIS

Lund University, SWEDEN

Co-authors: E. Vercoutere, Ghent University, Belgium; B. Al-Rudainy, O. Wallberg,

Lund University, Sweden

LIGNIN RECOVERY FROM NORWAY SPRUCE BY GVL-ORGANOSOLV**4CV.3.5**

Johan VAN DYK

GTI Energy, Technology Dpt., USA

Co-author: A. Eastland, GTI Energy, LA, Usa

UNDERSTANDING BIOMASS VERSUS COAL CHARACTERIZATION (FUNDAMENTAL AND SCIENTIFIC UNDERSTANDING OF BIOMASS PROPERTIES FOR GASIFICATION)**4CV.3.6**

Bassazin Ayalew MEKONNEN

KU Leuven, Mechanical Engineering Dpt., BELGIUM

Co-authors: F. Norman, F. Verplaetsen, Adinex, Herentals, Belgium; J. De Greef,

M. Vanierschot, KU Leuven, Leuven, Belgium; S.W. Fanta, Bahir Dar University, Bahir

Dar, Ethiopia

THERMAL ANALYSIS AND TORREFACTION OF SPENT COFFEE GROUND (SCG) FOR SUSTAINABLE SOLID FUEL PRODUCTION USING A GREWER OVEN

4CV.3.7

Izabella MAJ

Silesian University of Technology, Power Engineering and Turbomachinery Dpt.,
POLANDCo-authors: K. Niesporek, K. Matus, Silesian University of Technology, Gliwice,
Poland**RETENTION OF HEAVY METALS DURING THE THERMAL CONVERSION OF
POULTRY LITTER AND HYDROCHAR****4CV.3.9**

Diani MUHANDIRAM

University of Agder, NORWAY

Co-authors: S. Roy, S. Rudra, University of Agder, Grimstad, Norway

**NUMERICAL MODELING AND VALIDATION OF A HYDRODYNAMIC CAVITATION
REACTOR WITH ORIFICE PLATE FOR DELIGNIFICATION****4CV.3.10**

Michael DARAMOLA

University of Pretoria, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: L. Mulaudzi, S.A. Iwarere, University of Pretoria, South Africa

**EFFECTS OF BASIC WASHING PARAMETERS AND RECIRCULATION OF WASHING
AGENT ON ASH COMPOSITION DURING WASHING PRETREATMENT OF
WOOD BIOMASS USING AQUEOUS PHASE DERIVED FROM HYDROTHERMAL
CARBONISATION OF WOOD BIOMASS****4CV.3.12**

Henrique MACHADO

CMC BIOMASSA, PORTUGAL

Co-author: L. Coelho, CASAL & CARREIRA - BIOMASSA, Juncal, Portugal

**CONVERSION OF AGRICULTURAL WASTE IN THE CONTEXT OF SUGAR-BASED
BIOREFINERIES: PRELIMINARY CASE STUDY FOR PORTUGUESE ALMOND HULL
AND GRAPE POMACE****4CV.3.13**

Vorapat SANGUANCHAIPAIWONG

King Monkut's Institute of Technology Ladkrabang, Biology Dpt., Faculty of Science,
THAILANDCo-authors: T. Rinthanapipat, T. Wongyou, King Monkut's Institute of Technology
Ladkrabang, Ladkrabang, Thailand**PRETREATMENT AND HYDROLYSIS OF EUCALYPTUS FOR BIOBUTANOL
PRODUCTION USING CLOSTRIDIUM SP. G10****4CV.3.15**

Elisa FISCHETTI

CREA, ITALY

Co-authors: M.V. Lasorella, F. Lupia, CREA - Research Center for agriculture Policy
and Bioeconomy, Bologna, Italy; F. Gallucci, CREA - Research Center for Engineering
& Agro-Food Processing, Monterotondo, Italy; A. Assirelli, CREA - Research Center
for Engineering & Agro-Food Processing, Ravenna, Italy**EVALUATION OF AGROFORESTRY BIOMASSES AVAILABLE FOR ENERGY
PURPOSES IN A MUNICIPALITY IN CENTRAL ITALY AS INSTRUMENT FOR
ENERGY PLANNING****4CV.3.16**

Felix ENDRISS

University of Applied Sciences Rottenburg, GERMANY

Co-author: H. Thorwath, Hochschule für Forstwirtschaft Rottenburg, Rottenburg am
Neckar, Germany**EVALUATION OF A MICROWAVE SENSOR FOR ON-LINE MEASUREMENT OF
WATER CONTENT IN SOLID BIOFUELS****4CV.3.17**

Hope BALOYI

University of South Africa, Chemical and Materials Engineering Dpt., SOUTH AFRICA

Co-author: M. Nzimande, University of South Africa, Florida, Johannesburg, South
Africa**BIOMASS WASTES AS ALTERNATIVE GREEN ENERGY FOR OPERATION OF LIME
KILN****4CV.3.20**

longfei HONG

Southeast University, P.R. CHINA

Co-authors: R. Xiao, S. Chu, H.Y. Zhang, Southeast University, Nanjing, P.R. China

NEAR-INFRARED LIGHT DRIVEN BIOMASS CONVERSION**4CV.3.26**

Edgar A. SILVEIRA

University of Brasilia, Mechanical Engineering Dpt., BRAZIL

Co-authors: T.F. Oliveira, B.S. Frantzen, University of Brasilia, Brazil

**EXPERIMENTAL ANALYSIS OF INTERMITTENT DRYING CYCLES IN LUMBER:
ENERGY SAVINGS AND PRODUCT QUALITY**

VISUAL PRESENTATIONS 3CV.4

11.45 - 12.45

Biorefinery concepts and processes I
ROOM: Poster Area B*Overall biorefinery concepts and processing parts are illustrated.***CHAIRPERSON:****Maria GEORGIADOU**

European Commission, DG RTD, BELGIUM

3CV.4.4

Hui-Jun WANG

National Atomic Research Institute, TAIWAN

Co-authors: C. Ou, G. Gou, National Atomic Research Institute, Taoyuan, Taiwan

STUDY OF SCALE-UP AND OPTIMIZATION OF FERMENTATION PROCESSES FOR PRODUCING POLYHYDROXYALKANOATES BY BACILLUS STRAIN**3CV.4.5**

Gianfrancesco RUSSO

Università degli studi di Perugia, ITALY

Co-authors: G. Fabbri, N. Ascani, M. Gelosia, V. Coccia, S. Esposito, A. Nicolini,

Università degli studi di Perugia, Italy

OPTIMIZATION OF PHENOLIC COMPOUNDS EXTRACTION AND ENZYMATIC HYDROLYSIS OF SPENT COFFEE GROUNDS (SCG)**3CV.4.6**

Edgar A. SILVEIRA

University of Brasilia, Mechanical Engineering Dpt., BRAZIL

Co-authors: L. Wanick, G.C. Lamas, T.S. Gonzales, University of Brasilia, Brazil

BIOHYDROGEN PRODUCTION THROUGH THE BIOCHEMICAL PATHWAY OF ANAEROBIC DIGESTION—A REVIEW**3CV.4.10**

Clarissa BERGMAN-FONTE

Fundação COPPETEC, Energy Planning Dpt., BRAZIL

Co-authors: D. Amaral, B. Nunes Garcia, L. Lorentz, A. Szklo, COPPE/UFRJ/Brazil, Rio de Janeiro, Brazil; I.S. Tagomori, PBL Netherlands Environmental Assessment Agency, Den Haag, The Netherlands; P.R.R. Rochedo, Khalifa University, Abu Dhabi, United Arab Emirates; F. Lantz, IFP Energies Nouvelles, IFP School, Rueil-Malmaison, France

BIOMASS CO-PROCESSING IN OIL REFINERIES: FROM BIOMASS SUPPLY CHAIN TO FINAL PRODUCTS**3CV.4.11**

Stella BEZERGIANI

Centre for Research & Technology Hellas, Chemical Process & Energy Resources Institute, GREECE

Co-author: L. Chrysikou, CERTH Centre for Research and Technology Hellas, Thessaloniki, Greece

TOWARDS ADVANCED BIOFUELS UNDER A MICROALGAE BIOREFINERY APPROACH**3CV.4.17**

Philipp PETERMEIER

AEE INTEC, AUSTRIA

Co-authors: B. Muster-Slawitsch, AEE INTEC, Gleisdorf, Austria; J. Lindorfer, Energy Institute at Johannes Kepler University Linz, Linz, Austria; S. Serna-Loaiza, Institute of Chemical, Environmental and Bioscience Engineering, TU Vienna, Vienna, Austria; P.R. Stuart, Polytechnique Montréal, Canada

STRATEGIC APPROACHES TO NET ZERO AND NEGATIVE EMISSION CONCEPTS FOR BIOREFINERIES

VISUAL PRESENTATIONS 4CV.5

15.00 - 16.00

Biogas and biomethane
ROOM: Poster Area A*This poster session gives an overview on different aspects of biogas research and development.***CHAIRPERSON:****Bernhard DROSG**

BEST - Bioenergy and Sustainable Technologies, AUSTRIA

4CV.5.8

Stefano TROTTA

CRPA, ITALY

Co-authors: M. Soldano, M. Garuti, Centro Ricerche Produzioni Animali - CRPA, Reggio Emilia, Italy

MODELLING BIOMETHANE EMISSIONS OF DIGESTATE STORAGE

4CV.5.9

Elisa FISCHETTI
CREA, ITALY

Co-authors: M.V. Lasorella, CREA - Research Center for agriculture Policy and Bioeconomy, Bologna, Italy; A. Assirelli, CREA - Research Center for Engineering & Agro-Food Processing, Monterotondo, Italy

STRENGTHS AND WEAKNESSES OF THE ANAEROBIC DIGESTION: THE ITALIAN CASE STUDY AS SUSTAINABLE APPROACH**4CV.5.10**

Javier DÍAZ PINEDA

University of Valencia, Chemical Engineering Dpt., SPAIN

Co-authors: J. Revert Vercher, J. Diaz Pineda, J.B. Giménez García, J. Ribes Bertomeu, University of Valencia, Burjassot, Valencia, Spain

ANAEROBIC CO-DIGESTION OF WWTP PRIMARY SLUDGE WITH PROCESS WATER FROM HYDROTHERMAL CARBONIZATION OF DEWATERED SLUDGE**4CV.5.12**

Betul ESEN

University of Leeds, School of Chemical and Process Engineering Dpt., UNITED KINGDOM

Co-authors: A.B. Ross, University of Leeds, United Kingdom; J.M.M. Adams, Aberystwyth University, United Kingdom

A COMPARISON OF PRETREATMENT APPROACHES FOR ENHANCING THE BIOGAS YIELD FROM WATER HYACINTH**4CV.5.16**

Antti KARHUNEN

Lappeenranta-Lahti University of Technology, LUT School of Energy Systems - Bioenergy, FINLAND

Co-authors: M. Laihanen, T. Ranta, Lappeenranta-Lahti University of Technology, Finland

