e-EUBCE 2020
28th European Biomass Conference & Exhibition

Bioeconomy’s role in the post-pandemic economic recovery

VIRTUAL | 6 - 9 JULY

CONFERENCE

PROGRAMME

status of 19 June 2020
### Monday, 06 July 2020

#### e-EUBCE Opening

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<td>09.00 – 10.00</td>
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<td>10.00 - 12.00</td>
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*Networking & Exhibition Visiting Time*  
12.00 - 14.00
ORAL SESSION 1AO.1

14.00 - 15.00 Territorial Biomass Assessment

Case studies of territorial biomass assessment and mobilisation from around the world.

CHAIR & MODERATOR:
Olivier DUBOIS
UN Food and Agriculture Organisation, ITALY
Enrico CEOTTO
CREA- Council for Agricultural Research and Economics, ITALY

1AO.1.1 M. Ooba, T. Togawa, S. Nakamura
National Institute for Environmental Studies, Fukushima, Japan
An Evaluation of Woody Biomass Production and Consumption by Using of an Integrated and Dynamic Indicator of Carbon Sequestration

1AO.1.2 N. Ghasemi, B. Elbersen, M. Van Eupen, S. Mantel
Wageningen Environmental Research, The Netherlands
P. Ciria, P. Perez, J. Carrasco, M. Sanz
Spanish Ciamat, Madrid, Spain
Identifying Agricultural Abandoned Lands for Biomass Monitoring and Managing Using Landsat Imagery

1AO.1.3 A. Younis, Y. Trujillo, R. Benders, A. Faaij
Energy and Sustainability Research Institute Groningen, University of Groningen, The Netherlands
Subnational Assessment of the Biomass Cost-Supply Potential: Spatial Distribution of Energy Crops and Residues in Colombia

1AO.1.4 EUBCE Student Awardee Presentation
LNBR/CNPEM - Brazilian Biorenewables National Laboratory, Brazilian Center for Research in Energy an, Campinas, Brazil
Guidelines for Sugarcane Straw Removal: A Decision-Making Tool for Assessing the Potential and Availability of Biomass
ORAL SESSION 2AO.2

14.00 - 15.00  Production, Characterization and Quality of Solid Biofuels

The session covers presentations regarding the development of innovative methods for solid biofuels characterization, factors influencing fuels quality and biomass management procedures to improve the fuel quality, as well as the combustion behaviour of solid biofuels.

CHAIR & MODERATOR:
Thomas Andreas SCHLEKER
European Commission DG RTD, EU

Peter Arendt JENSEN
Danish Technical University, DENMARK

2AO.2.1  N. Kirstein, C. Hennig
DBFZ -German Biomass Research Centre, Leipzig, Germany
D. Thrän
UFZ - Helmholtz Centre for Environmental Research, Leipzig, Germany
Current Status of Solid Biogenic Fuels in the European Union: Overview on Qualities, Standards and Applications

2AO.2.2  A. Pollex, J. Mühlenberg
DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Leipzig, Germany
T. Zeng
DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH
DBFZ Deutsches Biomasseforschungszentrum, Leipzig, Germany
Development of A Simple and Rapid Test Method for Potassium to Ensure Fuel Quality of Woody Biomass Fuels

2AO.2.3  S. Lavergne, M. Campargue
RAGT Energie, Albi, France
S.H. Larsson
SLU, Umeå, Sweden
M. Marchand
CEA, Grenoble, France
C. Dupont
IHE, Delft, The Netherlands
Effect of Process Parameters and Biomass Composition on Flat-Die Pellet Production from Underexploited Forest and Agricultural Feedstocks
ORAL SESSION 3AO.3

14.00 - 15.00 New Processes for Bioproducts

This session addresses new approaches to bio-based chemicals and materials, and new products types.

CHAIR & MODERATOR:
Tanja BARTH
University of Bergen, NORWAY

Kevin CRAIG
DOE - Golden Field Office, USA

3AO.3.1 S. Kakadellis, Z.M. Harris
Imperial College, London, United Kingdom
Don't Scrap the Waste: Bioplastic Food Packaging is Not Inherently ‘Green’ but Offers Benefits Through Alternative End-of-Life Management of Food Waste

3AO.3.2 E. Heracleous, E. Pachatouridou, A.A. Lappas
CPERI-CERTH, Thessaloniki, Greece
B. Russell, B. Lee, D. Dugar
VISOLIS, Geleen, The Netherlands
A Novel Hybrid Bio-Thermochemical Route for the Production of Bio-Isoprene Via Decarboxylation of Mevalonolactone (MVL)

3AO.3.3 I. Mediavilla, R. Bados, L.S. Esteban
CEDER-CIEMAT, Lubia-Soria, Spain
M.A. Blázquez
University of Valencia, Valencia, Spain
Characterisation of the Essential Oil and the Biomass Obtained by Mechanised Harvesting of Cistus Ladanifer L.

3AO.3.4 V. Van-Dunem, L. Sanfins, F. Pires, L.C. Duarte, F. Gírio, F. Carvalheiro
LNEG, Lisbon, Portugal
Effect of Catalysts on Organosolv Ethanol-Based Pre-Treatment for the Selective Fractionation of Polysaccharides and Lignin

14.00 - 16.00 R&I for Embedded Bioenergy in Energy Consuming Sectors

Networking & Exhibition Visiting Time 15.00 - 15.10
Recent trends on bioalcohols production using new pre-treatments, simultaneous saccharification and fermentation are included in the latest advances addressed in this topic.

CHAIR & MODERATOR:
Francisco GIRIO
LNEG - Laboratorio Nacional de Energia e Geologia, PORTUGAL

James SPAETH
U.S. Department of Energy, USA

3AO.4.1 G. Prasoulas, D. Mamma, D. Kekos
National Technical University of Athens, Greece
A. Konti, N. Scarlat
Joint Research Centre, Ispra, EU
Assessment of the Food Waste as a Feedstock for Bioethanol Production:
Simultaneous Saccharification and Fermentation Using Mixed Microbial Cultures and
Hydrolytic Enzymes Produced on-Site

3AO.4.2 W. Sun, T. Greaves, M. Othman
RMIT University, Melbourne, Australia
Electro-Assisted Organosolv Pretreatment of Lignocellulosic Materials

3AO.4.3 J.A. Gonzalez-Rios, A. Sanchez
CEMIE-BIO/CINVESTAV, Zapopan, Jal., Mexico
L. Amaya-Delgado
CIATEJ, Zapopan, Jal., Mexico
D. Sauvageau
University of Alberta, Edmonton, Canada
The Self-Cycling Saccharification-Fermentation, A New Strategy to Process
Lignocellulosic Biomass at High Solid Loadings.
New models regarding packed bed conversion, alkali release from the fuel bed as well as emission modelling are presented. Moreover, the utilisation of residues from olive production as well as of used cooking oil in novel combustion systems is addressed.

**CHAIR & MODERATOR:**
Ingwald OBERNBERGER
BIOS Bioenergiesysteme, AUSTRIA

Jean-Michel COMMANDRÉ
CIRAD, FRANCE

**2AO.5.1**
M. Blank, C. Benesch, I. Obernberger
Bios Bioenergiesysteme, Graz, Austria
*Packed Bed Modelling for CFD Simulations of Pellet Combustion*

**2AO.5.2**
Y. Ge, X.. Kong, J. Pettersson
University of Gothenburg, Sweden
*Release of Alkali Metal during Biomass Pyrolysis and Combustion*

**2AO.5.3**
C. Le Dreff- Lorimier DREFF, S. Aguinaga
CSTB, Nantes, France
R. Bounaceur, F. Battin-Leclerc, O. Herbinet
LRGP, Nancy, France
*AeroCAB Project: Towards a Method to Predict Pollutants from Residential Wood Heating Appliances*

**2AO.5.4**
A. O’Connell, N. Scarlat
JRC, Ispra, EU
G. Vaitilingom
CIRAD, Montpellier, France
*Used Cooking Oil as a Blend Fuel for Domestic Heating*
This session focuses on biotechnology in production of chemicals and materials.

**CHAIR & MODERATOR:**
Solange MUSSATTO  
Technical University of Denmark, DENMARK

Paul DE WILD  
ECN part of TNO, THE NETHERLANDS

**3AO.6.1**  
P. Yaseneva, P.K. Aulakh, A.A. Lapkin  
University of Cambridge, United Kingdom  
*Analysis of the Influence of Feedstocks and Processing Technologies on Valorisation of Bio-Waste Terpenes*

**3AO.6.2**  
*Invited*

**3AO.6.3**  
C. Mihailof, A. Marianou, S. Karakoulia, A. Lappas  
LEFH/CPERI/CERTH, Thessaloniki, Greece  
*Heterogeneously Catalysed Conversion of Cellulose to High-Added Value Chemicals*

*Networking & Exhibition Visiting Time*  
16.10 - 16.20
Global biomass potentials and sustainability constraints.

**CHAIR & MODERATOR:**
Gerard OSTHEIMER  
World Business Council for Sustainable Development, USA  
Andreas KLEINSCHMIT VON LENGEFELD  
FCBA, FRANCE

| 1AO.7.1 | E. Garbolino, T. Pourbaix  
MINES ParisTech, Sophia Antipolis, France  
W. Daniel  
University of Antwerp, Antwerp, Belgium  
L. Dieckhoff, M.L. Rabot-Querci  
EIFER, Karlsruhe, Germany  
**Potential Impacts of Climate Change Towards 2050 on Wood Resources in two Contrasted Bioclimatic Regions in France** |
| 1AO.7.2 | J. Broeze, H. Bos, L. Garcia Chavez  
Wageningen Food & Biobased Research, The Netherlands  
**Quantification of Agricultural Production Potential in Relation to Food and Biobased Demands** |
| 1AO.7.3 | E.E. Silva Lora, D.M.M. Yepes, T.A.C Dias  
UNIFEI, Itajubá, Brazil  
**Global Potential Assessment of Available Land for Bioenergy Projects in 2050 within Food Security Limits** |
| 1AO.7.4 | F. Ginaldi, G.A. Cappelli, E. Ceotto  
CREA-AA, Bologna, Italy  
S.L. Cosentino, S.A. Corinzia  
Università degli Studi di Catania, Catania, Italy  
**Assessment of Giant Reed Biomass Potentials (Arundo Donax L.) in Marginal Areas of Italy Via the Application of Arungro Simulation Model** |
ORAL SESSION 2AO.8

16.20 - 17.20  Innovative Measures Towards High Efficiency and Low Emissions in Large Scale Combustion

The session deals with retrofitting of existing combustion plants, in particular aiming at fuel flexibility and high efficiency. Innovative modelling and experimental methods are also addressed to decrease maintenance costs, support failure prediction and high availability.

CHAIR & MODERATOR:
Marco BARATIERI
Free University of Bolzano, ITALY

CERTH, Athens, Greece
Combustion of Olive Tree Pruning Pellets Versus Olive Tree Pruning Chips and Exhausted Olive Cake at Industrial Boiler. Monitoring of Emissions and Combustion Efficiency

2AO.8.2  P.A. Jensen, G. Wang, F.J. Frandsen
DTU, Lyngby, Denmark
B. Sander
Ørsted A/S, Fredericia, Denmark
Laboratory and Full Scale Power Plant Study on the Use of Solid Additives in Biomass Fired Pulverized Fuel Power Plants

2AO.8.3  H. Niederwieser, C. Zemann, M. Gölles
BEST - Bioenergy and Sustainable Technologies GmbH, Graz, Austria
M. Reichhartinger
Graz University of Technology, Austria

2AO.8.4  A.W. Mainassara Chekaraou, A. Rousset, B. Peters, X. Besseron
University of Luxembourg, Luxembourg
C. Galletti
University of Pisa, Italy
M.G. Gallo, F. Sansone
Enel Green Power, Rome, Italy
Detailed Numerical Three-dimensional and Transient Analysis of a Grate Firing Combustion Process by Innovative High Performance Computing

2AO.8.5  M.K. Cieplik
TNO, Petten, The Netherlands
J. Kiel
ECN part of TNO, Petten, The Netherlands
Project ARBAHEAT- Taking Coal Plant Repowering one Step Further
ORAL SESSION 3AO.9

16.20 - 17.20 Chemical Pathways to Biobased Products

This session focusses on chemical strategies for converting biomass to products.

CHAIR & MODERATOR:
Dieter BRYNIOK
Hochschule Hamm-Lippstadt of University of Applied Sciences, GERMANY

Monique AXELOS
INRAE, FRANCE

3AO.9.1 T. Istasse, G. Debroux, L. Bockstal, A. Richel
Laboratory of Biomass and Green Technologies, University of Liege, Gembloux, Belgium
V. Lemaur, R. Lazaroni
Laboratory for Chemistry of Novel Materials, University of Mons, Mons, Belgium
Transformation of Monosaccharides to Furanic Compounds and Polymers in Deep Eutectic Solvents

3AO.9.2 S. Rautiainen, N. van Strien, H. Pöhler
VTT, Espoo, Finland
Unique Pathway to Platform Chemicals - 2,5-Furandicarboxylic Acid and Muconic Acid from Sugar Acids

3AO.9.3 C. Løhre, T. Barth
University of Bergen, Norway
R. Brusletto
Arbaflame, Oslo, Norway
Side-Stream Effluent from Large Scale Steam Explosion at Black-Pellet Plant Revealing High Furfural-Content and Added Product-Value

3AO.9.4 J. Köchermann, C. Klüpfel
DBFZ Deutsches Biomasseforschungszentrum, Leipzig, Germany
M. Klemm
DBFZ Deutsches Biomasseforschungszentrum, Leipzig, Gibraltar
Brönsted/Lewis-Acid Combinations for Hydrothermal Production of Levulinic Acid from Starch Residues

Networking & Exhibition Visiting Time 17.20 - 18.30
Tuesday, 07 July 2020

ORAL SESSION 1BO.1

09.00 - 10.00  Agricultural Residues for Energy Production

Agro-industrial residues for advanced biofuels, bioenergy carriers, heat and for soil amendment.

CHAIR & MODERATOR:
Emmanuel GARBOLINO
ASES France R & D / Climpact Data Science, FRANCE

Raphael SLADE
Imperial College London, UNITED KINGDOM

1BO.1.1  V. Dombinov
Forschungszentrum Jülich GmbH, IBG-2: Plant Sciences, Jülich, Germany
H. Herzel, C. Vogel, C. Adam
Federal Institute for Materials Research (BAM, Thermochemical Residues Treatment and Resource Recove, Berlin, Germany
S. Willbold
Forschungszentrum Jülich, ZEA3, Jülich, Germany
G. Vettorazzi Levandowski
Universidade Federal de Goiás (UFG), Goiânia, Brazil
M. Meiler
Fraunhofer UMSICHT, Energy Technology, Sulzbach-Rosenberg, Germany
F. Müller
TU Clausthal (CUTEC), Clausthal-Zellerfeld, Germany
J.W. Zang, W.A. da Fonseca-Zang
Instituto Federal de Goiás (IFG), Goiânia, Brazil
N.D. Jablonowski
Forschungszentrum Jülich, IBG-2: Plant Sciences, Jülich, Germany
S.D. Schrey
Forschungszentrum Jülich , IBG-2: Plant Sciences, Jülich, Germany
Phosphorus Availability and Efficiency of Thermochemical Treatments of Bagasse-Based Fertilizers Depends on Co-Processed Biomass

1BO.1.2  M. Christou, K. Tsiotas, I. Papamichael
CRES, Pikermi, Greece
K. Panopoulos, T. Kraia, G. Kardaras
CERTH, Thessaloniki, Greece
Y. Fallas, N. Ntavos
CLUBE, Thessaloniki, Greece
Agroforestry Residues for Intermediate Bioenergy Carriers

1BO.1.3  M. Ugolini, L. Recchia
CA.RE. FOR. Engineering, Florence, Italy
European Regions Suitability for Advanced Biofuel Production Cases Scenarios for Residual Biomass Supply Chains

1BO.1.4  D.R. Negrao, L.Y. Ling, C. Driemeier
LNBR, Campinas, Brazil
Debris in Sugarcane Bagasse and Straw Zoomed through Microscale X-Ray Analyses
ORAL PRESENTATIONS
TUESDAY, 07 JULY 2020

ORAL SESSION 2BO.2

09.00 - 10.00  Innovative Integrated Gasification Systems Modeling and Demonstration

In this session, typical pilot-scale gasification systems are the focus dealing with aspects of integration of process units.

CHAIR & MODERATOR:
Wiebren DE JONG
Delft University of Technology, THE NETHERLANDS

Yann ROGAUME
University of Lorraine, FRANCE

2BO.2.1  M. Prestipino, F. Famoso, S. Brusca, A. Galvagno
University of Messina, Italy
Process and Location Optimization by GIS-Based Modelling of a Biomass Gasification-Power Plant for Planning Sustainable and Local Bioenergy Systems: A Sicilian Case Study

2BO.2.2  D. Barisano, F. Nanna, A. Villone, E. Catizzone
ENEA, Rotondella, Italy
C. Freda
ENEA, Portici, Italy
F. Cosentino, D. Carboni, F. Di Benedetto
ENEA, Brindisi, Italy
E. Boci
USGM, Roma, Italy
Towards the Implementation of the BLAZE Technology for CHP Applications: Preliminary Gasification Tests at a Bench Scale Bubbling Fluidized Bed

2BO.2.3  N. Morselli, F. Ottani, P. Tartarini, P. Tartarini
UniMORE, Modena, Italy
Enhanced Heat Transfer in Tubes-In-Shell Heat Exchanger for Syngas Cooling: a Comparison between Conventional and Perforated Twisted Tape Inserts

2BO.2.4  V. Pérez, E. Borjabad, L. Esteban, R. Ramos
CEDER-CIEMAT, Lubia (Soria), Spain
Sewage sludge solar drying and gasification at pilot scale for CHP
## ORAL SESSION 3BO.3

**09.00 - 10.00**  
System Assessment in Biorefineries

Techno-economic and life-cycle assessment of biorefineries.

### CHAIR & MODERATOR:
Alain QUIGNARD  
IFPEN, FRANCE

Yukihiko MATSUMURA  
Hiroshima University, JAPAN

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<td>C. Parisi, P. Gurría</td>
<td>Biorefineries as Key Element of the Bioeconomy in the European Union</td>
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<td>3BO.3.2</td>
<td>C.M. Nwachukwu, A. Toffolo, E. Wetterlund</td>
<td>Optimizing Biomass Utilisation in Iron and Steel Production</td>
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<td>L. Menin, V. Benedetti, F. Patuzzi, M. Baratieri</td>
<td>Techno-Economic Modeling of a Liquid Scrubbing Process for the Co-Production of Biomethane and Biomethanol from Syngas</td>
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<td>3BO.3.4</td>
<td>B. Guo, W. Frey, U. Hornung, N. Dahmen</td>
<td>Biorefinery of Microalgae Via Combination of Pulsed Electric Field Treatment and Hydrothermal Liquefaction - A Techno-Economic Assessment</td>
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Bioenergy is considered to play an important role in future scenarios that keep climate warming well below 2°C. Transition towards renewable technologies is a key measure in climate change mitigation. This session will discuss different technological options and conversion routes for bioenergy to develop energy systems towards the energy transition.

CHAIR & MODERATOR:
Heinz A. OSSENBRINK
Former Head of Unit of European Commission, Joint Research Centre, EU

Pedro HARO
Universidad de Sevilla, SPAIN

5BO.4.1 Invited

5BO.4.2 X. Li, T. Damartzis, F. Maréchal
EPFL, Sion, Switzerland

5BO.4.3 E. Le Net, A. Chappaz, E. Le Goff, V. Lacroix
CEA, Grenoble, France
Carbon Cycle: Comparison of Different Systems Based on Several Sources of Carbon and Energy

5BO.4.4 L. Pelkmans
IEA Bioenergy, Mol, Belgium
J. Spaeth
US Department of Energy, Denver, USA
M. Brown
University of the Sunshine Coast, Maroochydore, Australia
K. Kwant
Netherlands Enterprise Agency, Utrecht, The Netherlands
P. Bennett
SCION, Rotorua, New Zealand
P. Buckley
IEA Bioenergy, Dublin, Ireland
U.R. Fritsche
IINAS, Darmstadt, Germany
G. Berndes
Chalmers University of Technology, Gothenburg, Sweden
A. Grassi
ETA Florence Renewable Energies, Italy
V. Djemelinskaia
Social Media Manager, Vienna, Austria
Creating Trust Through Effective, Fact-Based Communication is Key for Further Deployment of Sustainable Bioenergy

Networking & Exhibition Visiting Time 10.00 - 10.10
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<td>The Role of Biomass and Bioenergy in European Green Deal</td>
<td>P. Klintbom</td>
<td>RISE, Sweden</td>
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<td>The Role of Etip Bioenergy in Promoting Advanced Bioenergy Research, Innovation and Market Deployment in the EU</td>
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<td>BP.1.2</td>
<td>Perspectives from the US biofuels and bioenergy industry</td>
<td>J. Spaeth</td>
<td>DOE, USA</td>
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<td>BP.1.3</td>
<td>BBI JU Vision for a Resource Efficient and Sustainable Low-carbon Economy</td>
<td>P. Mengal</td>
<td>BBI, Belgium</td>
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<td>BP.1.4</td>
<td>The new CAP proposal - opportunities for the bioeconomy</td>
<td>N. Di Virgilio</td>
<td>CNR, Italy</td>
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*Networking & Exhibition Visiting Time* 12.00 - 14.00
Land use change and environmental concern over biomass and bioenergy production have fuelled research to support the production of biomass on marginal land. In this session presentations will cover a wide range of crops and management strategies for producing biomass on marginal conditions.

**CHAIR & MODERATOR:**
Efthymia ALEXOPOULOU  
CRES - Center for Renewable Energy Sources and Saving, GREECE

Danilo SCORDIA  
University of Catania, ITALY

1BO.5.1 M. Acciai, F. Zanetti, A. Monti  
DISTAL - University of Bologna, Italy  
B. Elbersen  
Wageningen Environmental Research, The Netherlands  
Are Camelina [Camelina sativa (L.) Crantz] and Crambe (Crambe abyssinica R.E. Fr.) Feasible non-food Crops under Sloppy Marginal Land?

1BO.5.2 K.D. Thelen  
Michigan State University, East Lansing, UsA  
G.R. Sanford  
University of Wisconsin, Madison, Usa  
Marginal Soils Affect Bioenergy Feedstock Yield and Quality

1BO.5.3 J. Costa  
ISEC, Lisbon, Portugal  
L. Gomes, M. Ferreira, C. Graça, A.L. Fernando  
FCT NOVA, Caparica, Portugal  
M. Abias  
3UnUniv Católica Moçambique, Caparica, Mozambique  
F. Germanà, F. Zanetti, A. Monti  
UNIBO, Bologna, Italy  
Production of Oil Crops for Bioenergy Under Heavy Metal Contaminated Soils
This session concerns research works dedicated to small-scale laboratory characterisation of fuels for gasification and small-scale testing works.

**CHAIR & MODERATOR:**
Wolter PRINS  
Ghent University, BELGIUM

Donatella BARISANO  
ENEA Research Centre, ITALY

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<td>2BO.6.1</td>
<td>K. Koido, K. Kurosawa, M. Sato</td>
<td>Catalytic Role of Ca and K in Erianthus Char Gasification</td>
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<td>2BO.6.2</td>
<td>F. Kerscher, J. Bolz, I. Stellwag, H. Spliethoff</td>
<td>Experimental Investigation of Mineral Sorbents for Alkali Removal in Gasification and Combustion Plants</td>
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<td>2BO.6.3</td>
<td>E. Cordioli, M. Baratieri, F. Patuzzi, M.J. Castaldi</td>
<td>Toluene Cracking Using Char from A Commercial Gasifier without Activation</td>
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<td>2BO.6.4</td>
<td>H. Yokoyama, Y. Matsumura</td>
<td>Decomposition Rate of Glycine as Protein Model Compound in Supercritical Water</td>
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Integrated concept development.

CHAIR & MODERATOR:
Maria GEORGIADOU
European Commission, DG RTD, EU
Andreas HORNUNG
Fraunhofer UMSICHT, GERMANY

3BO.7.1 S. Ghysels, A.E. Estrada Léon, N. Priharto, M. Pala, J. De Vrieze, K. Rabaey, W. Prins, F. Ronsse
Ghent University, Belgium
N. Acosta Ortiz
Ghent University, ..., Belgium
**Improving the Biorefinery Output by Coupling Ethanol Fermentation, Anaerobic Digestion and Pyrolysis**

3BO.7.2 G. Haarlemmer, M. Peyrot, M. Briand
CEA, Grenoble, France
**Thermochemical Conversion of Industrial Wastes Produced at a Pulp and Paper Mill Into Biofuels**

3BO.7.3 J.R. Bastidas-Oyanedel, J.E. Schmidt
University of Southern Denmark, Odense, Denmark
**Unlocking Value from Food Waste - Chemicals and Biogas Production**

3BO.7.4 J.W. van Hal
TNO, Petten, The Netherlands
A.B. Bjerre
DTI, Taastrup, Denmark
**Driving on Seaweed: Major Achievements of the H2020 MacroFuels Project towards Producing Biofuels from Macroalgae.**
Successful strategies and policies for the industrialization of renewable energy production.