FARM-SCALE UTILISATION OF BIOGAS IN FINLAND, CASE SOUTH SAVO**4CV.5.19**

Ronghou LIU

Shanghai JiaoTong University, School of Agriculture and Biology, P.R. CHINA

Co-authors: D. Yellezuome, X. Zhu, Shanghai JiaoTong University, P.R. China

EFFECT OF ACIDOGENIC HEADSPACE PRESSURE ON HYDROGEN AND METHANE PRODUCTION IN A TWO-STAGE ANAEROBIC CO-DIGESTION SYSTEM**4CV.5.21**

Önder UYSAL

Isparta University of Applied Sciences, TURKEY

Co-authors: O. Uysal, F.O. Uysal, K. Ekinçi, R. Yildirim, Isparta University of Applied Sciences, Turkey

DETERMINATION OF BIOGAS METHANE POTENTIAL OF MICROALGAE GROWN IN ROSE OIL PROCESSING WASTEWATER**4CV.5.30**

Alejandra CÓRDOVA VALENCIA

Cetaqua, Water Technology Centre, Zero Waste and Decarbonisation Dpt., SPAIN

Co-authors: T. Alvariño, M. Vilaplana, D. Checa, Cetaqua, Water Technology Centre, Barcelona, Spain; M. Poch, M. Ruiz, Aigües de Barcelona, Barcelona, Spain

BIOLOGICAL METHANATION FOR COST-EFFECTIVE BIOMETHANE PRODUCTION: THE SEMPRE-BIO PROJECT AT BAIX LLOBREGAT WWTP**4CV.5.33**

Angela VENTURA PRADOS

VenpraLab, Microbiology, SPAIN

Co-author: J. Solis Garcia, VenpraLab, Madrid, Spain

DESIGN, MONITORING, AND APPLICATION OF A COST-EFFECTIVE BIOREACTOR FOR BIOGAS PRODUCTION**VISUAL PRESENTATIONS 6CV.6**

15.00 - 16.00

Developments in biomass conversion to chemicals and materials
ROOM: Poster Area B

This session will discuss the recent developments in biomass valorization for the production of chemicals and materials.

CHAIRPERSON:

Invited

6CV.6.4

Giuseppe PIPITONE

Politecnico di Torino, DISAT Dpt., ITALY

Co-authors: C. Ciervo, S. Fraterrigo Garofalo, Politecnico di Torino, Italy

EXTRACTION OF POLYPHENOLS FROM WINEMAKING BYPRODUCTS USING NATURAL DEEP EUTECTIC SOLVENTS: AN EXPERIMENTAL AND TECHNO-ECONOMIC INVESTIGATION

6CV.6.7

Ha Yeon KIM

Bio-energy Research Center, Chonnam National University, SOUTH KOREA

Co-authors: H.-J. Bae, Bio-energy Bio-energy Research Center, Chonnam National University/Research Center, Gwangju, South Korea; S.H. Jang, Bio-Energy Research Center, Chonnam National University, Gwangju, South Korea

ENHANCING BIOACTIVE UTILIZATION IN GREEN AND BLACK TEA RESIDUES: SUSTAINABLE FUNCTIONAL SUGAR PRODUCTION THROUGH ENZYMATIC HYDROLYSIS**6CV.6.8**

Michael RENZ

Universitat Politecnica de Valencia, Institute of Chemical Technology, SPAIN

Co-authors: A. Marco Aleixandre, UInstituto Tecnológico Metalmeccánico, Mueble, Madera, Embalaje y Afines (AIDIMME), Valencia, Spain; R.M. Pérez Campos, UInstituto Tecnológico Metalmeccánico, Mueble, Madera, Embalaje y Afines (AIDIMME) Instituto Tecnológico, Valencia, Spain; M. Hitzl, Ingelia, Valencia, Spain

RENEWABLE AND RECYCLABLE PANELS FROM WET LIGNOCELLULOSE**6CV.6.10**

Aleksander HEJNA

Poznan University of Technology, Institute of Material Technology, POLAND

Co-author: M. Barczewski, Poznan University of Technology, Poland

SUSTAINABLE UPCYCLING OF SOLID BREWERY WASTES INTO DISPOSABLE PRODUCTS**6CV.6.11**

Michael DARAMOLA

University of Pretoria, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: N. Ndwandwa, F. Ayaa, University of Pretoria, South Africa

SYNTHESIS AND CHARACTERIZATION OF AGAR-BASED NANOCOMPOSITE FILMS REINFORCED WITH CELLULOSE NANOFIBERS AS A GROWING MEDIUM FOR MUSHROOMS**6CV.6.14**

Svetlana BUTYLINA

LAB University of Applied Sciences, Technology Dpt., FINLAND

Co-authors: K. Mustonen, A. Elo, LAB University of Applied Sciences, Lappeenranta, Finland

VALORIZATION OF PRODUCTS DERIVED FROM AGRO-WASTE BY MEANS OF GREEN EXTRACTION**6CV.6.15**

Abhishek R. VARMA

Indian Institute of Technology Hyderabad, Chemical Engineering Dpt., INDIA

Co-authors: B.S. Shrirame, S.K. Maity, Indian Institute of Technology Hyderabad, Kandi, Sangareddy, Hyderabad, India

CHEMOCATALYTIC CONVERSION OF 1,4-BUTANEDIOL OVER HZSM-5 CATALYSTS**6CV.6.18**

Marianny COMBARIZA

Universidad Industrial de Santander, Chemistry Dpt., COLOMBIA

Co-authors: C. Blanco-Tirado, L. Calderón-Vergara, M. Flórez, M. Ramírez, Universidad Industrial de Santander, Bucaramanga, Colombia

PHOSPHATE RECOVERY AND RECYCLING FROM DOMESTIC WASTEWATER USING RESIDUAL BIOMASS-DERIVED MATERIALS**6CV.6.21**

Lara CAMPOS

Technical University of Denmark, DTU Bioengineering Dpt., DENMARK

Co-authors: A. Krejlund, S.S. Queiroz, S.I. Mussatto, Technical University of Denmark, Kongens Lyngby, Denmark; M. Henriques, A.C. Veloso, Polytechnic University of Coimbra, Portugal; C. Silva, CITEVE - Technological Center for the Textile and Clothing Industries of Portugal, Vila Nova de Famalicão, Portugal

OPTIMIZATION OF ENZYMATIC HYDROLYSIS OF CORK POWDER FOR SUGAR RECOVERY**6CV.6.23**

Tooba QURESHI

Aalto University, Bioproducts and Biosystems Dpt., FINLAND

Co-author: L. Desbessell, Aalto University, Espoo, Finland

MAPPING PATHWAYS AND FEASIBILITY TO UPSCALE THE PRODUCTION OF THIRD GENERATION MAN-MADE CELLULOSIC FIBERS**6CV.6.25**

Marcell GYURKAC

National Institute of Chemistry, SLOVENIA REPUBLIC

Co-authors: E. Jasiukaityte-Grojzdek, B. Likozar, M. Grilc, National Institute of Chemistry, Ljubljana, Slovenia Republic; M. Knez Marevci, University of Maribor, Maribor, Slovenia Republic; R.S. Kalb, M. Damm, Proionic, Raaba-Grambach, Austria
LIGNIN EXTRACTION FROM LOCAL HERBACEOUS WASTE BIOMASS BY IONIC LIQUIDS—A RECYCLING STUDY

6CV.6.26

Carla DIAS

Universidade Nova de Lisboa, Faculdade de Ciências e Tecnologias, Química Dpt., PORTUGAL

Co-authors: V.G.L. Souza, L. Mersmann, M.H. Godinho, A.L. Fernando, Universidade Nova de Lisboa, Caparica, Portugal; J.R.A. Pires, A. Martins, Bio4Plas, Cantanhede, Portugal

BIOPLASTICS REINFORCEMENT WITH NANOCELLULOSE**6CV.6.28**

Fernando PAZ CEDENO

UNESP, Bioenergy Research Institute, BRAZIL

Co-authors: M. Brienzo, UNESP, Rio Claro, Brazil; F. Masarin, UNESP, Araraquara, Brazil

FRACTIONATION OF SUGARCANE BAGASSE INTO HIGHLY PURIFIED AMORPHOUS CELLULOSE AND HEMICELLULOSE**6CV.6.29**

Fernando MASARIN

São Paulo State University, Bioprocess Engineering and Biotechnology Dpt., BRAZIL

Co-authors: M. Brienzo, F. Roberto Paz Cedeno, Bioenergy Research Institute, São Paulo State University (UNESP), Rio Claro-SP, Brazil

IMMOBILIZATION OF ENDOGLUCANASE AND XYLANASE ON MAGNETIZED GRAPHENE OXIDE**VISUAL PRESENTATIONS 6CV.7****16.15 - 17.15****Biomass valorization for different applications
ROOM: Poster Area A***This session will discuss strategies for biomass valorization and utilization in different areas.***CHAIRPERSON:****Yukihiko MATSUMURA**

Hiroshima University, JAPAN

6CV.7.1

Cristina MOLINER

University of Genova, ITALY

Co-authors: V. Schiattarella, S. Moioli, G. De Guido, Politecnico di Milano, Milan, Italy
COMPARATIVE ASSESSMENT OF TRADITIONAL AND BIO-BASED SOLVENTS FOR CO₂ CAPTURE: BALANCING PERFORMANCE AND ENVIRONMENTAL IMPACT**6CV.7.2**

Brigita HOCEVAR

National Institute of Chemistry, Catalysis and Chemical Reaction Engineering Dpt., SLOVENIA REPUBLIC

Co-authors: M. Gabric, F.M. Harth, J. Terzan, M. Grilc, B. Likozar, National Institute of Chemistry, Ljubljana, Slovenia Republic; S. Gyergyek, Jozef Stefan Institute, Ljubljana, Slovenia Republic

IMPROVED STABILITY OF RHENIUM-BASED CATALYSTS FOR THE SELECTIVE DEOXYDEHYDRATION OF ALDARIC ACIDS TO ADIPIC ACID AND ITS ESTERS**6CV.7.3**

Rok POGOREVC

National Institute of Chemistry Slovenia, Catalysis and Chemical Reaction Engineering Dpt., SLOVENIA REPUBLIC

Co-authors: B. Hocevar, M. Grilc, B. Likozar, National Institute of Chemistry Slovenia, Ljubljana, Slovenia Republic

CATALYTIC CONVERSION OF AMINO ACIDS INTO ADDED VALUE N-CHEMICALS**6CV.7.5**

Abubakar AHSAN

Hamad Bin Khalifa University, QATAR

Co-author: B. McKay, Hamad Bin Khalifa University, Doha, Qatar

ORGANIC WASTE MANAGEMENT IN THE MIDDLE EAST AND NORTH AFRICA (MENA) REGION: EUROPEAN POLICY LESSONS AND CLIMATE-ADAPTED COMPOSTING TECHNOLOGIES**6CV.7.6**