**CHAIR & MODERATOR:**

Kyriakos MANIATIS  
Former European Commission, DG Energy, EU

Bruno GAGNEPAIN  
ADEME, FRANCE

**IBO.8.1**  
D. Bacovsky  
Bioenergy and Sustainable Technologies, Wieselburg, Austria  
The Contribution of Advanced Renewable Transport Fuels to Transport Decarbonisation in 2030 and Beyond

**IBO.8.2**  
R Mergner, R Janssen, D Rutz  
WIP Renewable Energies, Munich, Germany  
Smart Strategies for the Transition in Coal Intensive Regions

**IBO.8.3**  
M Gómez, S Zapata, J Aranda, C Bartolomé  
CIRCE - Research Centre for Energy Resources and Consumption, Zaragoza, Spain  
B. Annevelink  
WFBR- Stichting Wageningen Research, The Netherlands, The Netherlands  
L. Urciuoli  
ZLC- Fundación Zaragoza Logistics, Spain  
M. Karampini  
CERTH- Ethniko Kentro Erevnas Kai Technologikis, Greece, Greece  
M. Kougioumtzis  
CERTH- Ethniko Kentro Erevnas Kai Technologikis, Greece  
C. Gunnarsson, J. Olsson  
RISE Research Institutes of Sweden, Sweden  
A. Kravchenko  
UCAB - Association Ukrainian Agribusinessclub, Ukraine  
A. Suardi  
CREA- Consiglio per la Ricerca in Agricoltura e l'analisi dell' Economia Agraria, Italy  
C. Serrat  
APS - Agroindustrial Pascual Sanz, Zaragoza, Spain  
I. Boukis  
NUTRIA - Anonymi Biomichaniki Etairia Typopiisis Kai Emporias Agrotikon, Greece  
D. Karlsson  
LANTMÄNNEN - Lantmännens Ekonomisk Forening, Sweden  
T. Gustafsson  
PROCESSUM - RISE Processum AB, Sweden  
P. Fernández  
Spanish CO-OPS - Cooperativas Agro-Alimentarias de España. Sociedad Cooperativa, Spain  
C. Stavropoulou  
INASO - Institouto Agrotikis Kai Synetairistikis Oikonomias INASO PASEGES, Greece  
B. Falcon  
AESA - Agriconsulting Europe S.A, Belgium  
D. Stojiljkovic  
UBFME - University of Belgrade. Faculty of Mechanical Engineer, Serbia
C. Jarauta
CIRCE, Spain
From Agroindustries to Integrated Biomass Logistics Centres. AGROinLOG Project:
Summary of Final Results

IBO.8.4
G. Lamers
BMNT, Vienna, Austria
The Bioeconomy Strategy of Austria

Networking & Exhibition Visiting Time  15.00 - 15.10
ORAL SESSION 1BO.9

15.10 - 16.10  Annual and Perennial Crops

In this session presentations will tackle agronomic and environmental issues related to a range of annual and perennial biomass crops.

CHAIR & MODERATOR:
Ana Luisa FERNANDO
Universidade Nova de Lisboa, PORTUGAL

Vance OWENS
South Dakota State University, USA

1BO.9.1  W. Zegada-Lizarazu, A. Parenti, A. Monti
University of Bologna, Italy

Is Sunnhemp (Crotalaria Juncea L.) a Valid Biomass Feedstock Alternative in Temperate Climates?

1BO.9.2  D. Scordia, G. Testa, S. Calcagno, S.A. Corinzia, B.R. Ciaramella, A. Piccitto, S.L. Cosentino
UNICT-Di3A, Catania, Italy

Potential and Actual Yield of African Fodder Cane (Saccharum Spontaneum Ssp. Aegypticum) on Areas Affected by Biophysical Constraints

1BO.9.3  M. Christou, E. Alexopoulou
CRES, Pikermi, Greece
F. Zanetti, A. Monti
Unibo, Bologna, Italy
M. Krzyzaniak, M. Stolarski
UWM, Olsztyn, Poland
E.N. Van Loo
WUR, Wageningen, The Netherlands

Effect of Varieties, Sowing Dates and Densities on Camelina & Crambe Yields - Final Results of COSMOS Project
### ORAL SESSION 2BO.10

15.10 - 16.10  Innovations in Feedstock for Gasification for Synthesis Gas Production

In this session various feedstocks for the gasification for synthesis gas production are discussed and analysed. Their behaviour on the quality of the liquid is studied.

**CHAIR & MODERATOR:**
Markus BOLHÄR-NORDENKAMPF  
Valmet, AUSTRIA

David BAXTER  
Former European Commission, Joint Research Centre, EU

| 2BO.10.1 | S. Valin, F. Defoort, S. Ravel, P. Pons de Vincent, S. Thiery, H. Miller  
CEA, LITEN, Grenoble, France  
**Fluidized Bed Gasification of New Feedstocks and Blends - Focus on Agglomeration** |
| 2BO.10.2 | M. Schmid, G. Scheffknecht  
IFK University of Stuttgart, Stuttgart, Germany  
**Closing the Loop for Carbon and Raw Materials by Sewage Sludge Gasification for Syngas and Ash Utilization** |
| 2BO.10.3 | E. Paris, F. Gallucci  
CREA, Monterotondo, Italy  
D. Borello, B. De Caprariis  
Università La Sapienza, Roma, Italy  
V. Ancona  
P. Plescia  
CNR, Monterotondo, Italy  
**Use of an Innovative Instrumental Apparatus for Sampling the Emissions Generated by the Simulation of Energy Conversion Processes of Biomass Obtained from PABR (Plant Assisted Bio-Remediation)** |
| 2BO.10.4 | C. Tsekos, M. del Grosso, W. de Jong  
Delft University of Technology, Delft, The Netherlands  
**Investigation of PAH formation from woody biomass and Miscanthus gasification in a novel 50 kWth indirectly heated gasifier and their characterization via fast pyrolysis in a Pyroprobe** |
Development of bio-based products.

**CHAIR & MODERATOR:**
René VAN REE  
Wageningen Research, THE NETHERLANDS

Tomasz CALIKOWSKI  
European Commission, EU

3BO.11.1 L. Jasiunas, L. Miknius  
Kaunas University of Technology, Lithuania
**Biodiesel Plant-integrated Production of Biopolyols - A Bioeconomy Approach**

3BO.11.2 S.U. Larsen, A.B. Bjerre  
Danish Technological Institute, Aarhus, Denmark
N. Ma, X. Hou  
Danish Technological Institute, Taastrup, Denmark
A. Bruhn  
Aarhus University, Silkeborg, Denmark
A. Macleod  
Scottish Marine Institute, Argyll, United Kingdom
U.G. Bak  
Ocean Rainforest, Kaldbak, Denmark
**Ensiling of Seaweed Biomass for Biorefining**

3BO.11.3 C. Mukarakate, N. Wilson, M. Griffin, S. Habas, K. Magrini, K. lisa, M. Yung, M. Nimlos, J. Schaidle  
National Renewable Energy Laboratory, Golden, USA
**Bio-oil as a Platform for Products: Improved Process Economics and Enhanced Utilization of Carbon and Oxygen by Expanding the Product Slate from Catalytic Fast Pyrolysis of Biomass**

3BO.11.4 A. Hornung, S. Eder  
Fraunhofer-Institut UMSICHT, Sulzbach-Rosenberg, Germany
M. Ouadi  
University of Birmingham, United Kingdom
T. Hornung  
Susteen Technologies, Sulzbach-Rosenberg, Germany
J. Zhou  
Verfahrenstechnik Schwedt GmbH, Schwedt/Oder, Germany
D. Lieftink  
HyGear Technology and Services BV, Arnhem, The Netherlands
S. Capaccioli  
ETA-Florence Renewable Energies, Italy
A. Contin, S. Righi, D. Marazza, F. Baioli  
Università di Bologna, Ravenna, Italy
I. Rapone, R. Miglio  
ENI, Novara, Italy
M. Langley, C. Tuck  
WRG, Exeter, United Kingdom
A. Claret, J. Bastos  
Leitat, Terrassa, Spain
**To-Syn-Fuel Project To Convert Sewage Sludge In Value-Added Products**
ORAL SESSION 4BO.12

15.10 - 16.10 Strategy Guidance for Local and Regional Bioenergy Projects

This session will illustrates approaches how local and regional projects for non-food biomass projects for bioenergy and the wider bioeconomy can be fostered.

CHAIR & MODERATOR:
Martin JUNGINGER
Utrecht University, THE NETHERLANDS
Mirjam RÖDER
Aston University, UNITED KINGDOM

4BO.12.1 E. Alexopoulou
CRES, Pikermi, Greece
Non-Food Crops Producing Feedstocks for Bio-Based Products and Materials to Feed EU’s Circular Economy

4BO.12.2 J.S. Ford, P.G. Taylor, C.S.E. Bale
University of Leeds, United Kingdom
The Prospects for Reviving Perennial Energy Crop Cultivation in the Uk

4BO.12.3 M. Torre, P. Tratzi, L Tomassetti, M. Segreto, V. Rizza, P. Fazzini, V. Cozza, V. Paolini, F. Petracchini
CNR - IIA, Monterotondo, Italy
A. Palma, M. Carnevale, E. Paris, F. Gallucci
CREA, Monterotondo, Italy
Development and Evaluation of a Decision Support System for Energy Exploitation of Biomass

4BO.12.4 P. Canciani
Central European Initiative, Trieste, Italy
B. Elbersen
Wageningen University & Research, Wageningen, The Netherlands
C. Panoutsou
Imperial College London, United Kingdom
Fostering Bioeconomy in Central, East And South-East Europe. The Experience of Celebio Project in the Czech Republic, Slovakia, Hungary, Slovenia, Croatia and Bulgaria.

Networking & Exhibition Visiting Time 16.10 - 16.20
ORAL SESSION 1BO.13

16.20 - 17.20 Broadening Opportunities for Bioenergy Feedstock Production from Sustainable Agricultural Practices

The session 1BO.13 discusses integrated biomass production for energy purposes with particular focus on bioenergy production integrated into farming systems. It will give insights into how farming practices can improve by adopting bioenergy feedstock production.

CHAIR & MODERATOR:
Toshimasa MASUYAMA
IRENA - International Renewable Energy Agency, GERMANY
Marisol BERTI
North Dakota State University, USA

1BO.13.1 M. Francavilla, M. Marone, P. Marasco, M. Monteleone
University of Foggia – STAR*Facility Centre– Department of Agriculture, Food and Environment Science, Foggia, Italy
Artichoke biorefinery to obtain the vegetable (artichoke heads) and a range of high-value chemical compounds, feeds and bioenergy

1BO.13.2 C. Panoutsou
Imperial College London, London, United Kingdom
P. Anttila, J. Routa, J. Laitila, A. Asikainen
Luke, Joensuu, Finland
W. Baumgarten
FNR, Berlin, Germany
R. Spinelli
Consiglio Nazionale Ricerca, Rome, Italy
W. Gerwin
BTU Cottbus-Senftenberg, Cottbus, Germany
E. Alakangas
VTT, Juvaskyla, Finland
Opportunities and challenges for broadening biomass feedstock in Europe

1BO.13.3 M. Von Cossel, M. Wagner, J. Lask, E. Magenau, A. Bauerle, I. Lewandowski, B. Winkler
Department of Biobased Products and Energy Crops (340b), Institute of Crop Science, University of Ho, Stuttgart, Germany
V. Von Cossel, K. Warrach-Sagi, V. Wulfmeyer
Institute of Physics and Meteorology (120), University of Hohenheim, Stuttgart, Germany
B. Elbersen, I. Staritsky, M. Van Eupen
Earth Informatics, Wageningen University and Research Centre, Wageningen, The Netherlands
Y. Iqbal
College of Bioscience and Biotechnology, Hunan Agricultural University, Changsha, P.R. China
N.D. Jablonowski
IBG-2: Plant Sciences, Institute of Bio- and Geosciences, Forschungszentrum Jülich, Jülich, Germany
S. Happe
Institute of Animal Breeding and Husbandry, Kiel University, Kiel, Germany
A.L. Fernando
MEIRICs, Departamento de Ciências e Tecnologia da Biomassa, Faculdade de Ciências e Tecnologia, Univ, Caparica, Portugal
D. Scordia, S.L. Cosentino
Dipartimento di Agricoltura, Alimentazione e Ambiente (Di3A), University of Catania, Catania, Italy
Bioenergy Cropping Systems of Tomorrow

1BO.13.4 A. Parenti, W. Zegada-Lizarazu*, A. Borghesi, A. Monti
University of Bologna, Bologna, Italy
Agronomic performance of dedicated lignocellulosic feedstocks in a double cropping system following a cereal food crop
In this session the process related factors for production of syngas are discussed as well as the cleaning and upgrading possibilities.