Serena LIMA

University of Palermo, ITALY

Co-authors: A. Marchese, A. Cosenza, F. Scargiali, University of Palermo, Italy

USE OF AGRI-FOOD WASTE HYDROLYSATE AND CIVIL WASTEWATER FOR MICROALGAL CULTIVATION**6CV.7.8**

Rebecca SERNA GARCÍA

University of Valladolid, SPAIN

Co-authors: R. Serna, Y. Lanzoni, S. Cantera, R. Muñoz, University of Valladolid, Spain

VALORIZING BIOGAS INTO PHARMACEUTICAL PRODUCTS: THE ROLE OF METHANOTROPHIC CULTURES AND ALGAL-METHANOTROPHIC CO-CULTURES

6CV.7.9

Ines DEL CAMPO

Fundación Cener, Biomass Energy Dpt., SPAIN

Co-authors: I. Alegria, I. Funcia, V. Lopez, CENER, Sarriguren, Spain

CASCADE VALORIZATION OF OLIVE LEAF BIOMASS IN CENER BIO2C**6CV.7.10**

Léa BREUX

IFP Energies Nouvelles, FRANCE

Co-authors: N. Laloué, N. Cadran, D. Decottignies, IFP Energies Nouvelles, Solaize, France; Y. Schuurman, IRCELYON, Villeurbanne, France

EXPERIMENTAL STUDY AND MODELLING OF THE DEACTIVATION OF SUPPORTED COPPER CATALYSTS IN ETHANOL DEHYDROGENATION TO ACETALDEHYDE**6CV.7.12**

Suttijit SRIWATCHARAKUL

King Mongkut's Institute of Technology Ladkrabang, Biology Dpt., THAILAND

INVESTIGATION OF BIOACTIVITIES FROM CASSIA FISTULA LINN. EXTRACTS**6CV.7.13**

Matteo FRANCAVILLA

University of Foggia, Agriculture, Food and Environmental Science Dpt., ITALY

Co-authors: M.N. Saukat, M. Marone, P. Marasco, University of Foggia - STAR*Facility Centre, Italy

VALORIZATION OF ARTICHOKE BIOWASTE: ONE-POT EXTRACTION OF PHENOLS AND INULIN VIA MICROWAVE AND ULTRASOUND-ASSISTED TECHNIQUES**6CV.7.14**

Giorgos KARDARAS

CPERI/CERTH, GREECE

Co-authors: V. Proskynitopoulou, A. Vourros, P. Dimopoulos Toursidis, S. Lorentzou, K. Panopoulos, CERTH, Thessaloniki, Greece

VALORIZATION OF FOOD PROCESSING RESIDUES: NUTRIENT RECOVERY AND CIRCULAR SOLUTIONS FOR SUSTAINABLE AGRICULTURE**6CV.7.15**

Cinzia SANTONI

Free University of Bolzano, ITALY

Co-authors: F. Patuzzi, M. Baratieri, Free University of Bolzano, Italy; V. Benedetti, University of Trento, Italy; T. Diana, Biologik System, Bolzano, Italy

VALORIZATION OF AGRICULTURAL RESIDUES INTO COMPOST AND RENEWABLE THERMAL ENERGY: THE COMPOSTDIVINO PROJECT**6CV.7.17**

Ana Luisa FERNANDO

Universidade Nova de Lisboa, Chemistry Dpt., PORTUGAL

Co-authors: M. Aqeel, V.G.L. Souza, Universidade Nova de Lisboa, Caparica, Portugal

ADDING VALUE TO LIGNOCELLULOSIC WASTES—APPLICATION IN MICROENCAPSULATION OF FERTILIZERS AND CONTRIBUTING TO A SUSTAINABLE AGRICULTURE**6CV.7.19**

Tommaso NIERI

Next Technology Tecnotessile, ITALY

Co-authors: D. Spinelli, I. Canesi, M. Maccanti, Next Technology Tecnotessile, Prato, Italy

PHYBI: PHYTMANAGEMENT AS A SUSTAINABLE FEEDSTOCK SOURCE OF LIGNOCELLULOSIC-BASED HIGH VALUE BIO-BASED PRODUCTS FOR TEXTILE APPLICATIONS**6CV.7.21**

Stoyko PETRIN

UCTM, Pulp, Paper and Printing Arts, BULGARIA

Co-authors: I. Yordanov, G. Radeva, I. Valchev, UCTM, Sofia, Bulgaria; V. Savov, LTU, Sofia, Bulgaria

APPLICATION OF HYDROLYSIS LIGNIN IN THE PRODUCTION OF FIBREBOARDS**6CV.7.22**

Johann GORGENS

Stellenbosch University, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: M. Sikazwe, J. Louw, Stellenbosch University, Stellenbosch, South Africa

MULTI-OBJECTIVE DECISION ANALYSIS AND ENVIRONMENTAL ASSESSMENT OF INTEGRATED BIOREFINERIES: PREFERRED BIOPRODUCTS FOR PRIORITIZATION IN STRAIN AND BIOPROCESS DEVELOPMENT**6CV.7.26**

Alberto LOPEZ GIL

CellMat Technologies, Bio-foams Dpt., SPAIN

Co-authors: M.A. Rodriguez Perez, L. Oliveira Salmazo, University of Valladolid, Spain

VALORISATION OF AGRI-FOOD BY-PRODUCTS AS MICROMETRIC BIO-FILLERS WITH MULTIFUNCTIONAL ROLES IN POLYMER FOAMS

VISUAL PRESENTATIONS 3CV.8

16.15 - 17.15

Innovative biobased applications
ROOM: Poster Area B

Session presents different innovative biobased value chains and their techno economic and environmental performance.

CHAIRPERSON:**Berien ELBERSEN**

Wageningen Environmental Research, THE NETHERLANDS

3CV.8.1

Alberto ASSIRELLI

CREA - Research Center for Engineering & Agro-Food Processing, ITALY

Co-author: K. Carbone, CREA - Research Center for Olive and Tree Fruits, Rome, Italy

**A NOVEL APPROACH TO THE SUSTAINABILITY OF HOP CULTIVATION:
ASSESSING THE BIOACTIVE POTENTIAL OF HOP LEAVES****3CV.8.2**

Alberto ASSIRELLI

CREA - Research Center for Engineering & Agro-Food Processing, ITALY

Co-authors: T. Gasperini, C. De Francesco, E. Leoni, L. Olivi, Marche Politecnich University, Ancona, Italy; G. Toscano, Marche Politecnich University, Ancona, Italy

**FROM WASTE TO RESOURCE: ANALYZING WOOD PROCESSING RESIDUES IN
X-LAM PRODUCTION****3CV.8.5**

Elisa FISCHETTI

CREA, ITALY

Co-authors: A. Assirelli, M. Carnevale, F. Gallucci, CREA - Research Center for Engineering & Agro-Food Processing, Monterotondo, Italy; K. Carbone, CREA - Research Center for Olive and tree fruits, Rome, Italy

**CAROB WASTE AS AGRIFOOD PRODUCT: PHYSICO-CHEMICAL COMPOSITION
OF SEEDS****3CV.8.7**

Efthymia ALEXOPOULOU

CRES - Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE

**CURING CONTAMINATED AND SALINE LAND WITH INDUSTRIAL CROPS AND
PRODUCING BIOMASS FOR HIGH-VALUE APPLICATIONS—THE IASIS PROJECT****3CV.8.8**

Efthymia ALEXOPOULOU

CRES - Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE

**UTILIZATION OF MARGINAL LANDS FOR GROWING SUSTAINABLE INDUSTRIAL
CROPS AND DEVELOPING INNOVATIVE BIO-BASED PRODUCTS—THE MIDAS
PROJECT****3CV.8.9**

Sarah DE SOUZA QUEIROZ

Technical University of Denmark, DENMARK

Co-authors: S.S. Queiroz, S.I. Mussatto, Technical University of Denmark, Kongens Lyngby, Denmark; O. Gouseti, S. Bakalis, University of Copenhagen, Denmark

**STRUCTURAL CHARACTERIZATION AND PREBIOTIC ACTIVITY OF NON-
DIGESTIBLE OLIGOSACCHARIDES DERIVED FROM LIGNOCELLULOSIC
SUBSTRATES****3CV.8.11**

Francesco PATUZZI

Free University of Bolzano, Faculty of Engineering, ITALY

Co-authors: G. Zuccon, M. Baratieri, E. Boselli, E. Longo, Free University of Bolzano, Italy; A. Ceccon, Laimburg Research Centre, Bolzano, Italy; V. Benedetti, University of Trento, Italy

**GRAPESTALK PROJECT: A SUSTAINABLE APPROACH FOR THE VALORIZATION
OF GRAPE STALKS FROM THE WINEMAKING PROCESS****3CV.8.16**

Luziana HOXHA

University of Padova, ITALY

Co-authors: P. Lennartsson, M. Taherzadeh, University of Borås, Sweden; M. Marangon, University of Padova, Italy

**BIOTRANSFORMING EU WINE AND DISTILLERY BY-PRODUCTS: GRAPE MARC
VALORIZATION VIA EDIBLE FILAMENTOUS FUNGI FOR SUSTAINABLE PROTEIN
PRODUCTION****3CV.8.17**

Dimitrios SIDIRAS

University of Piraeus, Industrial Management and Technology Dpt., GREECE

Co-author: D. Politi, University of Piraeus, Greece

**MULTI-CRITERIA ANALYSIS FOR COMPARISON OF NUMEROUS ADSORBENT
MATERIALS PRODUCED BY VARIOUS LIGNOCELLULOSIC BIOMASS
PRETREATMENT METHODS**

3CV.8.19

Juan Carlos GUERRERO

AIDIMME, Materials Dpt., SPAIN

Co-authors: E. Serra, AIDIMME Technological Institut, Paterna, Valencia, Spain;

E. Papadopoulou, AIDIMME, Salónica, Greece

IMPROVING THE PRODUCTION OF INSULATING MATERIALS MADE WITH NATURAL BY-PRODUCTS AND ADHESIVES**3CV.8.23**

Luziana HOXHA

University of Padova, ITALY

Co-authors: P. Lennartsson, University of Borås, Sweden; M. Marangon, University of Padova, Italy; M. Taherzadeh, University of Borås, Italy

A NOVEL BIOREFINERY APPROACH USING EDIBLE ASCOMYCETE AND ZYGOMYCETE FILAMENTOUS FUNGI TO VALORIZE VINASSE FROM THE DISTILLERY INDUSTRY**VISUAL PRESENTATIONS 6CV.9****17.30 - 18.30****New approaches for the production of bio-based platform chemicals and polymers
ROOM: Poster Area A***The session addresses various new approaches for the production of bio-based platform chemicals and polymers, e.g. lignin depolymerisation and syngas fermentation.***CHAIRPERSONS:****Tim SCHULZKE**

Fraunhofer UMSICHT, GERMANY

Jaap KIEL

TNO, THE NETHERLANDS

6CV.9.7

Vicente LOPEZ

Fundación Cener, Biomass Dpt., SPAIN

Co-authors: I. Del Campo, I. Funcia, A. Clemente, J. Fernandez, CENER, Sarriguren, Spain

OHRIGINS: FROM LIGNIN TOWARDS A NEW ERA OF BIOAROMATIC PRODUCTS**6CV.9.8**

Ines DEL CAMPO

Fundación Cener, Biomass Energy Dpt., SPAIN

Co-authors: I. Alegria, V. Lopez, L. Garcia, D. Orol, CENER, Sarriguren, Spain

GAS FERMENTATION. A PROMISING CO₂ CONVERSION TECHNOLOGY FOR DECARBONIZATION CHALLENGES**6CV.9.9**

Andrew ROSS

University of Leeds, School of Chemical & Process Engineering, UNITED KINGDOM

Co-authors: D. Chernick, V. Dupont, University of Leeds, United Kingdom

PRODUCTION OF BIO-BASED SOLVENTS FROM THE PYROLYSIS OF LIGNIN-RICH RESIDUES**6CV.9.10**

Virginia MARTIN TORREJON

Brunel University London, Chemical Engineering Dpt., UNITED KINGDOM

Co-authors: U. Onwukwe, L. Anguilano, Brunel University London, United Kingdom

EVALUATION OF THE INFLUENCE OF ARSENIC EXTRACTION ON THE PROPERTIES OF SARGASSUM-BASED HYDROGELS AND FILMS FOR PACKAGING APPLICATIONS**6CV.9.12**

Carla DIAS

Universidade Nova de Lisboa, Faculdade de Ciências e Tecnologias, Química Dpt., PORTUGAL

Co-authors: L. Mersmann, V.G.L. Souza, I. Coelho, H. Godinho, A.L. Fernando, Universidade Nova de Lisboa, Caparica, Portugal; J.R.A. Pires, Bio4Plas, CantanhedeCaparica, Portugal; A. Martins, Bio4Plas, Cantanhede, Portugal

IMPROVING THE SUSTAINABILITY OF NANOCELLULOSE PRODUCTION FROM LIGNOCELLULOSIC RESIDUES**6CV.9.15**

Daniela MILLAN

Universidad Bernardo O'Higgins, CHILE

Co-author: T. Poblete, Universidad Bernardo O'Higgins, Santiago, Chile

DELIGNIFICATION WITH SUSTAINABLE SOLVENTS AND THE INFLUENCES OF WATER ON THE LIGNIN STRUCTURE

6CV.9.16

Johann GORGENS

Stellenbosch University, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: M.S. Brobbey, J. Louw, Stellenbosch University, South Africa

A TECHNO-ECONOMIC AND LIFE CYCLE ASSESSMENT OF MULTIPRODUCT SUGARCANE BIOREFINERY: AN ASSESSMENT FOR LACTIC ACID AS A PLATFORM CHEMICAL**6CV.9.17**

Yaime DELGADO-ARCANO

Technological University of Havana, Center for Renewable Energy Technology Study, CUBA

Co-authors: O.D. Valmaña-García, Center for Sustainable Development Studies, ECOTEC University, Guayaquil, Ecuador; D. Mandelli, W. Alves Carvalho, Federal University of ABC, São Paulo, Brazil; L.A. Magalhães Pontes, Federal University of Bahia, Salvador, Brazil

HIGH XYLITOL YIELD DIRECTLY FROM FRESH CORNCOB: THE ONE-POT APPROACH**VISUAL PRESENTATIONS 3CV.10****17.30 - 18.30****Examples of implementation in different countries and sectors: biobased, biochar and bioheat
ROOM: Poster Area B***Biobased implemetations will be presented in a range of countries/regions and sectors. Sectors range from biobased products, fuels, biochar and heating.***CHAIRPERSONS:****Daniela THRÄN**

Helmholtz Center for Environmental Research, GERMANY

Kees KWANT

Netherlands Enterprise Agency, Ministry of Economic Affairs, THE NETHERLANDS

3CV.10.1

Mirjam ROEDER

Aston University, Energy and Bioproducts Research Institute, UNITED KINGDOM

Co-authors: P.A. Okoro, P. Thornley, M. Röder, Aston University, Birmingham, United Kingdom; K. Chong, Energy Systems Catapult, Birmingham, United Kingdom

MODERN BIOENERGY AS A PATHWAY TO SUSTAINABLE DEVELOPMENT IN NIGERIA: A RICE VALUE-CHAIN CASE STUDY**3CV.10.2**

Boon-Ling YEO

University of California, Air Quality Research Center, USA

Co-authors: K. Li, S. Kirkland, H. Guo, B. Hartsough, A. Kendall, B. Jenkins, University of California, Davis, USA

INTEGRATED ECONOMIC AND ENVIRONMENTAL MODELING OF FOREST BIOMASS FOR RENEWABLE ENERGY IN CALIFORNIA: MODEL APPLICATION FOR SITE SPECIFIC BIOPOWER ANALYSIS**3CV.10.3**

Rainer JANSEN

WIP Renewable Energies, GERMANY

Co-author: R. Mergner, WIP GmbH & Co Planungs, Munich, Germany

PROMOTING INNOVATION EXCELLENCE IN TRANSFORMATION OF COAL REGIONS TO CLIMATE-NEUTRAL, THRIVING ECONOMIES**3CV.10.4**

Holger BRAUN

Nuertingen-Geislingen University, GERMANY

Co-authors: T. Venus, University of Passau, Passau, Germany; B. Rilling, C. Herbes, Nuertingen-Geislingen University, Nuertingen, Germany

DOES GREEN ACTION FOLLOW GREEN MOTIVATION? INSIGHTS FROM PEAT-FREE HOBBY GARDENING**3CV.10.5**

Chuan MA

WIP Renewable Energies, GERMANY

Co-authors: D. Celik, S. Caneva, I. Ball, WIP Renewable Energies, Munich, Germany; H. Gerdes, Z. Kiresiewa, Ecologic Institutue, Berlin, Germany; N. Bailet, Association of the Chambers of Agriculture of the Atlantic Area, Nantes, France; R. Castillo Barrero, Technological Corporation Andalusia, Seville, Spain; E. Mihajloska, The International Centre for Sustainable Development of Energy, Water and Environment Systems, Zagreb, Croatia; K. Rull Quesada, UNIMOS Alliance, Warsaw, Poland; W. Gabriele, Business Upper Austria, Linz, Austria; F. Feil, Biomass Technology Group, Enschede, The Netherlands; B. Kalla, Biofuel Region, Umea, Sweden

SCALING UP SUSTAINABLE BIOECONOMY IN EUROPEAN RURAL AREAS: THE SCALE-UP PROJECT

3CV.10.6

Thi Huyen Trang DAM

Leibniz-Institut für Agrartechnik und Bioökonomie, Technology Assessment Dpt., GERMANY

Co-authors: P. Grundmann, Leibniz-Institut für Agrartechnik und Bioökonomie, -Institut für Agrartechnik und Bi, Potsdam, Germany; K.T. Hamann, Institute for Evaluation of Labour Market and Education Policy, Uppsala, Sweden; S. Shahsharif Mohammadshafi, Leibniz-Institut für Agrartechnik und Bioökonomie, Potsdam, Germany

FACILITATING MARKET UPTAKE OF BIOBASED PRODUCTS: INSIGHTS FROM STAKEHOLDERS AT GALABAU 2024**3CV.10.7**

Erandy CORREA GUILLEN

Aalto University, FINLAND

Co-authors: S. Babaeipour, M. Österberg, L. Dessbesell, Aalto University, Espoo, Finland

SCALING-UP LIGNIN-BASED COATINGS: A TECHNO-ECONOMIC ANALYSIS FOR MARKET INTEGRATION AND INVESTMENT POTENTIAL**3CV.10.13**

Juuso KIVIJAKOLA

University of Oulu, IEM Dpt., FINLAND

Co-authors: A. Willman, P. Rönkkö, P. Tervonen, University of Oulu, Finland

SUSTAINABLE CIRCULAR ECONOMY ECOSYSTEM—TECHNO-ECONOMIC REVIEW OF BIOCHAR**3CV.10.14**

Leteng LIN

Linnaeus University, Built Environment and Energy Technology Dpt., SWEDEN

Co-authors: M. Nöjd, E. Zambrell, Linnaeus University, Växjö, Sweden

FEASIBILITY ASSESSMENT OF BIOCHAR CO-PRODUCTION FROM EXISTING BIOMASS-FIRED MOVING GRATE BOILER SYSTEM**3CV.10.15**

Robert MACK

Technology and Support Centre of Renewable Raw Materials, Solid Biofuels Dpt., GERMANY

Co-author: H. Hartmann, Technology and Support Centre of Renewable Raw Materials, Straubing, Germany

DO RESIDENTIAL PELLET STOVES NEED A SEPARATE PELLET QUALITY BESIDE ENPLUS A1**3CV.10.16**

Hans HARTMANN

Technology & Support Centre of Renewable Raw Materials, Solid Biofuels Dpt., GERMANY

Co-authors: R. Mack, F. Tomaschko, S. Härtl, Technology & Support Centre of Renewable Raw Materials, Straubing, Germany; V. Zelinski, University of Applied Sciences and Arts, Göttingen, Germany

EVALUATION OF METHODS FOR THE DETERMINATION OF PELLET LENGTH

VISUAL PRESENTATIONS 1DV.1

09.00 - 10.00 **Municipal and industrial bio-wastes**
ROOM: Poster Area A

Waste valorization and sustainable energy production, exploring diverse approaches from regional energy matrix impacts to advanced chemical recycling and waste-derived materials.

CHAIRPERSON:

Leonardo TOGNOTTI
 University of Pisa, ITALY

1DV.1.3

Federico TORO ALVAREZ
 Universidad Nacional de Colombia Sede Medellín, COLOMBIA
 Co-authors: M.A. Gutiérrez Gómez, J.M. Romero Salinas, C.A. Patiño Osorio, S. Soto Arcila, M.A. Delbarre Rojas, V.A. Córdoba Pizarro, D. Gil Rúa, Universidad Nacional de Colombia Sede Medellín, Medellín, Colombia

WASTE-TO-ENERGY POTENTIAL IN ANTIOQUIA, COLOMBIA: IMPACTS ON COLOMBIA'S ENERGY MATRIX

1DV.1.4

Sabyasachi CHATTOPADHYAY
 Karlsruhe Institute of Technology, Chair of Economic Geology and Mineral Deposits, GERMANY
 Co-authors: J. Reichelt, Institut für angewandte Bau- und Reststoff-Forschung, Bruchsal, Germany; D. Stein, J. Wagner, J. Kolb, E. Eiche, Chair of Geochemistry and Economic Geology, Institute of Applied Geosciences, Karlsruhe Institute of Technology, Karlsruhe, Germany

INVESTIGATIONS OF DIFFERENT BIOFUEL MIXTURES ON THE FORMATION POTENTIAL OF CAKING IN THE COMBUSTION CHAMBER AND DEPOSITS IN THE BOILER AREA OF BIOMASS POWER PLANTS

1DV.1.7

Shaivya ANAND
 University of Alberta, Mechanical Engineering Dpt., CANADA
 Co-authors: J. Joy, A. Kumar, University of Alberta, Edmonton, Canada
CIRCULAR ECONOMY OF PLASTIC WASTE VIA CHEMICAL RECYCLING ROUTES: A PATHWAY TOWARDS SUSTAINABILITY, RESOURCE OPTIMIZATION AND WASTE UTILIZATION

1DV.1.14

Patricia NEGRO LACRUZ
 SITRA, SPAIN
 Co-authors: E. Zuriaga Agustí, A. Sifre Alcantarilla, J.L. Nacher Civera, SITRA, Castellón, Spain; A. Grönroos, VTT, Jyväskylä, Finland; S. Wolman, RECYCLEYE, Birmingham, United Kingdom; B. Callens, SIEV ILVOTRA, Merelbeke, Belgium
MIXMATTERS: DEMO SEPARATION UNIT FOR THE VALORIZATION OF THREE AGRI-FOOD WASTES (WHOLESALE MARKET, GREENHOUSE AND FOOD INDUSTRY) IN AN INTEGRATED SYSTEM

VISUAL PRESENTATIONS 5DV.2

09.00 - 10.00 **New trends in hydrothermal gasification and carbonization**
ROOM: Poster Area B

This session covers hydrothermal technologies for biomass and waste conversion, emphasizing catalyst performance, product upgrading, and process optimization.