CHAIR & MODERATOR:
Frederik RONSSE
Gent University, BELGIUM
Jean-Henry FERRASSE
Aix Marseille Universite, FRANCE

2BO.14.1 Invited

2BO.14.2 E.H. Boymans, B.J. Vreugdenhil
TNO, Petten, The Netherlands
Towards Advanced Biofuels Production from Energy Crops; Gasification and Gas Cleaning

2BO.14.3 EUBCE Student Awardee Presentation
H. Boujjat, S. Rodat, G. Mitsuyoshi
CEA, Grenoble, France
S. Abanades, S. Chuayboon
CNRS PROMES, Odeillo, France
Experimentation, Simulation and Scale-Up Study of a Solar Hybrid Reactor for Continuous Biomass Steam Gasification

Institute of Combustion and Power Plant Technology, University of Stuttgart, Stuttgart, Germany
Upgrading of Synthesis Gas From Biomass Gasification by Reforming of Recycled Methane
ORAL SESSION 4BO.15

16.20 - 17.20 Resource Efficient Bioeconomy

Resource efficiency in industrial and policy related circular economy strategies.

CHAIR & MODERATOR:
Luc PELKMANS
CAPREA Sustainable Solutions, BELGIUM

Calliope PANOUTSOU
Imperial College London, UNITED KINGDOM

4BO.15.1 L. Visser, R. Hoefnagels, H.M. Junginger
Utrecht University, The Netherlands
G. Latta, R. Pokharel
University of Idaho, Moscow, Usa
Impact of Increased Pellet Production on Feedstock Allocation and Carbon Flux in the SE US

4BO.15.2 EUBCE Student Awardee Presentation
P. Stegmann, M. Londo, M. Junginger
Utrecht University, The Netherlands
V. Daioglou
PBL, Den Haag, The Netherlands
Integrated Assessment of the Role of the Circular Bioeconomy in Climate Change Mitigation: The Case of Plastics

4BO.15.3 A.K. Lutzenberger
KRU FEA, Siek, Germany
A Resource-Efficient Europe - A Programme for Climate, Competitiveness and Employment

4BO.15.4 K.W. Kwant, A.M. Hamer, D. Both, B. Braakman
Netherlands Enterprise Agency, Utrecht, The Netherlands
The Development of the Circular Economy and Role of Biomass in the Netherlands
ORAL SESSION IBO.16

16.20 - 17.20  Industrial Power and Heat Process and Systems

A selection of innovative projects dealing with pyrolysis, anaerobic digestion, gasification and transport fuels, linked with the use of biomass feedstock or waste.

CHAIR & MODERATOR:
Thomas HABAS
ENGIE, FRANCE

Sylvie VALIN
CEA Grenoble, FRANCE

IBO.16.1  L. van de Bekd, E. Leijenhorst
BTG, Enschede, The Netherlands
S. Ramaswamy, M. Grote, D. Möntmann
OWI, Herzenroath, Germany
A. Toussaint
BTG Bioliquids, Enschede, The Netherlands
T. Rütten
MEKU, Dauchingen, Germany
Residue2heat: Renewable Residential Heating with Fast Pyrolysis Bio-Oil

OPRA Turbines International, Hengelo, The Netherlands
B.A. Putra, A.K. Pozarlik, G. Brem
University of Twente, Enschede, The Netherlands
C. Benesch, T. Brunner
BIOS Bioenergiesysteme, Graz, Austria
Experimental and Numerical Investigation of the Application of Fast-Pyrolysis Oil in a Gas Turbine Combustor

IBO.16.3  L. Wang, M. Perez-Fortes, J. Van, S. Diethelm
EPFL, Sion, Switzerland
Progress of EU project WASTE2GRIDS: Converting WASTE to Offer Flexible GRID Balancing Services with Highly-integrated, Efficient Solid-oxide Plants

IBO.16.4  J. Van Herle
EPFL, Sion, Switzerland
Biogas Cleaning and Integration with Solid Oxide Fuel Cells

Networking & Exhibition Visiting Time  17.20 - 18.30
Wednesday, 08 July 2020

ORAL SESSION 1CO.1

09.00 - 10.00 Valorization of Municipal and Industrial Wastes for Materials and Energy

This session will present the results from a range of research works focused on the recovery and the valorization of municipal and industrial waste both materials and energy. Experimental trials, concept studies and assessments are included.

CHAIR & MODERATOR:
Jens Bo HOLM-NIELSEN
Aalborg University, DENMARK

Matteo PRUSSI
European Commission, JRC, EU

1CO.1.1 H. Honkanen, T. Pennanen, L. Turunen
JAMK University of Applied Sciences, Jyväskylä, Finland
Testing of Applicability of Pulp Production Waste to Concrete and Concrete-Like Materials

1CO.1.2 L.A. Souza, A. Sanches-Pereira, I.L. Sauer
Institute of Energy and Environment, University of São Paulo, São Paulo, Brazil, São Paulo, Brazil
Analysis of Energy Recovery from Domestic Wastewater: Identifying Characteristics that Influence Energy Recovery Implementation in Brazilian Municipalities

1CO.1.3 Invited

1CO.1.4 K. Kohansal, L.A. Rosendahl, S.S. Toor, T.H. Pedersen
Aalborg University, Denmark
Water and Nitrogen Management in Hydrothermal Liquefaction of Urban Waste
ORAL SESSION 5CO.2

09.00 - 10.00  Technological Options and Assessments for Energy Integration

This session will discuss different technological options for bioenergy to develop the future energy grids and energy systems.

CHAIR & MODERATOR:
Oskar MEIJERINK
SkyNRG, THE NETHERLANDS

Christian THIEL
European Commission, Joint Research Centre, EU

5CO.2.1  K. Guerra, P. Haro, A. Ronda-Gálvez, R. Gutiérrez, A. Gómez-Barea
Universidad de Sevilla, Spain

Renewable Hydrogen Production, Underground Storage and Highly Flexible and Synchronous Generation of Electricity to Balance the Future European Electric Grid

5CO.2.2  E. Lozano, T. Pedersen, L.A. Rosendahl
Aalborg University, Denmark

Integration of Hydrothermal Liquefaction and Carbon Capture for the Production of Advanced Liquid Biofuels With BECCS

5CO.2.3  A. Agostini, C. Carbone, F. Gracceva
ENEA, Rome, Italy
V. Motola
ENEA, Ispra, Italy
Y. Zong, S. You
DTU, Roskilde, Denmark
M. Perez Fortes, L. Wang
EPFL, Sion, Switzerland

Waste2Grids: The Potential of Waste-based Solid-oxide Plants for Grid-balancing Services

5CO.2.4  M. Dotzauer, K. Schering
DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Leipzig, Germany
K. Deweß
Hochschule Merseburg, Merseburg, Germany

Flexible Bioenergy by Batteries? Comparison of Conventional Capacity Extension and Utilization of Battery Storage Systems for Demand Driven Power Generation of Biogas Plants
This session deals with the upgrade of the liquid pyrolysis products by fractional condensation and esterification for chemicals, materials, fuels and energy.

**CHAIR & MODERATOR:**
Andreas APFELBACHER  
Fraunhofer-Institut UMSICHT, GERMANY

Ralph P. OVEREND  
Biomass & Bioenergy Journal, CANADA

**3CO.3.1**  
P.J. de Wild  
ECN part of TNO, Petten, The Netherlands  
*Biomass Pyrolysis with Fractionated Product Recovery for Chemicals, Materials, Fuels and Energy*

**3CO.3.2**  
M. Peters, T. Schulzke  
Fraunhofer UMSICHT, Oberhausen, Germany  
*Esterification of Pyrolysis Oils with Higher Alcohols to Improve Liquid Properties*
ORAL SESSION 4CO.4

09.00 - 10.00  Fostering Sustainability in Bioeconomy

This session will address the issue of sustainability in different biomass supply chains and regions around the world.

CHAIR & MODERATOR:
Alexa LUTZENBERGER
ALRENE, GERMANY

Peter CANCIANI
Central European Initiative, ITALY

4CO.4.1  T. Jayabal, S. Schucht, E. Real, L. Letinois, S. Proust, M. Marlair
INERIS, Verneuil-en-Halatte, France
F. Sessa, J. Laffely
Quantis, Lausanne, Switzerland
M.C. Romano
Politecnico di Milano, Italy
Sustainability and Safety Assessment of DME Production from Biomass Gasification With Flexible Sorption-Enhanced Processes

4CO.4.2  S.E. Taelman, D. Sanjuan-Delmás, J. Dewulf
Ghent University, Belgium
D. Tonini
JRC, European Commission, EU
Comprehensive Sustainability Framework for European Waste Management Systems: A Case Study on Food Waste as Valuable Resource

4CO.4.3  T.D. Beuchelt
ZEF - University of Bonn, Germany
R. Schneider
Welthungerhilfe, Bonn, Germany
L. Gamba
WWF, Berlin, Germany
Paving a Way for Food Security in Global Biomass Supply Chains

4CO.4.4  R. Diaz-Chavez
SEI, Nairobi, Kenya
Sustainable Integration of Bioenergy And Bioeconomy The Global South. New Forms of Landscape Governance?

Networking & Exhibition Visiting Time  10.00 - 10.10
PLENARY SESSION CP.1

10.10 - 12.00 Views from the Stakeholders

CHAIR & MODERATOR:
Christian THIEL
European Commission, Joint Research Centre, EU
James SPAETH
U.S. Department of Energy, USA

CP.1.1 R. Venendaal
BTG, The Netherlands
A Bioenergy Industry Perspective for Reaching Carbon Neutrality by 2050

CP.1.2 K. Craig
DOE, USA
The Bio - Advantage - from Bottles to BOTTLE; the U.S. DOE’s Research on Drop-in,
Performance Advantage, and Recycled Bio-materials

CP.1.3 B. Gabrielle
AgroParisTech, Thierval-Grignon, France
B. Elbersen
Wageningen Environmental Research, Wageningen, The Netherlands
U. Fritsche
International Institute for Sustainability Analysis and Strategy, Heidelberg, Germany
Bioenergy Crops: The Silver Bullet to Cool the Planet?

CP.1.4 F. Belin
ErGar, Belgium
Greening the gas grid

Networking & Exhibition Visiting Time 12.00 - 14.00
ORAL SESSION 2CO.5

14.00 - 15.00 Results from Industrial Anaerobic Digestion Plants and Related Research

This session will address the issues of efficiency and ways to improve control in anaerobic digestion plants and biogas cleaning.

**CHAIR & MODERATOR:**
Dominik RUTZ  
WIP Renewable Energies, GERMANY

Serge BIOLLAZ  
Paul Scherrer Institut, SWITZERLAND

**2CO.5.1**  
M. Pohl, T. Barchmann, J. Liebetrau  
DBFZ Deutsches Biomasseforschungszentrum gemeinnützige, Leipzig, Germany

*Biogas Monitoring Programme III: Energy Efficiency Assessment of 61 Biogas Plants in Germany*

**2CO.5.2**  
M. Ravina, S. Borzooei, G. Campo, A. Cerutti, D. Panepinto, B. Ruffino, V. Riggio, M.C. Zanetti  
Turin Polytechnic, Italy  
G. Scibilia  
SMAT Research Center, Turin, Italy  
L. Meucci  
SMAT S.p.A., Turin, Italy

*Optimizing Sewage Sludge Digestion in Wastewater Treatment Plants: A Case Study from the Largest WWTP in Italy*

**2CO.5.3**  
M. Kolano, M. Kraume  
TU Berlin, Germany

*Using Thrust to Control the Mixing Process in Biogas Fermenters*
This session evaluates the environmental impacts of different biomass, bioenergy and biorefinery systems, ranging from pulp and paper to rice straw, grass and residues.

CHAIR & MODERATOR:
Uwe R. FRITSCHE
IIAS, GERMANY
Karen MASCARENHAS
Imperial College, UNITED KINGDOM

4CO.6.1 A. Ekman Nilsson
RISE Research Institute of Sweden, Lund, Sweden
G. Croxatto Vega, J. Sohn, S. Irving Olsen
DTU Technical University of Denmark, Lyngby, Denmark
Upgrading Agricultural Residues in a Biorefinery Setting: Life Cycle Assessment Including Regional Parameters

4CO.6.2 M. Roeder, P. Thornley
Supergen Bioenergy Hub, Birmingham, United Kingdom
Environmental Performance and Trade-Offs of Biogas Production from Rice Straw

4CO.6.3 G. Balcioglu, H. Jeswani, A. Azapagic
Department of Chemical Engineering and Analytical Science, The University of Manchester, United Kingdom
Environmental Life Cycle Assessment of Energy from Anaerobic Digestion of Different Feedstocks in Turkey

4CO.6.4 L. Timma, T. Kristensen, M. Trydeman Knudsen
Department of Agroecology, Aarhus University, Tjele, Denmark
Dynamic Sustainability Analysis of Green Biorefineries by Combining Life Cycle Assessment and System Dynamics Methods. Case Study of Danish Agriculture
The session introduces advanced analytical technologies like Pyrolysis TG-MS. Furthermore, fast Pyrolysis of Lignite via fluidized bed will be discussed. Catalytic pyrolysis and TCR are presented. Detailed Grid Measurements in a Gas Turbine Combustor fueled with pyrolysis oil is focus as well.

**CHAIR & MODERATOR:**

Wim VAN SWAAIJ  
University of Twente, THE NETHERLANDS

Ursel HORNUNG  
Karlsruhe Institute of Technology, GERMANY

**3CO.7.1**  
Q. Niu, N. Wu, J. Pieters, W. Prins, F. Ronsse  
Ghent University, Belgium  
Comparative Study of Microalgae Pretreatment Based on Py-GC/MS for Fast Pyrolysis

**3CO.7.2**  
J. Grunwald, R. Daschner, A. Hornung  
Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany  
Thermo-Catalytic Reforming of Sewage Sludge and Hydrogenation of Resulting TCR® Oils - A Route to Renewable Chemicals and Fuels

**3CO.7.3**  
A. Puente-Urbina  
ETH Zurich, ., Switzerland  
A. Singh-Morgan  
ETH Zurich and University of Edinburgh, Zurich, Switzerland  
J. A. van Bokhoven  
ETH Zurich and Paul Scherrer Institute, Zurich, Switzerland  
Stabilization of GVL-Lignin to Tune Product Selectivity of Fast Pyrolysis
ORAL SESSION ICO.8

14.00 - 15.00  Renewable Fuels: The Industry Perspective

Promising technologies to produce renewable energy from sustainable raw materials.

CHAIR & MODERATOR:
Philippe MARCHAND
Expert, FRANCE

Adam BROWN
REA - Renewable Energy Association, UNITED KINGDOM

ICO.8.1  M. Janhunen, L. Ranta
UPM, Helsinki, Finland
Climate Positive Fuels for Transport Decarbonization: Sequential Cropping
Responding to the Need to Develop New Sustainable Feedstock for Lipid Biofuels

ICO.8.2  S. Bezergianni, A. Dimitriadis, L. Chrysikou, P. Manara
Centre for Research & Technology Hellas, Thessaloniki, Greece
M. Auervald, D. Kubicka
University of Chemistry & Technology Prague, Prague, Czech Republic
U. Pfisterer
BP Europa, Bochum, Germany
P. Kukula
Ranido, Prague, Czech Republic
L. Meca
Ranido s.r.o, Prague, Czech Republic
Towards Bio-oil Integration in an Underlying Refinery

ICO.8.3  A. Pekaretz
Wood Technology Company, Irkutsk, Russian Federation
O. Fedorova, Y. Mandre, E. Akim
SPGTUITD, St-Petersburg, Russian Federation
N. Vinogradov
St. Petersburg State University of Technology and Design, St-Petersburg, Russian Federation
Development of Industrial Implementation and Scientific Basis of Innovative
Technology for Producing Fuel Wood and Wood-Coal Briquet from Sawdust

ICO.8.4  H. Horn, R. Modaresi
Tretekinsk, Oslo, Norway
J. Dibdiakova
NIBIO, As, Norway
A. Vestlund
Bergene Holm, Brandval, Norway
Environmental and Economic Impact of Rapid X-Ray Measurement of Forest Biomass
at Bioenergy Plants

Networking & Exhibition Visiting Time  15.00 - 15.15
This session will discuss the opportunities of power-to-x, hydrogen and other alternative fuels and the opportunities of using alternative fuels to increase the efficiency of existing biofuels.

CHAIR & MODERATOR:
Patrik KLINTBOM  
RISE, SWEDEN

Alain BENGAOUER  
CEA, FRANCE

5CO.9.1  
G. Grim, Z. Huang, M. Guarnieri, J. Ferrell, L. Tao, J. Schaidle  
National Renewable Energy Laboratory, Golden, USA  
**What is the Technical and Economic Feasibility of Utilizing Electricity-Driven CO₂ Reduction to Transform our Carbon Economy?**

5CO.9.2  
H.-P. Schmid  
WS Reformer, Germany  
**Analysis and Comparison of Transport Fuels from Biogas Origin**

5CO.9.3  
G. Zamboni, M. Capobianco  
University of Genoa, Italy  
**Experimental Analysis of the Influence of Diesel-Used Cooking Oil Methyl Ester Blends on Efficiency, Emissions and Combustion Process in a Diesel Engine.**

5CO.9.4  
M. Padella, R. Edwards, A. O'Connell, N. Scarlat  
JRC, Ispra, EU  
**Novel Tranport Fuels in the New Renewable Energy Directive**
ORAL SESSION 4CO.10

15.10 - 16.10 Environmental Impacts of Biomass Systems

This session covers different conversion routes and their contribution to climate mitigation. The approaches are divers in relation to conversion technologies addressed, methodologies applied, and policy perspectives taken.

CHAIR & MODERATOR:
Guido REINHARDT
IFEU-Institut Heidelberg, GERMANY

Rocio DIAZ-CHAVEZ
Stockholm Environment Institute, KENYA

4CO.10.1  T. Mai-Moulin, R. Hoefnagels, M. Junginger
Utrecht University, The Netherlands


4CO.10.2  M. Kaltschmitt
Hamburg Technical University, Germany
H.M. Junginger
Utrecht University, The Netherlands
B. Buchspies
Hamburg University of Technology, Hamburg, Germany

Straw Utilization for Biofuel Production: A Consequential GHG Assessment of Bioethanol and Biomethane Provision with a Focus on the Time-Dependency of Emissions

4CO.10.3  S. Proskurina, E. Vakkilainen
LUT University, Lappeenranta, Finland
R. Sikkema
Wageningen University & Research (WUR), Environmental Sciences Group, The Netherlands
M. Banja
Air and Climate Unit, Directorate for Energy, Transport and Climate, JRC, RC, Ispra, EU

How shall the EU Countries Contribute to the 2030 Renewable Energy Target in the New NECP’s and what is the Environmental Impact of using Solid Biomass?

4CO.10.4  S. Mandley
Utrecht University, The Netherlands

Eu Bioenergy In 2050: The What, Where And Why - An Assessment of Global and Regional Climate Policy on Future EU Bioenergy Consumption, Trade Requirements and Mitigation Potential
Modelling and schemes for hydrothermal processes are presented in the first part of the session, followed by a detailed focus on catalytic hydrotreatment of HTL biocrudes: what are the challenges and how can they be addressed?

**CHAIR & MODERATOR:**
Scott TURN  
University of Hawaii, USA

Pavlina NANOU  
ECN part of TNO, THE NETHERLANDS

**3CO.11.1**  
E. Moghaddam, W de Jong  
TU Delft, The Netherlands  
M. Siedlecki, K. Michalska  
CBI Pro-Academia, Lodz, Poland  
*Supercritical Water Gasification of Multi-Sourced Wet Biomasses: From the Lab-Scale Experiments towards a Novel design of a SCWG Plant*

**3CO.11.2**  
C. Penke, L. Moser, V. Batteiger  
Bauhaus Luftfahrt, Taufkirchen, Germany  
*Modeling of Cost Optimized HTL Fuel Production by Process Integration*

**3CO.11.3**  
D. Castello, M.S. Haider, L.A. Rosendahl  
Aalborg University, Denmark  
*Denitrogenation: A Big Challenge for Biocrude Upgrading to Drop-In Fuels*
Full Chain Demonstration of Advanced Biofuels

Various feedstocks are converted to a variety of products in complete demonstration plants. Operation experiences and next step of developments will be in focus.

CHAIR & MODERATOR:
Bert VAN DE BELD
BTG Biomass Technology Group, THE NETHERLANDS

Ingvar LANDÅLV
Fuel & Energy Consulting, SWEDEN

ICO.12.1  Invited

ICO.12.2  M. Hitzl, M. Hernandez
Ingelia, Valencia, Spain
M. Renz
ITQ, Valencia, Spain
C. Wang, P. Cobden
Swerim, Lulea, Sweden
Carbon sourcing of Cupola Furnace Industry with Hydrothermally Carbonised Paper Sludge, a Circular Economy Model

ICO.12.3  A. Koudil
Bionext, Solaize, France
G. Cheviron
Axens, Rueil-Malmaison, France
N. Ullrich
tkIS, Dortmund, Germany
L. Bournay
IFPEn, Solaize, France
M. Hecquet
Total, Harfleur, France
The BioTfueL Project for Second-generation Biofuels : Towards the Completion of more than 10 Years R&D Efforts

Networking & Exhibition Visiting Time  16.10 - 16.20
ORAL SESSION 5CO.13

16.20 - 17.20 Market Perspectives for Biomass in the Green Deal

This session presents the market perspectives and the required conditions to make this market grow within the EU Green Deal. All sectors: biofuels, bioproducts and sustainable biomass production are incorporated.

CHAIR & MODERATOR:
Giuliano GRASSI
European Biomass Industry Association, BELGIUM

Kees KWANT
Netherlands Enterprise Agency, Ministry of Economic Affairs, THE NETHERLANDS

5CO.13.1 A. Uslu, J. van Stralen
TNO Energy Transition, Amsterdam, The Netherlands
Systemic Analysis of Renewable Fuels (RESfuels) for 2030 and Beyond.

5CO.13.2 M. Prussi, N. Scarlat, J. Rejtharova
EC-JRC, Ispra, EU
M. Acciaro, V. Kosmas
KLU, Hamburg, Germany
Greening EU Waterborne Sector: The Potential Contribution of Biofuels

5CO.13.3 M.M.M. Overbeek
Wageningen Economic Research, The Hague, The Netherlands
A.C. Hoes
Wageningen Economic Research, The Netherlands
S. Albertini
FVA, Rome, Italy
Challenges for the Uptake of Bio-based Products

5CO.13.4 U.R. Fritsche
IINAS, Darmstadt, Germany
K. Moosmann
GIZ, Eschborn, Germany
T. Pirelli
FAO & GBEP, Rome, Italy
K. Sander
World Bank, Washington, DC, USA
Forest Landscape Restoration and Sustainable Bioenergy as a Bridge to Achieve the Paris Agreement, and the SDGs: Implementation Experiences and Financing Options
ORAL SESSION 3CO.14

16.20 - 17.20 Treatment and Analysis of Hydrothermal Process Streams

Advanced analytics on hydrothermal process streams and a detailed view of hydrothermal carbonization aspects are presented.

CHAIR & MODERATOR:
Lasse ROSENDALH
Aalborg University, DENMARK

Tim SCHULZKE
Fraunhofer UMSICHT, GERMANY

3CO.14.1 N.L. Taufer, V. Benedetti, M. Baratieri, M. Pecchi
Free University of Bolzano, Italy
Y. Matsumura
Hiroshima University, Japan
D. Basso
HBI, Bolzano, Italy
Experimental Investigation into the Coupling of Hydrothermal Carbonization of Digestate and Supercritical Water Gasification of Liquid by-products

3CO.14.2 U. Kongjampee, T. Barth
University of Bergen, Norway
The Fate of Pharmaceutical Residues during HTL Conversion of Biogas Residues Relative to Bio-oil Yields

3CO.14.3 D. Baudouin, R. Wang, R. Deplazes, F. Vogel
PSI - Paul Scherrer Institut, Villigen, Switzerland
R. Kirsten, T. Wintgens
FHNW, Muttenz, Switzerland
The Behaviour of Black Liquor Salts Under Hydrothermal Conditions and their Continuous Extraction

16.20 - 18.20 Algae Industry Workshop

Networking & Exhibition Visiting Time 17.20 - 18.30
Thursday, 09 July 2020

ORAL SESSION 2DO.1

09.00 - 10.00 Biogas Cleaning and Use in Local Communities

This session covers biogas cleaning in the form of siloxane removal and small-scale treatment for use in fuel cells, and in addition, biogas production from residues for use in decentralized local communities.

CHAIR & MODERATOR:
Alessandro AGOSTINI
ENEA Research Centre, ITALY

Ioana IONEL
Politehnica University of Timisoara, ROMANIA

2DO.1.1 E. Takaluoma, A. Rimpiläinen
University of Applied Science Kajaani, Finland

Novel Geopolymer Adsorbents for Siloxane Removal from Biogas

2DO.1.2 B.A. Pereira, T.F. Sawatani, T.S.O. De Souza
Department of Hydraulic and Environmental Engineering, Polytechnic School, University of São Paulo, Brazil

Institute of Energy and Environment, University of São Paulo, Brazil

G.M.F.L Leite, A.A. Baptista
Department of Agribusiness, Food and Nutrition, University of São Paulo, Piracicaba, Piracicaba, Brazil

Energy Recovery of in Situ Shredded Kitchen Residues: Decentralized Municipal Organic Solid Waste Treatment and Bioenergy Generation Potential for a Local Community in Brazil

Paul Scherrer Institute, Villigen, Switzerland

M. Gandiglio, A. Lanzini
Politecnico di Torino, Italy

P. Gislon, S. McPhail, F. Santoni
ENEA CR Casaccia, Rome, Italy

Development of a Small-Size Cleaning Unit for Biogas Use in High-Efficiency Fuel Cells: Experimental Investigation of Different Sorbents Materials
This session addresses the potential, feasibility and challenges for different strategies for climate mitigation with bioenergy and carbon capture.