CHAIRPERSON:

Ralph P. OVEREND
 Biomass & Bioenergy Journal, CANADA

5DV.2.1

Xujun LI
 Paul Scherrer Institut, SWITZERLAND
 Co-authors: D. Baudouin, F. Vogel, Paul Scherrer Institut, Villigen PSI, Switzerland
PERFORMANCE AND STABILITY OF PT-BASED CATALYSTS IN HYDROTHERMAL GASIFICATION OF GLYCEROL FOR HYDROGEN-RICH GAS PRODUCTION

5DV.2.3

Hary DEMEY
 Commissariat à l'Énergie Atomique et aux Énergies Alternatives, CEA/DRT/LITEN/DTCH/SCPC/LRP Dpt., FRANCE
 Co-authors: L. Sepini, A. Chppaz, Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Grenoble, France
GOING BEYOND THE BARRIERS OF SLUDGE GASIFICATION IN SUPERCRITICAL WATER CONDITIONS: METHANE AND HYDROGEN PRODUCTION BY CATALYTIC SCWG

5DV.2.4

Andrii KOSTYNIUK

National Institute of Chemistry, Catalysis and Chemical Reaction Engineering Dpt., SLOVENIA REPUBLIC

Co-author: B. Likozar, National Institute of Chemistry, Ljubljana, Slovenia Republic

CONVERSION OF BIOMASS WASTE VIA WET TORREFACTION TO HIGH-VALUE 5-HMF AND HYDROCHAR FUEL IN A NITROGEN ATMOSPHERE**5DV.2.5**

Maurizio VOLPE

University of Enna - Kore, Facoltà di Ingegneria e Architettura, ITALY

Co-authors: A. Picone, A. Messineo, University of Enna - Kore Department of Engineering and Architecture, Italy; M. Umair, M. Bellardita, University of Palermo, Department of Engineering, Italy

HYDROTHERMAL CARBONIZATION OF CITRUS WASTES: HYDROCHARS PROPERTIES AND HYDROGEN PRODUCTION VIA PHOTOCATALYTIC REFORMING OF PROCESS WATER**5DV.2.6**

Hye Won PARK

University of Seoul, SOUTH KOREA

Co-authors: J.M. Chang, J.H. Lee, J.Y. Lee, University of Seoul, South Korea

EVALUATION OF HYDROTHERMAL CARBONIZATION OF MIXED ORGANIC WASTE AND ENERGY POTENTIAL AS A SOLID FUEL**5DV.2.7**

Tatwadhika RANGIN SIDDHARTHA

Ghent University Global Campus, SOUTH KOREA

Co-authors: F. Ronsse, Ghent University, Belgium; P. Heynderickx, Ghent University Global Campus, Songdo, South Korea

HYDROCHAR PRODUCTION FROM SOUTH KOREAN MARINE-BASED FOOD WASTE: STUDY OF PROCESS VARIABLES AND INVESTIGATION OF APPLICATIONS**5DV.2.8**

Martin HITZL

INGELIA, SPAIN

Co-authors: M. Hernandez, B. Oliver, Ingelia, Valencia, Spain; M. Renz, ITQ, Valencia, Spain

UPGRADING OF HYDROCHAR OBTAINED FROM ORGANIC RESIDUES INTO NEW SUSTAINABLE CARBON PRODUCTS AND BIOFUELS**5DV.2.10**

Alessandro CARDARELLI

Università Degli Studi Della Toscana, ITALY

Co-authors: A. Nicolini, CIRIAF (Inter-University Research Center on Pollution and Environment "Mauro Felli"), Biomass Resear, Perugia, Italy; V. Vasic, University of Novi Sad, Novi Sad, Serbia; M. Barbanera, University of Tuscia, Viterbo, Italy

ADVANCING RENEWABLE ENERGY SOLUTIONS THROUGH THE CO₂-PRESSURIZED CO-HTC OF CATTLE MANURE AND HEMP STALK RESIDUES**5DV.2.11**

Maria Lourdes MARTÍNEZ-CARTAS

University of Jaen, Chemical, Environmental and Materials Engineering Dpt., SPAIN

Co-authors: A.A. Karim, M.L. Martínez Cartas, M. Cuevas Aranda, University of Jaen, Linares, Spain

OLIPFUEL: ADVANCED BIOFUELS PRODUCTION FROM WASTE OLIVE POMACE OF OLIVE OIL INDUSTRIES**5DV.2.12**

Lara CARVALHO

Mälardalen University, Sustainable Environment and Construction Dpt., SWEDEN

Co-authors: R. Bhowmish, K. Kirtania, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh; Y. Jani, S. Schwede, Mälardalen University, Västerås, Sweden

EVALUATING HYDROTHERMAL TECHNOLOGIES FOR SUSTAINABLE HORSE MANURE MANAGEMENT: A COMPARATIVE ANALYSIS OF HTC AND HTL**5DV.2.14**

Javier DÍAZ PINEDA

University of Valencia, Chemical Engineering Dpt., SPAIN

Co-authors: J. Revert Vercher, A. Bouzas Blanco, J. Ribes Bertomeu, University of Valencia, Spain

HYDROTHERMAL CARBONISATION OF ANAEROBICALLY DIGESTED SEWAGE SLUDGE: INFLUENCE OF PROCESS SEVERITY ON PRODUCT CHARACTERISTICS**5DV.2.26**

Jaeyong PARK

Korea Institute of Energy Research, SOUTH KOREA

Co-author: J. Cho, Korea Institute of Energy Research, Daejeon, South Korea

COMPREHENSIVE UNDERSTANDING OF CATALYST FOR HYDRODEOXYGENATION OF TRIGLYCERIDE

VISUAL PRESENTATIONS IDV.3

11.45 - 12.45

Industry topics
ROOM: Poster Area A

These presentations highlight a diverse range of research and development efforts focused on sustainable biomass utilization, encompassing economic, technological, and environmental aspects.

CHAIRPERSON:

Kyriakos MANIATIS

Kyriakos Maniatis, BELGIUM

IDV.3.1

Farmeen SALAMUT

Terra, Fields, MAURITIUS

INVESTIGATING HOW ENERGY FARMING CAN GENERATE GREEN FINANCE**IDV.3.3**

Boon-Ling YEO

University of California, Air Quality Research Center, USA

Co-authors: A. Markandeya, B. Jenkins, J. Fan, S. Miller, J. Harvey, S. Nassiri, University of California, Davis, Usa; A. Coleman, Asia School of Business, Kuala Lumpur, Malaysia

TECHNOECONOMIC EVALUATION OF ALMOND BIOMASS ASH AS ALKALI-ACTIVATED BINDER FOR SUSTAINABLE CONCRETE PRODUCTION**IDV.3.13**

Aitor ARANDIA

VTT Technical Research Centre of Finland, FINLAND

Co-authors: T. Viertiö, E. Mäkelä, S. Rautiainen, A. Reznichenko, J. Lehtonen, VTT, Espoo, Finland

HYDROPROCESSING OF LIGNOCELLULOSIC PYROLYSIS BIO-OILS VIA TANDEM CSTR-FIXED BED UPGRADING PROCESS: CATALYST AND PROCESS DEVELOPMENT**IDV.3.18**

Hary DEMEY

Commissariat à L'Energie Atomique et aux Energies Alternatives, CEA/DRT/LITEN/DTCH/SCPC/LRP Dpt., FRANCE

Co-authors: L. Gribal, G. Haarlemmer, Commissariat à l'Energie Atomique et aux Energies Alternatives, Grenoble, France

SUPERCRITICAL WATER GASIFICATION OF WASTEWATER GENERATED FROM HYDROTHERMAL LIQUEFACTION OF FOOD WASTE AND BLACK LIQUOR FROM PAPER INDUSTRY**IDV.3.19**

Suani COELHO

University of Sao Paulo - Julio Romano Meneghini - PROCESSO FAPESP 2020/15230-5, BRAZIL

Co-authors: F. Soares, V. Garcilasso, A. Gomez, Universidade de São Paulo, Brazil

IMPLEMENTATION OF AN SPE (SPECIFIC PURPOSE ENTITY) FOR THE CONSTRUCTION OF A BIOGAS AND DERIVATIVES BIOREFINERY IN SOUTHERN BRAZIL**IDV.3.22**

Dong Jin SUH

Woori Plant, R&D Center, SOUTH KOREA

Co-authors: Y.D. Cho, Woori Plant, Yeosu, South Korea; J. Kim, Sungkyunkwan University, Suwon, South Korea; B.-I. Sang, Hanyang University, Seoul, South Korea

EFFECTIVE EXTRACTION OF FINE CHEMICALS FROM BIOMASS WITH HIGH WATER CONTENT AND CONVERSION OF THE EXTRACTED RESIDUES INTO HIGH VALUE—ADDED PRODUCTS**IDV.3.23**

Wooil PARK

POSCO, Iron-making Research Group, SOUTH KOREA

Co-authors: S.H. Son, POSCO, Pohang-si, South Korea; J.H. Yoo, KIER, Daejeon-si, South Korea

POSSIBILITY OF BIOMASS AS ALTERNATIVE CARBON SOURCE FOR FINEX COAL BRIQUETTES**IDV.3.24**

Martín RODRÍGUEZ ÁLVAREZ

ANFACO-CECOPECA, Sustainability & Circular Economy Dpt., SPAIN

Co-authors: D.A. Baptista de Sousa, R. Vázquez Sobrado, V. Nóvoa Nóvoa, B. Lagoa Costa, D. Méndez Paz, J.L. Guede González, ANFACO-CECOPECA, Vigo, Spain

DEVELOPMENT AND TRACEABILITY OF BIOMASS VALUE CHAINS FOR THE CONVERSION OF WASTE INTO RAW MATERIALS

IDV.3.25

Johann GORGENS

Stellenbosch University, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: T. Kabwe, J. Louw, Stellenbosch University, South Africa

A TECHNO-ECONOMIC COMPARISON OF CHEMICAL DERIVATIVES FROM FURFURAL PRODUCED FROM BAGASSE AT AN EXISTING SUGAR CANE MILL**IDV.3.27**

Luis Vicente LOPEZ-LLORCA

University of Alicante, Marine Sciences and Applied Biology Dpt., SPAIN

CROPSAFE: A HORIZON-JU-CBE PROJECT. BIOMASS-DERIVED CROP PROTECTION STRATEGIES FOR THE TRANSITION TO ENVIRONMENTALLY-FRIENDLY AGRICULTURE**IDV.3.29**

Sanjeev GAJJELA

Tomato Sustainables LTD, R&D Dpt., UNITED KINGDOM

GREEN HYDROGEN: DRIVING SUSTAINABLE AVIATION'S FUTURE**VISUAL PRESENTATIONS 1DV.4****11.45 - 12.45****Sustainable integrated agricultural management practices
ROOM: Poster Area B**

This collection of research presentations highlights diverse approaches to improving soil health and utilizing plant biomass for sustainable purposes, with a particular focus on marginal lands and environmental remediation.

CHAIRPERSONS:**Efthymia ALEXOPOULOU**

CRES - Center for Renewable Energy Sources and Saving, GREECE

Ana Luisa FERNANDO

Universidade Nova de Lisboa, PORTUGAL

1DV.4.1

Manuel CORDERO PARRA

Cicytex, SPAIN

Co-authors: M. Cordero, A.I. Parralejo, L. Royano, J. González, Cicytex, Guadajira, Badajoz, Spain

DIFFERENT SOWING DATES IN HEMP (CANNABIS SATIVA L.) CULTIVATION FOR SUSTAINABLE AGRICULTURAL MANAGEMENT**1DV.4.5**

Nicolai David JABLONOWSKI

Forschungszentrum Jülich, IBG-2: Plant Sciences, GERMANY

Co-authors: B. Ohrem, C. Kuchendorf, A. Kuhn, H. Klose, Forschungszentrum Jülich, Jülich, Germany

IMPROVING MARGINAL SOILS FOR SUSTAINABLE PLANT BIOMASS PRODUCTION IN A UNIQUE FIELD RESEARCH INFRASTRUCTURE**1DV.4.6**

Francesco GALLUCCI

CREA-IT, ITALY

Co-authors: M. Carnevale, A. Palma, A. Assirelli, M. Salerno, C. Beni, A. Del Giudice, E. Santangelo, A. Scarfone, CREA-IT, Monterotondo, Italy

ENVIRONMENTAL MONITORING TO IDENTIFY THE MOST SUITABLE CROPS IN THE AGROVOLTAIC SYSTEM**1DV.4.10**

Luis Saúl ESTEBAN PASCUAL

CEDER-CIEMAT, CIEMAT, SPAIN

Co-authors: M. Sanz, M. Tomás Gascón, I. Mediavilla Ruiz, C.S. Ciria Ramos, J. Perez García, R. Corredor De Miguel, R. Ramos Casado, CEDER-CIEMAT, Lubia, Spain

DEMONSTRATION OF AN INNOVATIVE CULTIVATION SYSTEM FOR MEDICINAL AND AROMATIC PLANTS ADAPTED TO MARGINAL LANDS**1DV.4.11**

Marielle TRENKNER

University of Hohenheim, Biobased Resources in the Bioeconomy Dpt., GERMANY

Co-authors: L. Heiser, E. Magenau, I. Lewandowski, A. Bauerle, University of Hohenheim, Stuttgart, Germany

IMPACT OF DIFFERENT SOIL AMENDMENTS FROM PROCESSED FOOD INDUSTRY BY-PRODUCTS ON SELECTED SOIL HEALTH PARAMETERS AND MAIZE PERFORMANCE**1DV.4.17**

Efthymia ALEXOPOULOU

CRES - Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE

Co-authors: K. Iordanoglou, A. Kakagia, G. Tsiadis, CRES - Center for Renewable Energy Sources and Saving, Pikerimi Attikis, Greece; S. Zafeiropoulou, METE, Kozani, Greece; E.G. Papazoglou, AUA, Votanikos, Athens, Greece

PRODUCING LIGNOCELLULOSIC FEEDSTOCK BY CULTIVATED SELECTED LIGNOCELLULOSIC CROPS ON LIGNITE MINING AREAS FOR ADVANCED BIOFUELS PRODUCTION

1DV.4.18

Ana Luisa FERNANDO

Universidade Nova de Lisboa, Chemistry Dpt., PORTUGAL

Co-authors: M. Abias, Universidade Católica de Moçambique, Pemba, Mozambique;

J. Costa, ISEC LISBOA, Lisboa, Portugal

IMPROVING THE SUSTAINABILITY OF THE PRODUCTION OF CRAMBE OIL WHEN CULTIVATED IN SOILS CONTAMINATED WITH HEAVY METALS**1DV.4.19**

Belén HEREDIA

INTA, ARGENTINA

Co-authors: B.J. Young, INTA, Buenos Aires, Argentina; P. Rizzo, L. Martinez, INTA, Mendoza, Argentina; E. Ontivero, G. Roqueiro, INTA, San Juan, Argentina; P. Pacheco, INQUISAL-UNSL, San Luis, Argentina

PHYTOREMEDIATION IN SOIL CONTAMINATED WITH MINING WASTE IN ARGENTINA**1DV.4.20**

Nicolas RIERA

INTA, ARGENTINA

Co-authors: M.E. Beily, N. Pin Viso, M. Carrillo, P. Joaquim, G. Morici, D. Vilte, J. Schapiro, INTA, Hurlingham, Argentina; Y. Long, Bioma, Chengdu, P.R. China

COMPOSTING PIG ANAEROBIC DIGESTATE: A SUSTAINABLE APPROACH FOR BIOFERTILIZER PRODUCTION

VISUAL PRESENTATIONS 1DV.5

13.45 - 14.45

**Sustainable integrated agricultural management practices and algae
ROOM: Poster Area A***Sustainable integrated agricultural management practices. The session also focusses on microalgae with application to wastewater treatment, production of pigment and downprocessing processes.***CHAIRPERSON:****Nurhan DUNFORD**

Oklahoma State University, USA

1DV.5.5

Riju PRATAP SINGH

Banaras Hindu University, Agronomy Dpt., INDIA

Co-authors: R.P. Singh, Banaras Hindu University Varanasi Uttar Pradesh, Varanasi, India; P. Sanodiya, Department of Agronomy, I. Ag. Sc., Varanasi, Varanasi, India

SUSTAINABLE AGRICULTURE MANAGEMENT PRACTICE: AN ALTERNATIVE TO CONVENTIONAL METHODS AND ITS IMPACT ON GROWTH, PRODUCTIVITY AND ECONOMICS UNDER RICE-WHEAT CROPPING SYSTEM (RWCS) IN EASTERN U P INDIA**1DV.5.7**

Raja CHOWDHURY

Indian Institute of Technology, Roorkee, Civil Engineering Dpt., INDIA

Co-authors: V. Agrawal, V. Agrawal, Indian Institute of Technology, Roorkee, Roorkee, India

 BIOGENIC CARBON FLOW FROM FOOD TO HUMAN WASTE AND BEYOND, ITS SEQUESTRATION POTENTIAL**1DV.5.9**

Yao Hervé YAO

Laboratoire Plasma et Conversion d'Énergie, FRANCE

Co-authors: B.F. Degni, C.T. Haba, Laboratoire d'Ingénierie Electronique, d'Electricité et des Systèmes Embarqués (LIEESE), Yamoussoukro, Ivory Coast; L. Canale, P. Dupuis, G. Zissis, Laboratoire Plasma et Conversion d'Énergie, Toulouse, France

LIGHT SPECTRUM EFFECT ON STOMATAL CHARACTERISTICS OF OKRA LEAVES—RELATIONSHIP BETWEEN NDVI AND LEAF AREA INDEX**1DV.5.12**

Lara MENDEZ

Fundación Canaria Parque Científico Tecnológico de la ULPGC, SPAIN

Co-authors: L. Mendez Rodriguez, A. Martel Quintana, J.L. Gomez Pinchetti, Spanish Bank of Algae, Telde, Spain

INTENSIVE CULTIVATION AND NUTRITIONAL POTENTIAL OF THE NATIVE MACROALGAE VALONIA UTRICULARIS IN THE CANARY ISLANDS FOR SUSTAINABLE APPLICATIONS**1DV.5.13**

David MUNAR

CENIPALMA, COLOMBIA

Co-authors: N. Ramirez, J. Garcia, CENIPALMA, Bogota, Colombia

RACEWAY REACTORS AND MICROALGAE: A SUSTAINABLE ALTERNATIVE FOR THE TREATMENT OF EFFLUENTS FROM PALM OIL MILLS IN COLOMBIA

1DV.5.14

Christos CHATZIDOUKAS

Aristotle University of Thessaloniki, Chemical Engineering Dpt., GREECE

Co-authors: C. Samara, D. Samolada, E. Matzarli, G. Papapanagiotou, Aristotle

University of Thessaloniki, Greece

STIMULATING ASTAXANTHIN PRODUCTION IN HAEMATOCOCCUS PLUVIALIS BY FINE MODULATION OF KEY CULTIVATION PARAMETERS**1DV.5.15**

Maria Lourdes MARTÍNEZ-CARTAS

University of Jaen, Chemical, Environmental and Materials Engineering Dpt., SPAIN

Co-authors: M^a P. Patón Raya, M.L. Martínez Cartas, University of Jaen, Linares, Spain;

S. Sánchez Villasclaras, University of Jaen, Spain

CELLULAR DISRUPTION APPLIED TO SCENEDESMUS SP. TO PRODUCE BIODIESEL**1DV.5.16**

Maria Lourdes MARTÍNEZ-CARTAS

University of Jaen, Chemical, Environmental and Materials Engineering Dpt., SPAIN

Co-authors: F. Mnasser, M.L. Martínez Cartas, University of Jaen, Linares, Spain;

S. Sánchez Villasclaras, University of Jaen, Spain

WASTEWATER DEPURATION USING SCENEDESMUS SP. AND NEOCHLORIS OLEOABUNDANS. COMPARATION OF BEHAVIOUR**1DV.5.17**

Adriano ENSINAS

Federal University of Lavras, Engineering Dpt., BRAZIL

Co-authors: J. Infante Cuan, V. Fernandes Garcia, Federal University of ABC, Santo

André, Brazil

OPTIMIZED BIOREFINERY AND SUPPLY CHAIN DESIGN FOR SUSTAINABLE JET FUEL PRODUCTION FROM MICROALGAE CULTIVATED IN VINASSE**1DV.5.22**