**CHAIR & MODERATOR:**
Monica PADELLA  
European Commission, JRC, EU

Pierre COLLET  
IFP Energies Nouvelles, FRANCE

**4DO.2.1**  
S. Garcia-Freites  
Tyndall Manchester, Manchester, United Kingdom  
M. Roeder  
Supergen Bioenergy Hub, Birmingham, United Kingdom  
*Feasibility of Bioenergy with Carbon Capture and Storage (BECCS) Under the Uk’s Net-Zero Emission Target*

**4DO.2.2**  
K.L.. Mascarenhas, S.T. Coelho, J.R. Meneghini  
Research Centre for Gas Innovation (RCGI / FAPESP / Shell), São Paulo, Brazil  
*Challenges for BECCS Implementation through a Socio-technical Approach*

**4DO.2.3**  
M.P. van Veen, H.M. Junginger  
Utrecht University, The Netherlands  
K. Zagt  
Bareau, Heerenveen, The Netherlands  
*Identifying the Greenhouse Gas Reduction Potential of Autogenerative High Pressure Digestion*
## ORAL SESSION 3DO.3

### 09.00 - 10.00

**Innovations in Advanced Biofuels Production and Use**

This session deals with innovations and progress in processes for advanced biofuels production from different feedstocks.

**CHAIR & MODERATOR:**
- Guillaume BOISSONNET
  - Commissariat à l’Energie Atomique, FRANCE
- Dimitrios SIDIRAS
  - University of Piraeus, GREECE

### 3DO.3.1

**D. Chiaramonti, T. Barsali, D. Casini**
- RE-CORD/UniFI, Florence, Italy
- S. Thion
- Total, Courbevoie, France
- O. Meijerink
- SkyNRG, Amsterdam, The Netherlands
- B. De Ulíbarri
- CENER, Sarriguen, Spain
- Y. Herreras Yambanis
- Camelina Company España, Fuente el Saz de Jarama, Spain
- M. Cocchi
- ETA Florence Renewable Energies, Italy
- A. Jones
- Joint Research Center, Brussels, Belgium

**RE-CORD/UniFI, Florence, Italy**

**Bio4A: Bringing SAF to Scale and Delivering Sustainable Lipids for Aviation**

### 3DO.3.2

**C. Frilund, S. Tuomi, E. Kurkela**
- VTT, Espoo, Finland
- M. Selinsek
- Ineratec, Karlsruhe, Germany

**Compact Gasification and Synthesis Process for Transport Fuels: PDU-Scale Validation of Complete BtL Process**

### 3DO.3.3

**S. Gori, C. Antonetti, F. Doveri, A.M. Raspolli Galletti, G. Pasini, G. Caposciutti, S. Frigo**
- University of Pisa, Italy

**A Green Approach for the Valorisation of Arundo Donax L. and Paper Mill Waste to Produce the Advanced Biofuel N-Butyl Levulinate**

### 3DO.3.4

**S. Rios, O. Lépine**
- AlgoSource Technology, Saint-Nazaire, France
- S. Awad, D. Drouin, J. Pruvost, J. Legrand
- GEPEA, Saint-Nazaire, France

**Experimental Study on the Production of Biodiesel from Nannochloropsis Oceanica Microalgae and its Engine Tests**

### 09.00 - 11.00

**Overcoming Collaboration Challenges Between The Feedstock Owners And Bio-Based Industries**

**Networking & Exhibition Visiting Time**

10.00 - 10.10
ORAL SESSION 2DO.4

10.10 - 11.10 Biological Methanation Processes

Biological methanation is the focus of this session with examples of a trickle bed reactor, ex-situ biotrickling filter methanation and in-situ methanation with hydrogen additions.

CHAIR & MODERATOR:
Bernhard DROSG
BEST - Bioenergy and Sustainable Technologies, AUSTRIA

Arthur WELLINGER
European Biogas Association, BELGIUM

2DO.4.1 J.M. Triolo, L. Yde
University of Southern Denmark, Odense, Denmark
Assay for Testing Packing Materials for Ex-Situ Bio-Methanation

2DO.4.2 Invited

2DO.4.3 T. Weidlich, T. Trabold, P. Treiber, M. Neubert, J. Karl
Friedrich-Alexander-Universität Erlangen-Nürnberg, Chair of Energy Process Engineering, Nuremberg, Germany
Experimental Performance of a Trickle-Bed Reactor for Biological Methanation
ORAL SESSION 4DO.5

10.10 - 11.10 International Strategies and Governance Systems for Bioenergy and the Bioeconomy

This session will focus on a variety of strategies and governance mechanisms to steer bioenergy and the bioeconomy in different world regions.

CHAIR & MODERATOR:
Birger KERCKOW
FNR - Agency for Renewable Resources, GERMANY

Robert M'BAREK
European Commission, JRC, EU

4DO.5.1 Y. Zhou, N. Pavlenko, B. Comer, S. Searle
International Council on Clean Transportation, Washington D.C., USA
D. Rutherford
International Council on Clean Transportation, San Francisco, USA
Biofuel’s Potential in International Shipping Decarbonization

4DO.5.2 C. Panoutsou, A. Singh, T. Christensen
Imperial College, London, United Kingdom
L. Pelkmans
Caprea, Brussels, Belgium
Informed Decision Making in Bioeconomy Through Use of Value Chain Indicators

4DO.5.3 F.X. Johnson, M. Fielding, G. Gladkykh, O. Olsson
Stockholm Environment Institute, Sweden
N. Canales
Stockholm Environment Institute, Bogota, Colombia
M. Ogeya
Stockholm Environment Institute, Nairobi, Kenya
R. Bailis
Stockholm Environment Institute, Boston, USA
M. Aung
Stockholm Environment Institute, Bangkok, Thailand
Governing Alternative Bioeconomy and Development Pathways: An International Comparison

4DO.5.4 G. Beekman, S. van Berkum, H. Bos-Brouwer, H. Dagevos, W. de Haas, L. van Hoof, C. de Lauwere, C. Plaisier, M. Pleijte, D. Puente
Wageningen UR, The Netherlands
Governance in Transitions Towards A Circular and Climate Neutral Society
Intermediate (commodity) bioenergy carriers are key in making forestry, agricultural biomass (residues) and organic wastes available for biochemicals/materials and bioenergy applications. They facilitate logistics and conversion, but also sustainability certification and trade. This session addressed production, production fundamentals and application of solid bioenergy carriers produced via thermal treatment.

**CHAIR & MODERATOR:**
Jaap KIEL  
ECN part of TNO, THE NETHERLANDS  
Liang WANG  
SINTEF Energy Research, NORWAY

**3DO.6.1**  
H. Demey, T. Melkior, A. Chatroux, M. Grateau, P. Pons de Vincent, S. Thiery, M. Marchand  
Commissariat à l’Energie Atomique et aux Energies Alternatives, Grenoble, France  
**Torrefaction of Poplar Biomass: Manufacturing of Efficient Biocoal Materials for Cofiring Applications and as Reducing Agents in Metallurgical Industries**

**3DO.6.2**  
L.G.O. Galvão, B. S. Chaves  
Forest Products Laboratory, Brazilian Forest Service, Brasilia, Brazil  
E.A. Silveira, A. Caldeira-Pires, M.V. Girão de Morais  
Mechanical Engineering Dpt., University of Brasilia, Brazil  
P. Roussset  
French Agriculture Research Centre for International Development, Montpellier, France  
A.T. do Vale  
Forest Engineering Department, University of Brasilia, Brazil  
**Combined Thermo-Acoustic Upgrading of Solid Fuel: Experimental and Numerical Investigation**

**3DO.6.3**  
R. Deutsch, S. Martini, N. Kienzl  
BEST - Bioenergy and Sustainable Technologies GmbH, Graz, Austria  
C. Strasser  
BEST- Bioenergy and Sustainable Technologies GmbH, Graz, Austria  
**Customizing Biomass as Reducing Agent in Blast Furnace Ironmaking - Reduction Potential and Fluidization**

**3DO.6.4**  
EUBCE Student Awardee Presentation  
C. Saavedra, L. Simonin, S. Martinet  
CEA-LITEN, Grenoble, France  
C. Matthei-Ghimbeu  
CNRS, Mulhouse, France  
C. Dupont  
IHE, Delft, The Netherlands  
**Biochar-Derived Carbonaceous Materials as Electrodes of the Next-Generation Sodium-Ion Batteries: Elucidating the Impact of Biomass Composition in the Electrode Performance.**

**Networking & Exhibition Visiting Time**  
11.10 - 11.20
11.20 - 13.00  Closing Session

Networking & Exhibition Visiting Time  13.00 - 14.00
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>13.00 - 15.00</td>
<td>BIOFIT Industry Form - H2020 Project on Bioenergy Retrofits for Europe’s Industry</td>
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<tr>
<td>14.00 - 15.30</td>
<td>Sustainable biomass supply chains</td>
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<tr>
<td>14.00 - 15.30</td>
<td>Bioenergy - The Overlooked Contributor To The 1.5°C Climate Objective</td>
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<tr>
<td>14.00 - 15.30</td>
<td>FLEDGED Project</td>
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<tr>
<td>14.00 - 15.30</td>
<td>Fostering bioeconomy in central, East and South-East Europe.</td>
</tr>
<tr>
<td>16.00 - 17.30</td>
<td>Bioenergy Stakeholders Workshop</td>
</tr>
</tbody>
</table>

*Networking & Exhibition Visiting Time*  
17.30 - 18.30
This visual session covers different methodologies to assess sustainability for different regions and pathways, including resource efficiency in value chains for energy, fuels and biobased products for the bioeconomy are addressed. In addition, strategies and policies for bioeconomy in many different countries and regions of the world are addressed for a wide range of biomass substrates and their conversion to diverse bioproducts.

**CHAIR & MODERATOR:**

**Calliope PANOUTSOU**  
Imperial College London, UNITED KINGDOM

**Rocio DIAZ-CHAVEZ**  
Stockholm Environment Institute, KENYA

**4AV.1.1**  
B. Sumfleth, S. Majer  
DBFZ Deutsches Biomasseforschungszentrum, Leipzig, Germany  
D. Thrän  
Helmholtz Zentrum für Umweltforschung UFZ, DBFZ Deutsches Biomasseforschungszentrum, Leipzig, Germany  
**Low iLUC Risk Indicators for Certification in the EU Bioeconomy**

**4AV.1.2**  
C.M.T. Rocha, S.T. Coelho  
Institute of Energy and Environment, University of São Paulo, Brazil  
T.A.G. Fuentes  
Institute of Ecology, National Autonomous University of Mexico, Mexico City, Mexico  
A. Ghilardi  
Research Center in Environmental Geography, National Autonomous University of Mexico, Mexico City, Mexico  
**Energy Utilization of Biomass Residues in Underdeveloped Communities: Study Brazil and Mexico**

**4AV.1.3**  
A. Sánchez, M. López-Ortega  
Unidad Guadalajara de Ingeniería Avanzada, Centro de Investigación y Estudios Avanzados (CINVESTAV), Zapopan, Jalisco, Mexico  
T. L. Junqueira, A. Bonomi  
Brazilian Biorenewables National Laboratory (Lnbr), Campinas, São Paulo, Brazil  
**Enhancing Sustainable Sugarcane Bioethanol Production In Mexico with the Brazilian Experience**

**4AV.1.4**  
L. Zihare, I. Muizniece, A. Kubule, D. Blumberga  
Riga Technical University, Riga, Latvia  
**Country Level Sustainability Evaluation of Bioeconomy**

**4AV.1.5**  
B.S. Elbersen, R. Bugter  
Wageningen Environmental Research, Wageningen, The Netherlands  
M. Leeuwen, van  
Wageningen Economic Research, Wageningen, The Netherlands  
K. Meesters, J. Broeze  
Wageningen Food and Biobased Research, Wageningen, The Netherlands  
R Jongschaat  
Wageningen Plant Research, Wageningen, The Netherlands  
P. Mostert, M. Vries, de  
Wageningen Livestock Research, Wageningen, The Netherlands  
I. Fels-Klerx, van der  
Wageningen Food Safety Research, Wageningen, The Netherlands  
G. Piet
Wageningen Marine Research, Wageningen, The Netherlands

Monitoring Circularity in the Bioeconomy: The Example of the Netherlands

4AV.1.6
M. Von Cossel, C. Amarysti, H. Wilhelm, N. Priya, B. Winkler, L. Hoerner
Dpt.of Biobased Products and Energy Crops (340b), Institute of Crop Science, University of Hohenheim, Stuttgart, Germany
Changes in Energy and Material Cycles of a Biogas Plant through Replacing Maize with Cup Plant

4AV.1.7
R. M'barek, G. Philippidis, T. Ronzon
European Commission, JRC, EU
Synergies and Trade-Offs of Sustainable Development - A Bio-Economic Perspective with SDG Insights