Matteo PRUSSI

Politecnico di Torino, DENERG Dpt., ITALY

Co-authors: S. Adamo, N. Claassens, M. Barbosa, Wageningen University,

The Netherlands; O. Kruse, Universitaet Bielefeld, Bielefeld, Germany; L. Martinelly,

IN srl, Udine, Italy; P. Schall, Universiteit van Amsterdam, The Netherlands; L. Lesage,

Solarfoil, Amsterdam, The Netherlands; T. Erb, Max-Planck, Marburg, Germany

SUN-PERFORM: SYNTHETIC BIOLOGY UNITED WITH NANOTECHNOLOGY—A BIOHYBRID APPROACH TO IMPROVE LIGHT-HARVESTING AND CO₂ FIXATION FOR HIGH PERFORMANCE SUSTAINABLE SOLAR FUEL PRODUCTION**VISUAL PRESENTATIONS 3DV.6****13.45 - 14.45****Biorefinery concepts and processes II
ROOM: Poster Area B***Overall biorefinery concepts and processing parts are illustrated.***CHAIRPERSON:****James SPAETH**

Former Bioenergy Technologies Office DOE - US, USA

3DV.6.1

Thi Thu Huong LUONG

King Mongkut's Institute of Technology Ladkrabang, THAILAND

Co-authors: S. Prapasiri, C. Krachang, S. Poeaim, Department of Biology, School of

Science, King Mongkut's Institute of Technology Ladkrabang (KMITL), Bangkok,

Thailand

USING AGRI-FOOD WASTES AS POTENTIAL SUBSTRATES FOR XYLANASE PRODUCTION BY PENICILLIUM MENONORUM SP10 AND ITS APPLICATION IN CORNCOB SACCHARIFICATION**3DV.6.3**

Younho SONG

Chonnam National University, Bio-energy Research Center, SOUTH KOREA

Co-authors: H.-J. Bae, E.J. Cho, Chonnam National University, Gwangju, South Korea

CO-PRODUCTION OF D-TAGATOSE AND 5-HYDROXYMETHYLFURFURAL VIA AN INTEGRATED BIOREFINERY APPROACH FROM CEYLON MOSS (GELIDIUM AMANSII) HYDROLYSATE**3DV.6.5**

Pedram FATEHI

Lakehead University, Biomass Utilization Research Laboratory, CANADA

WATER-SOLUBLE LIGNIN-DERIVED POLYMERS**3DV.6.12**

Junhak LEE

ACTIVON, R&D center, SOUTH KOREA

Co-authors: T. Islam, B. Park, ACTIVON, Cheongju-si, South Korea; S. Cho, S. Park,

UNIST, Ulsan-si, South Korea

PRODUCTION OF BIOMASS-DERIVED 1,3-BDO AND ITS POTENTIAL AS A COSMETIC INGREDIENT

3DV.6.13

Jorge Mario MARCHETTI

Norwegian University of Life Science, Faculty of Science and Technology, NORWAY

Co-author: A. Bouaid, Universidad Complutense de Madrid, Madrid, Spain

BIOCATALYTIC UPGRADING OF MALIC ACID FOR SUSTAINABLE FOOD ADDITIVE PRODUCTION

3DV.6.14

Engkarat KINGKAEW

Department of Biology, School of Science, King Mongkut's Institute of Technology

Ladkrabang, Biology Dpt., THAILAND

Co-author: D. Ochaikul, Department of Biology, School of Science, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

ENHANCING SUGAR RECOVERY FROM SUGARCANE BAGASSE: OPTIMIZING MICROWAVE-ASSISTED ALKALINE PRETREATMENT METHODS

3DV.6.15

Celia ÁLVAREZ GONZÁLEZ

Universidad Loyola, Engineering Dpt., SPAIN

Co-authors: M. Zurita-Gotor, Universidad Loyola, Seville, Spain; J.M. Bolivar,

M. Ladero, Universidad Complutense of Madrid, Madrid, Spain

INTENSIFYING THE SACCHARIFICATION OF ALKALI-PRETREATED RICE STRAW THROUGH ENZYME SYNERGY: INSIGHTS FROM FRACTAL MODELING

3DV.6.17

Silvia GRESES

Universitat de València, Ingeniería Química Dpt., SPAIN

Co-authors: A. Martorell-Múgica, IMDEA Energy, Madrid, Spain; C. González-

Fernández, Universidad de Valladolid-ISP, Spain

ENDOGENOUS OPEN-MIXED CULTURE AS A PROMISING STRATEGY TO VALORIZE AGROINDUSTRIAL WASTE VALORIZATION INTO GREEN CHEMICALS

3DV.6.20

María GONZÁLEZ MARTÍNEZ

IMT Mines Albi, FRANCE

Co-authors: R. Pele, A. Nzihou, IMT Mines Albi, Albi, France

EXPERIMENTAL AND DFT STUDY OF NOX DECOMPOSITION THROUGH DIFFERENT BIOSOURCED CATALYSTS

PRIZES AND AWARDS

Giuliano Grassi Prize

A prize for the Excellence in Biomass Industrial Deployment

The Giuliano Grassi Excellence in Biomass Industrial Deployment Prize is established in 2022 to honour scientific, technical or managerial merit in the market deployment of biomass industrial processes, attained over a long period of continuous achievements. It is an International Award.

In view of recognition of the role of the industry, in 2022 the EUBCE management decided to establish the Giuliano Grassi Prize: Excellence in Biomass Industrial Deployment to be awarded to an individual whose contribution in the industrial deployment of biomass has been exceptional facilitating market deployment of biomass.

After quite some thought and search, the name of Giuliano Grassi Prize was proposed, in view of the contribution of Dr Giuliano Grassi had during his lifetime, to Renewable Energies and in particular Bioenergy and Photovoltaic, as European leader of the aforementioned programmes managed in Brussels on behalf of the European Union, becoming engaged in large integration projects for Renewable Energies, in particular Bioenergy, all over Europe. He also initiated links with major players in India, China, Latin America and Africa. One of the international networks he initiated is EUBIA, the European industry association with the headquarters in Brussels.

The Linneborn Prize

Outstanding merits in Biomass

The Prize was established in 1994 by European Commission for outstanding contributions to the development of energy from biomass and is awarded every year to an individual for outstanding merits in biomass.

The Prize is named in honour of Johannes Linneborn, a pioneer of wood gasification. Deeply rooted in human ethics, he had far-reaching visions on the world's development, on health, transport and agriculture.

The prize is awarded every year at EUBCE (European Biomass Conference & Exhibition) to honor scientific, technical or managerial merit in the development of biomass, to a single European individual (but occasionally to a non-European) for the long period of continuous achievements.

The Linneborn Prize Committee selects the individual to be honoured with the prize. The committee is formed by: (a) all the past awardees, (b) the Chairperson of EUBCE, (c) one representative of the European Commission, (d) the organiser of EUBCE.

Poster Awards

The Poster Awards ceremony is one of the highlights of the Conference Closing, placing emphasis on the most outstanding Visual Presentations of each topic.

Its own ceremony during each EUBCE edition highlights exceptional visual presentations that combine scientific novelty and excellence during that year's conference and exhibition.

Student Awards

The aim of the student awards is to encourage high-quality work amongst young researchers. The awards are bestowed, live, during the EUBCE 2024 closing session to select matriculated students who made significant contributions to remarkable biomass research.

PUBLICATIONS

SCIENTIFIC JOURNAL PUBLICATION

«Biomass and Bioenergy» is an international journal publishing original research papers and short communications, review articles and case studies on biological resources, chemical and biological processes, and biomass products for new renewable sources of energy, food and materials. The scope of the journal extends to the environmental, management and economic aspects of biomass and bioenergy. Our publishing partnership, established in 2012, gives a prestigious opportunity to the authors of abstracts submitted for EUBCE: each year a selected number of the highest scored abstracts is invited to be peer reviewed and published in a recurring special issue of Biomass & Bioenergy.

ENERGIES—OPEN ACCESS JOURNAL OF ENERGY RESEARCH, ENGINEERING AND POLICY

«energies» is a peer-reviewed open access journal of related scientific research, technology development, engineering, and the studies in policy and management. It is published semi-monthly online by MDPI. Many presenters from previous editions of EUBCE have been featured in Energies.

SUSTAINABILITY—OPEN ACCESS JOURNAL OF ENVIRONMENTAL CULTURAL, ECONOMIC, AND SOCIAL SUSTAINABILITY

«Sustainability» provides an advanced forum for studies related to sustainability and sustainable development, and is published semimonthly online by MDPI. The Canadian Urban Transit Research & Innovation Consortium (CUTRIC) and International Council for Research and Innovation in Building and Construction (CIB) are affiliated with Sustainability and their members receive discounts on the article processing charge.

BIOFPR — BIOFUELS, BIOPRODUCTS & BIOREFINING

«BioFPR» (Biofuels, Bioproducts & Biorefining) is published by Wiley and has an impact factor of 5.239. Biofuels, Bioproducts and Biorefining is a vital source of information on sustainable products, fuels and energy. Examining the spectrum of international scientific research and industrial development along the entire supply chain. The journal publishes a balanced mixture of peer-reviewed critical reviews, commentary, and policy updates. Biofuels, Bioproducts and Biorefining is dedicated to fostering growth in the biorenewables sector and serving its growing interdisciplinary community by providing a unique, systems-based insight into technologies in these fields as well as their industrial development.

CONFERENCE PROCEEDINGS

Scopus is the world's largest abstract and citation database of peer-reviewed research literature with over 22,000 titles from more than 5,000 international publishers. Delivering a comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences, as well as arts and humanities, Scopus features smart tools to track, analyze and visualize research.

PROGRAMME COMMITTEE MEMBERS

SCIENTIFIC COMMITTEE

Topic Organisers

Abdenour ACHOUR, Aalborg University, Denmark
Efthimia ALEXOPOULOU, CRES, Greece
Andreas APFELBACHER, Fraunhofer UMSICHT, Germany
Marco BARATIERI, Free University of Bolzano, Italy
David BAXTER, Former European Commission JRC
Guillaume BOISSONNET, CEA, France
Markus BOLHAR-NORDENKAMPF, Managing Director VAMED, Austria
Tanmay CHATURVEDI, Aalborg University, Denmark
Myrsini CHRISTOU, CRES, Greece
Suani COELHO, University of São Paulo, Brazil
Isabella DE BARI, ENEA, Italy
Wiebren DE JONG, Delft University of Technology, The Netherlands
Rocio DIAZ-CHAVEZ, School of Oriental and African Studies, United Kingdom
Bernhard DROSG, Bioenergy 2020+, Austria
Nurhan DUNFORD, Oklahoma State University, United States
Capucine DUPONT, IHE Delft, The Netherlands
Berien ELBERSEN, Wageningen University and Research Centre (WUR), The Netherlands
Ana Luisa FERNANDO, Universidade de Nova de Lisboa, Portugal
Jean-Henry FERRASSE, Aix Marseille Université, France
Maria GEORGIADOU, European Commission DG RTD
Francisco GIRO, LNEG, Portugal
Aristide GIULIANO, ENEA, Italy
Pedro HARO, Universidade de Sevilla, Spain
Martin JUNGINGER, Copernicus Institute, The Netherlands
Heiko KELLER, IFEU – Institute for Energy and Environmental Research Heidelberg, Germany
Birger KERCKOW, FNR-Agency for Renewable Resources, Germany
Jaap KIEL, TNO, The Netherlands
Kees KWANT, NL Agency, Ministry of Economic Affairs, The Netherlands
Jack LEGRAND, University of Nantes, France
Yukihiko MATSUMURA, University of Hiroshima, Japan
Solange MUSSATTO, Technical University of Denmark, Denmark
Ingwald OBERNBERGER, Graz University of Technology, Austria
Heinz OSSENBRINK, Former European Commission JRC
Francesco PATUZZI, Free University of Bolzano, Italy
Luc PELKMANS, CAPREA, Belgium
Matteo PRUSSI, Politecnico di Torino, Italy
Tapio RANTA, Lappeenranta University of Technology, Finland
Guido REINHARDT, IFEU – Institut für Energie- und Umweltforschung, Germany
Mirjam RÖDER, Tyndall Center for Climate Change Research, United Kingdom
Lasse ROSENDAHL, Aalborg University, Denmark
Stefano SANTARELLI, Consorzio RE-CORD, Italy
Thomas SCHLEKER, European Commission, DG RTD
Tim SCHULZKE, Fraunhofer UMSICHT, Germany
Dimitrios SIDIRAS, University of Piraeus, Greece
Raphael SLADE, Imperial College London, United Kingdom
Jim SPAETH, U.S. Department of Energy, United States
Paul STUART, Polytechnique Montréal, Canada
Daniela THRÄN, DBFZ-German Biomass Research Centre, Germany



Paper Reviewers

Ayush AGARWAL, Paul Scherrer Institute (PSI) & École Polytechnique Fédérale De Lausanne (EPFL), Switzerland
Alessandro AGOSTINI, ENEA, Italy
Iker AGUIRREZABAL, University of the Basque Country, Spain
Andrés ANCA-COUCE, Carlos III University of Madrid, Spain
Thalles ANDRADE, Aarhus University, Denmark
Elena ANGELOVA, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Germany
Hans BACHMAIER, Technologie- und Förderzentrum (TFZ), Germany
Donatella BARISANO, ENEA, Italy
Vittoria BENEDETTI, Free University of Bolzano, Italy
Simone BERGONZOLI, Council for Agricultural Research and Economics, Research Centre for Engineering and Agro-food Processing), Italy
Yvon BERNARD, Axens, France
Romain BESSEAU, European Commission, JRC
Serge BIOLLAZ, Paul Scherrer Institut, Switzerland
Paulo BRITO, Portalegre Polytechnic University, Portugal
Marco BUFFI, European Commission, JRC
Krystian BUTLEWSKI, Institute of Technology and Life Sciences – National Research Institute, Poland
Giulia CANCEAN, EBA, Belgium
Alma CAPA, TNO, The Netherlands
Daniele CASTELLO, Aalborg University, Denmark
Nadia CERONE, ENEA, Italy
Loukia CHRYSIKOU, Centre for Research and Technology Hellas – CERTH, Greece
Maurizio COCCHI, ETA Florence, Italy
Jean-Michel COMMANDRE, CIRAD Montpellier, France
Magda CONSTANTÍ, University Rovira i Virgili, Spain
Flamin CYRIL, ENGIE, France
Christian DE GROMARD, France
Ana Paula DE SOUZA SILVA, Technological Research Institute of the state of São Paulo – IPT, Brazil
Hary DEMEY, CEA, France
Anita DEMUTH, PtX Lab Lausitz, Germany
Manuel J. DÍAZ VILLANUEVA, Universidad de Cádiz, Spain
Ioanna DIMITRIOU, University of Nottingham, United Kingdom
Daniel DAVID, Durán Aranguren, Technical University of Denmark, Denmark
Wolter ELBERSEN, Wageningen University and Research Centre (WUR), The Netherlands
Yara EVANS, Imperial College London, United Kingdom
Florent EVEILLE, GIZ, Germany
Pedram FATEHI, Lakehead University, Canada
David FERNÁNDEZ GUTIÉRREZ, Centro Tecnológico de la Energía y el Medio Ambiente, Spain
Tamara FERNÁNDEZ-ARÉVALO, CEIT, Spain
Jarno FÖHR, LUT University, Finland
Matteo FRANCAVILLA, University of Foggia, Italy
Marilene FUHRMANN, BEST – Bioenergy and Sustainable Technologies GmbH, Austria
Sara FULIGNATI, University of Pisa, Italy
Francesco GALLUCCI, CREA, Italia
Yadolah GANJKHANLO, TNO, The Netherlands
Ali GHANNADZADEH, Maastricht University, The Netherlands
Brandon GILROYED, University of Guelph, Canada
Jerónimo GONZÁLEZ CORTÉS, CICYTEX, Junta de Extremadura, Spain
Maria GONZALEZ MARTINEZ, IMT Mines Albi/RAPSODE Research Center, France
Marcos GUTIÉRREZ DEL OLMO, Instituto Nacional de Técnica Aeroespacial (INTA), Spain
Christiane HENNIG, DBFZ German Biomass Research Centre, Germany
Hannariina HONKANEN, JAMK University of Applied Sciences, Finland

Oliver HURTIG, JRC, Italy
Ioana IONEL, Universitatea POLITEHNICA Timisoara, Romania
Rainer JANSSEN, WIP – Renewable Energies, Germany
Matthias JORDAN, Helmholtz Centre for Environmental Research – UFZ, Germany
Krzysztof KAPUSTA, Central Mining Institute (GIG), Poland
Antti KARHUNEN, LUT University, Finland
Sangita Kasture, Government of India, India
Lukas KNOLL, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Germany
Mehdi LAKHDARI, Natural Resources, Canada
Hans LANGEVELD, Biomass Research, The Netherlands
Abril LANSOY, TotalEnergies, France
Yong Woon LEE, Korea Institute of Industrial Technology, Korea
Jun LI, University of Strathclyde, United Kingdom
Leteng LIN, Linnaeus University, Sweden
Yongqiang LIU, University of Southampton, United Kingdom
Richard LORD, University of Strathclyde, United Kingdom
Alexa LUTZENBERGER, Leuphana Universität Lüneburg, Germany
Pierre-André MAITRE, CEA Grenoble, France
Filippo MARCHELLI, University of Trento, Italy
Sylvain MARSAC, ARVALIS Institut du végétal, France
Karen MASCARENHAS, Research Centre for Greenhouse Gas Innovation (RCGI) at University of São Paulo (USP) – Brazil
Ana MATIN, University of Zagreb Faculty of Agriculture, Croatia
Valentina MAZZURCO MIRITANA, ENEA, Italy
Jesus Alberto MERCADO CORDOVA, Institut Mines-Telecom Business School, France
Cristina MOLINER, Università di Genova, Italy
Mathieu MORIN, IFPEN, France
Beethoven NARVÁEZ-ROM, University of São Paulo, Brazil
Andrea NICOLINI, University of Perugia, Italy
Hillary Onyebuchi ONYISHI, Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Germany
Ralph OVEREND, Nextfuels Biomass and Bioenergy, Canada
Danilo PERECIN, USP, Brazil
Giuseppe PIPITONE, Politecnico di Torino, Italy
Giulio POGGIARONI, ETA-Florence Renewable Energies, Italy
Athanasios RENTIZELAS, NTUA, Greece
José Antonio RODRÍGUEZ-LIÉBANA, Andaltec I+D+i (Plastic Technological Center), Spain
Diego ROMANO, Università degli Studi di Milano – DEFENS, Italy
Frederik RONSSE, University of Ghent, Belgium
Elena ROZZI, Politecnico di Torino, Italy
Fernando RUSSO ABEGÃO, Newcastle University, United Kingdom
Dominik RUTZ, WIP – Renewable Energies, Germany
Angeliki SAGANI, CERTH, Greece
Anil Kumar SAKHIYA, IITH DELHI, India
Sebastian SANCEHZ VILLASCLARAS, University of Jaen, Spain
Francesca SCARGIALI, Università degli Studi di Palermo, Italy
Rebecca SERNA GARCÍA, University of Valencia, Spain
Abhishek SINGHAL, Netherlands Organisation for Applied Scientific Research (TNO), The Netherlands
Sureewan SITTIJUNDA, Faculty of Environment and Resource Studies, Mahidol University, Thailand
Antonio SORIA-VERDUGO, Universidad Carlos III de Madrid, Spain
Daniele SPINELLI, Next Technology Tecnotessile, Italy
Gururajarao SRIDHAR, Sardar Swaran Singh National Institute of Bioenergy, India
Claudia STECKELBERG, Universidade Estadual de Campinas, Brazil
Marwa TALLAWI, TUM- Chair of carbon composites, Germany

Fernanda Thimoteo AZEVEDO JORGE, Bio Base Europe Pilot Plant, France
Sharon VELASQUEZ-ORTA, Newcastle University, United Kingdom
Frédéric VOGEL, Paul Scherrer Institute, Switzerland
George VOURLIOTAKIS, Exergia S.A., Greece
Iris VURAL GURSEL, Wageningen Food & Biobased Research, The Netherlands
Asanka Nuvansiri Illankoon WIJEPALA ABEYSINGHE MUDIYANSELAGE, University of Milan Bicocca, Italy
Ronja WOLLNIK, DBFZ Deutsches Biomasseforschungszentrum gGmbH, Germany
Walter ZEGADA-LIZARAZU, University of Bologna, Italy

INDUSTRY COMMITTEE

Industry Track Advisors

Myrsini CHRISTOU, CRES, Greece
Paolo CORVO, BF Partners, Italy
Stamatis KALLIGEROS, Hellenic Naval Academy, Greece
Kees KWANT, NL Agency, Ministry of Economic Affairs, The Netherlands
Philippe MARCHAND, Independent expert, France
Eric VAN DEN HEUVEL, Studio Gear Up, The Netherlands
Berend VREUGDENHIL, TNO, The Netherlands

VENUE AND OPENING HOURS

Palacio de Congresos de Valencia
Conference Centre
Avda. Cortes Valencianas, nº 60
46015 Valencia, Spain

BADGE COLLECTION – HELP DESK – WELCOME DESK

Sunday 16:00-18:00
Monday 07:30-18:30
Tuesday-Wednesday 08:00-18:30
Thursday 08:00-18:00

PRESENTERS' DESK

Sunday 16:00-18:00
Monday 07:30-08:30 | 12:30-18:30
Tuesday-Wednesday 08:00-18:30
Thursday 08:00-17:00

CONFERENCE

Monday-Thursday 09:00-18:30

EXHIBITION

Monday 13:00-20:00
Tuesday-Wednesday 09:00-18:30
Thursday 09:00-16:00

POSTER AREA

Sunday 16:00-18:00 (setup)
Monday-Wednesday 09:00-18:30
Thursday 09:00-16:00

Organised by
etaflorencia

renewable
energies