4AV.1.8
M.C. Vivas-Cuellar, E.A. Collado Dominguez, D.A. Arias Durand, D. Jorge Rimachi
Universidad Nacional de Ingenieria, Lima, Peru
O.G. Marin Flores
Washington State University, Pullman, USA
Clean Technologies for Obtaining Feather Flour by the Physical Hydrolysis Method Using Chicken Feather Waste

4AV.1.9
D. Rutz, F. Colmorgen, R. Janssen
WIP Renewable Energies, Munich, Germany
Biogas - Global Challenges, Markets and Cooperation Opportunities

4AV.1.10
L. Hagman
Linköping University, Sweden
Creating a Circular Biorefinery Through Anaerobic Digestion

4AV.1.12
T. Ranta, M. Laihanen, A. Karhunen
LUT University, Lappeenranta, Finland
Sustainability of Forest-Based Bioenergy - A Student Survey

4AV.1.13
B. Velázquez Martí
Departamento de Ingeniería Rural y Agroalimentaria, Universitat Politècnica de València (Spain), Valencia, Spain
C. Mena Campoverde
Facultad de Economía, Universidad Católica de Santiago de Guayaquil (Ecuador), Guayaquil, Ecuador
Model for the Distribution of Energy and Food Crops to Maximize GDP and Guarantee Food Sovereignty

4AV.1.14
A. Roth
Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France/CIRAD-Upr B, Montpellier, France
F. Pinta
CIRAD-Upr BioWooEB, F-34398 Montpellier. Université Montpellier, CIRAD, France, Montpellier, France
S. Negny, L. Montastruc
Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France, Toulouse, France
Identifying Sustainable Strategies and Policies to Strengthen Local Forestry and Wood Based Economy - The Case Study of The Cévennes Area (France) and the Chestnut Tree

4AV.1.15
I. Gyparis, D. Sidiras
University of Piraeus, Greece
A Pathway Towards the Development of EU Energy Sector: Unconventional Gas or Biofuels?
**4AV.1.16**
P. Sridan, P. Surapolchai  
Social Research Institute, Chulalongkorn University, Bangkok, Thailand  
**A Systemic Approach to Biomass Energy Development: Thailand’s Path towards Sustainable Development**

**4AV.1.17**
H. Honkanen  
JAMK University of Applied Sciences, Jyväskylä, Finland  
A. Aalto  
JAMK University of Applied Sciences, Saarijärvi, Finland  
H. Koponen  
Regional Council of Central Finland, Jyväskylä, Finland  
**Connecting Rural Areas in Baltic Sea Region to Boost Smart and Sustainable Bioeconomy**

**4AV.1.18**
N. Szarka, L. Garcia, T. Schmidt-Baum  
Deutsches Biomasseforschungszentrum gemeinnützige, Leipzig, Germany  
**A Guideline to Create Regional Bioeconomy Hubs**

**4AV.1.19**
A. Younis, R. Benders, T. Lap, A. Faaij  
Energy and Sustainability Research Institute Groningen, University of Groningen, Groningen, The Netherlands  
R. Delgado, A. Cadena  
Modeling and analysis group: Energy-Environment-Economy, School of Engineering, Universidad de los A, Bogota, Colombia  
M. Gonzalez-Salazar  
Institute for Technology Assessment and Systems Analysis, Karlsruhe Institute of Technology, Karlsruhe, Germany  
**Systems Analysis of the Bioeconomy as a Path Towards Low Carbon Development in Colombia**

**4AV.1.20**
T.M. Lammens  
BTG Bioliquids, Enschede, The Netherlands  
R. Venendaal  
BTG Biomass Technology Group, Enschede, The Netherlands  
**Methodologies for Biogenic Carbon Determination when Co-Processing Fast Pyrolysis Bio-Oil**

**4AV.1.25**
M. Sajdak  
Polish Academy of Sciences Scientific Center in Paris, Paris, France  
R. Sikkema  
Wageningen University & Research Centre, The Netherlands  
**Higher Efficiencies First or Diversification of Support for Bio-Heat and -Electricity?**

**4AV.1.32**
Z.M. Harris, J. Feng, D. Ying, E Sevigné-Itoiz, Y. Kountouris  
Centre for Environmental Policy, Imperial College London, London, United Kingdom  
T.J. Hudelson, H. Lieth, G. Taylor  
Plant Sciences Department, University of California, Davis, Davis, Usa  
**Vertical Farming as a Game Changer for BECCS Technology**

**4AV.1.37**
E. Falch, V. Hjellnes  
NTNU, Norwegian University of Science and Technology, Trondheim, Norway  
R. Slizyte  
SINTEF Ocean, Trondheim, Norway  
N. Kaushik  
Amity University, Nodia, India  
**The power of educating students to make an impact on food loss reduction in a global perspective**
4AV.1.39  A. Pavlou, G. Penloglou  
CERTH/CPERI, Thessaloniki, Greece  
C. Kiparissides  
CERTH/CPERI & AUTh, Thessaloniki, Greece  
Chemicals and Polymers from Microalgae: an Economic Assessment

4AV.1.42  L Fryda  
TNO, Petten, The Netherlands  
F. Carvalheiro, L. Duarte, C. Oliveira  
LNEG, Lisbon, Portugal  
I. del Campo  
CENER, Navarra, Spain  
The Role of Protocols and Benchmarks in a Bio Based Economy

Networking & Exhibition Visiting Time    15:00 - 15:10
This session deals with land and soil interactions associated with biomass production systems from an ecosystem perspective. This session also deals with a range of processes for reduced GHG emissions, carbon capture, BECCS/BECCUS, C-efficiency in energy systems including transport, and the impacts of biomass crops on soils in different regions of the world.

**CHAIR & MODERATOR:**
Monica PADELLA  
European Commission, JRC, EU

Mirjam RÖDER  
Aston University, UNITED KINGDOM

**4AV.2.2**  
R.-U. Syrbe, T. H. Tran, K. Grunewald, H. Herold, G. Meinel  
Leibniz Institute of Ecological Urban and Regional Development, Dresden, Germany  
**Biomass Based Residential Heating as Ecosystem Service - Spatial Implications and Service Trade-Offs of German Energy Transition**

**4AV.2.3**  
I. Fraboulet, F. Del-Gratta  
INERIS, Verneuil-en-Halatte, France  
J.S. Andersen, M.W. Warming-Jespersen  
DTI, Aarhus, Denmark  
D. Bäckström  
RISE, Borås, Sweden  
S. Janhäll  
RISE, Borås, Sweden  
F. Hugony  
ENEA, Milan, Italy  
C. Morreale  
INNOVHUB, Milan, Italy  
**European Inter-Comparison Campaigns on PM and OGCs Atmospheric Emissions Test Methods from Residential Wood Combustion using a Stack Simulator Generating Real Biomass Combustion Gases**

**4AV.2.5**  
University of Gothenburg, Sweden  
S. Carlsson, K. Davidsson  
RISE Research Institutes of Sweden, Borås, Sweden  
Å. Hallquist  
IVL Swedish Environmental Research Institute, Gothenburg, Sweden  
**Factor Analysis and Molecular Characterization of Emissions from a Residential Wood Burning Boiler**

**4AV.2.6**  
E. Paris, A. Assirelli, B. Vincenti, M. Carnevale, V. Di Stefano, F. Gallucci  
CREA, Monterotondo, Italy  
V. Paolini, E. Guerriero  
CNR, Montelibretti, Italy  
**Comparison Between VOCs Emitted from Orange With and Without Peel and Development of a Emission Abatement System**

**4AV.2.7**  
Brazilian Center for Research in Energy and Materials (CNPEM)/ Brazilian Biorenewables National Labo, Campinas, Brazil  
**Yield Estimation and Water Use Efficiency for Sugarcane Production in Center-South Brazil**
4AV.2.8  A. Cecchin, M. Berti  
North Dakota State University - Department of Plant Sciences, Fargo, USA  
G. Pourhashem  
North Dakota State University - Department of Coatings and Polymeric Materials, Fargo, USA  
Evaluating Environmental Impacts of Introducing Winter Camelina and Field Pennycress into the Current Cropping Systems in the Upper Midwest of the USA

4AV.2.9  S. Righi, R. Guerra, L. Vogli, F. Baioli  
University of Bologna, Ravenna, Italy  
Polyhydroxybutyrate from Sewage Sludge: Life Cycle Assessment Methodological Choices and Inventory

4AV.2.10  S. Righi, F. Baioli  
University of Bologna, Ravenna, Italy  
S. Marinello  
University of Modena and Reggio Emilia, Reggio Emilia, Italy  
Life Cycle Assessment of a Biofuel Production System from Algal Biomass Cultivated in Photobioreactors

4AV.2.11  P. Arora  
Indian Institute of Technology, Roorkee, India  
V. Thomas, M.J. Realff  
Georgia Institute of Technology, Atlanta, USA  
Y. Yuan, R. Chance  
Algenol Biofuels, Fort Myers, USA  
Sustainability Assessment of Hydrothermal Liquefaction of Algae for the Production of Refined Bio-crude: Effects of CO2 Sourcing

4AV.2.12  A. Hahn, N. Szarka  
DBFZ, Leipzig, Germany  
M. Uglik  
UFZ, Leipzig, Germany  
D. Thrän  
DBFZ, UFZ, Leipzig, Germany  
Retrofitting bioenergy Plants with Carbon Capture: Assessing the Near-term Potential for Biogenic CO2 in Germany

4AV.2.13  M. Aalto, O.J. Korpinen, T. Ranta  
LUT-University, Mikkeli, Finland  
Modeling Passenger Travels in a Low-Carbon Transportation System with an Agent-Based Simulation Approach

4AV.2.14  V. Larnaudie, M.D. Ferrari, C. Lareo  
Dept. Bioingeniería, Facultad de Ingeniería, Universidad de la República, Montevideo, Uruguay  
Impact Of Electricity Credits in the Life Cycle Inventory Analysis of Bioethanol Produced in a Biorefinery

4AV.2.15  C. Moretti, H.M. Junginger, L. Shen  
Utrecht University, The Netherlands  
A. López-Contreras, T. de Vrije  
Wageningen University & Research, The Netherlands  
A. Kraft  
Fraunhofer Institute, Oberhausen, Germany  
Techno-Economic Analysis and Life-Cycle Greenhouse Gas Emissions of a Novel Aviation Fuel from Residue Streams from the Potato Processing Industry
4AV.2.16  C.M. Sastre, J. Carrasco, R. Barro  
CIEMAT, Madrid, Spain  
J. Cabanillas, L. Royano, A. Parralejo, J. González  
CIICYTEX, Guadajira, Spain  
P. Ciria  
CIEMAT, Guadajira, Spain  
L.E. Pascual  
CIEMAT, Guadajira, Spain  

4AV.2.17  K. Nemoto, T. Nakata  
Tohoku University, Sendai, Japan  
S. Nakamura, M. Ooba  
National Institute for Environmental Studies, Miharu, Japan  
Y. Mori  
National Institute for Environmental Studies, Tsukuba, Japan  
Comparison of Carbon Emissions Utilizing Different Residential Heating Systems in Mountainous Areas

4AV.2.18  A. Poluzzi, G. Guandalini, M. C. Romano  
Politecnico di Milano, Italy  
Potential Carbon Efficiency as a New Index to Track the Performance of Biofuel Production Processes

4AV.3.35  E. Alexopoulou  
CRES - Center for Renewable Energy Sources and Saving, Biomass Dpt., Greece  
Growth Responses of Sorghum and Switchgrass to Heavy Metals

Networking & Exhibition Visiting Time  16:10 - 16:20
The poster session addresses some options concerning technology integration and flexible feed-ins for energy grid stability, including energy storage using the products of biomass conversion. Also addressed are alternative fuels and their most important building blocks: CO2 and H2, as well as market perspectives for biomass production, the value chain, market and how to reduce financing risks.

**CHAIR & MODERATOR:**
Kees KWANT  
Netherlands Enterprise Agency, Ministry of Economic Affairs, THE NETHERLANDS

Liang WANG  
SINTEF Energy Research, NORWAY

**5AV.3.1**  
E. Middelhoff, N. Florin  
Institute for Sustainable Futures, University of Technology Sydney, Sydney, Australia  
L. Andrade Furtado, J. Reis Parise  
Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil  
F. Ximenes  
Forest Science, New South Wales Department of Primary Industries, Sydney, Australia  
**Concentrated Solar-Biomass Hybrid Plant for Electricity Generation in New South Wales, Australia**

**5AV.3.2**  
R. Gutiérrez, P. Haro, M. Suárez-Almeida, K. Guerra, A. Gómez-Barea  
Universidad de Sevilla, Spain  
**Integration of Solar and Biomass for the Production of Electricity: Contributions to Face the Challenge of Flexible Operation in Thermochemical Biorefineries**

**5AV.3.3**  
D. Rutz, R. Mergner, R. Janssen  
WIP Renewable Energies, Munich, Germany  
C. Winterscheid  
Solites, Stuttgart, Germany  
V. Lukoševičius, E. Cepulis  
Lithuanian District Heating Association, Vilnius, Lithuania  
A. Danulevič  
4Salcininku Silumos Tinklai, Šalcininkai, Lithuania  
A. Kazagic, A. Merzic, D. Tresnjo  
Elektroprivreda, Sarajevo, Bosnia And Herzegovina  
S. Grimm  
AGFW, Frankfurt, Germany  
B Doracic, T. Pukšec  
University of Zagreb, Zagreb, Croatia  
R. Hummelshøj  
COWI, Copenhagen, Denmark  
M. Pozzi, S. Morgione  
OPTIT, Bologna, Italy  
A. Krasatsenko  
Euroheat & Power, Brussels, Belgium  
S. Rossi  
Gruppo Hera, Imola, Italy  
**Upgrading District Heating: The Upgrade DH Project**
5AV.3.4 M. Steubing
Helmoltz-Centre for Environmental Research - UFZ, Leipzig, Germany
Ö Can
Helmoltz-Centre for Environmental Research - UFZ
Helmoltz-Centre for Environmental Research – UFZ, Leipzig, Germany
M Dotzauer
DBFZ - Deutsches Biomasseforschungszentrum gGmbH, Leipzig, Germany

Concepts for the Promotion of Demand-Oriented Electricity Feed-In through Bioenergy Plants

5AV.3.5 M. Akbari, A. Kumar
University of Alberta, Edmonton, Canada

Comparative Techno-Economic Assessment of Renewable Natural Gas (RNG) Production Pathways from Various Biomass Feedstocks

5AV.3.6 T. Green, A. Ross, R. Crook
University of Leeds, United Kingdom

A Solar - Driven Thermochemical Process for the Production of Biofuel: With Application to Rural Uganda

5AV.3.7 R. Daschner, A. Apfelbacher, A. Hornung
Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany

Biobattery Concept: Integration of Biomass and Waste for Fuels, Heat and Power on Demand

5AV.3.8 EUBCE Student Awardee Presentation
A. Poluzzi, G. Guandalini, S. Guffanti, S. Moioli, C. Elsido, E. Martelli, G. Groppi, M.C. Romano
Politecnico di Milano, Italy

Techno-Economic Analysis of Flexible Power&biomass-to-Methanol Plants

5AV.3.9 R. Maier, B. Thomas
Reutlingen University, Germany

Flexible and Robust Control Algorithm for Intelligent Control of Biogas CHP Units for Stabilising the Power Grid

5AV.3.10 M. Veress, A. Bartik, F. Benedikt, M. Hammerschmid, J. Fuchs, S. Müller, H. Hofbauer
TU Wien, Vienna, Austria

Development and Techno-Economic Evaluation of an Optimized Concept For Industrial Bio-SNG Production from Sewage Sludge

5AV.3.12 C. Perakis, L. Gavriel, I. Papamichail, K. Tsiotas, M. Christou
Centre for Renewable Energy Sources and Saving, Pikermi, Greece

Crop Residues in the Post-Coal Era - The Case of Amyntaio in Western Macedonia.

5AV.3.13 A. Pfeiffer, A. Mertens
Deutsches Biomasse Forschungszentrum gGmbH, Leipzig, Germany
D. Thrán
Deutsches Biomasse Forschungszentrum gGmbH and Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

Supply Chain Management for Intermediate Bioenergy Carriers - Analysis of Four European Case Studies

5AV.3.14 M. Donner, I. Radic
INRA, Montpellier, France
T. Yatribi
ENA Meknès, Meknès, Morocco
Y. Erraach
INAT, Tunis, Tunisia
F. López-i-Gelats
Collective Marketing Strategies and Circular Business Models for Valorising Local Food, Agro-Waste and By-Products: Example of the Olive Oil Chain

N.R. Mosteanu
American University of Malta, Bormla, Malta

Financial and Economic Policies for a Sustainable Development through Green Circular Economy and Artificial Intelligence

N.R. Mosteanu
American University of Malta, Bormla, Malta

Risk Assessment of Financing Bioeconomy Projects to Develop a Healthy Social and Business Environment

N.R. Mosteanu
American University of Malta, Bormla, Malta

Education, Qualification Awareness and Social Civism to Build and Sustain a Healthy and Developed Society

P..J. de Wild
University of Groningen, The Netherlands

Biobased Products: An Academic Course on Green & Sustainable Chemistry for the Bio-Economy

D. Rutz, I. Ball, R. Janssen
WIP Renewable Energies, Munich, Germany
H. Tretter, K. Knaus
Austrian Energy Agency, Vienna, Austria
S. Drexlmeier, C. Baumann
Civiv Foundation Energiewende Oberland, Penzberg, Germany
F. Puente
Escan, Madrid, Spain
V. Segon
Regionalna Energetska Agencija Sjeverozapadne Hrvatske, Zagreb, Croatia
D. Balic
Energy Institute Hrvoje Pozar, Zagreb, Croatia
F. Silajdžic
ENOVA, Sarajevo, Bosnia And Herzegovina
A. Nikolaev
Black Sea Energy Research Centre, Sofia, Bulgaria
S. Jerotic
City of Sabac, Serbia
G. Stegnar
Institut Jozef Stefan, Ljubljana, Slovenia Republic
N. Markovska
SDEWES Skopje, Skopje, Macedonia
R. Ayuste Cupido
Regional Energy Agency of Castilla y León, Leon, Spain
P. Mazzucchelli
EUREC, Brussels, Belgium
M. Colla
Bioenergy Europe, Brussels, Belgium
Ø. Skreiberg
SINTEF, Trondheim, Norway

An Urgent Call for the Phase-Out of Fossil Space Heating Systems and for the Support of Renewables in the Heating Sector
5AV.3.20  M. Wojcieszyk, Y. Kroyan, O. Kaario, M. Larmi  
Aalto University, Espoo, Finland  
Impact of Alternative Transport Fuel Properties on Engine Performance

5AV.3.29  P. Karka, S. Papadokonstantakis, F. Johnsson  
Chalmers University of Technology, Göteborg, Sweden  
C. Panoutsou  
Imperial College, London, United Kingdom  
Key Challenges and Opportunities on the Development of Liquid Transport-Biofuel Technologies in Short- And Long-Term Timeframes

Networking & Exhibition Visiting Time  17:20 - 18:30
Posters in this session cover various feedstocks converted to a variety of intermediate and final products from biomass. Operation experiences and next steps for developments towards industrialization are the main focus. In addition, examples of dedicated feedstock bioenergy plants, innovative algal biorefineries, tools for feedstock supply decision making, as well as successful strategies and policies for the industrialization of renewable energy generation are presented.

**CHAIR & MODERATOR:**
Philippe MARCHAND
Expert, FRANCE

Bert VAN DE BELD
BTG Biomass Technology Group, THE NETHERLANDS

**IBV.1.1**
A.J. Grootjes, B.J. Vreugdenhil
TNO Energy Transition, Petten, The Netherlands
F.R. Groeneveld
TNO CBRN Protection, Rijswijk, The Netherlands
R.J.J. Zwart, A. van der Drift
Synova Renewable Technology, Maassluis, The Netherlands
E. Boymans
TNO Energy Transition, The Netherlands
**Cyanide Removal for Synthesis Gases**

**IBV.1.2**
F.M. Baena-Moreno, M. Rodríguez-Galán, B. Navarrete
University of Seville, Spain
**Definition of a New CO2 Capture and Utilization Process from Biogas and Waste Valorization.**

**IBV.1.3**
I. Ball, R. Janssen, D. Rutz
WIP Renewable Energies, Munich, Germany
S. Berger-Ruiz
Solagro, Toulouse, France
G. Descamps, P.-E. Rollet
APYGEC, Juillan, France
Ch. Triquenaux
Interis, Champs Sur Marne, France
**The BABET-REAL 5 Project - Perspectives for a Second Generation (2G) Bioethanol Production Plant in Bavaria**

**IBV.1.4**
F. Schäfer, L. Janke, J. Prüter
DBFZ, Leipzig, Germany
F. Niebling
GICON, Cottbus, Germany
A. Himmelstoss
AEV, Dresden, Germany
**NovoHTK - A Novel Process for Anaerobic Digestion of Chicken Manure**

**IBV.1.5**
C. Richard, G. Karakachian, F. Fallot, L. Thonat
ENGIE, Saint-Denis, France
C. Charnier, J. Budin, C. Marcilhac, L. Teuma, F. Novellis, J. Miroux
BioEnTech, Narbonne, France
G. Accarion, E. Baudu
Akajoule, Saint-Nazaire, France
E. Latrille
INRA-LBE, Narbonne, France
F. Beline
IRSTEA, Rennes, France
S. Houot
INRA-ECOSYS, Thiverval-Grignon, France
E. Le Cadre Loret
ENGIE, La Défense, France

**Mapped: Digital Tools to Boost and Optimize the Biogas Production at Local And Territory Scales**

**IBV.1.6**
A. Arjun, B. Patel, S.M.A. Biollaz
PSI, Villigen PSI, Switzerland
Chr. Ludwig
EPFL, Lausanne, Switzerland

**Manure to Biomethane: A Techno-Economic Assessment of Small and Medium Scale Value Chains**

**IBV.1.8**
L. Pari, V. Alfano, A. Suardi, N. Palmieri, S. Lazar
CREA, Rome, Italy
M. Karampinis
CERTH, Thessaloniki, Greece
M. Piccinni
FIUSIS, Lecce, Italy

**FIUSIS, the First Biomass Power Plant in the World Powered Exclusively by Olive Tree Prunings. A Case Study in the AGROinLOG H2020 Project**

**IBV.1.9**
I. Khozin-Goldberg, B. Zorin, S. Leu, S. Boussiba
Ben-Gurion University of the Negev, Sede-Boker campus, Israel
T. Andreou, M. Andrielou, D. Kalias
VIO Chemicals, Zurich, Switzerland

**Selection, Optimization and Implementation of “Biorefinery-Ready” Microalgae for the Production of Omega-3 Fatty Acids and Additional High-Value Functional Ingredients**

**IBV.1.10**
F. Colmorgen, C. Khawaja, D. Rutz, R. Janssen
WIP Renewable Energies, Munich, Germany

**Bio-Based Strategies and Roadmaps for Enhanced Rural and Regional Development in the EU - the Be-Rural Project**

**IBV.1.11**
C.A. García-Velásquez, Y. van der Meer
Maastricht University, The Netherlands
S. Leduc
International Institute for Applied Science Analysis (IIASA), Laxenburg, Austria

**Use of Optimization Tools for Decision-Making: Accounting for Externalities in the Production of Biobased Plastics**

**IBV.1.12**
N. Szarka, D. Pfeiffer, C. Schmid
DBFZ, Leipzig, Germany
D. Thrän
UFZ, Leipzig, Germany

**An Assessment Tool for Smart Integration of Biomass Into the Energy System**

**IBV.1.13**
S. Arsenijevic
Provincial Secretariat for Energy, Construction, and Transport (Assistant Secretary), Novisad, Serbia
D. Berg
E3 International (Senior Advisor), Belgrade, Serbia
L. Bratic
Balkan Energy and Forest Trends (President), Belgrade, Serbia
D. Jovic
Republic of Serbia, Ministry of Agriculture, Forestry, and Water Management (Senior Advisor), Belgrade, Serbia
S. Karalic
Kovan International (CEO), Belgrade, Serbia
E3 International (President), Washington, DC, USA
B. Norman
R. Russo

Recovery of Government-Owned Abandoned Land Using Short Rotation Wood Biomass Plantations to Achieve U.N. Sustainable Development Goals, Paris Climate Goals, and Bioeconomy Goals

IBV.1.17
R.A.J. Verlinden
Bioprocess Pilot Facility, Delft, The Netherlands
The Scale-Up Route for Fuels and Chemicals from Second Generation Biomass

IBV.1.19
L. Hongshen, L. Shizhong
Tsinghua University, Beijing, P.R. China
C. Liping
BBCA Group, Anhui, P.R. China
Continuous Solid-State Distillation Technology for Cost-Effective Bioethanol Production

IBV.1.23
C. khawaja, R. Janssen, D. Rutz
WIP, Munich, Germany
M. Colangeli, L. Traverso, M.M. Morese
FAO, Rome, Italy
M. Hirschmugl, C. Sobe
JR, Graz, Austria
A. Calera, D. Cifuentes, A. Simon
UCLM, Albacete, Spain
Promoting Sustainable Use of Underutilised Lands for Bioenergy Production through a Web-Based Platform for Europe

IBV.1.25
T. Habas, C. Richard, E. Le Cadre, G. Karakachian
ENGIE, Paris, France
G. Postec, D. Bouniol
OpenForêt, Brioux sur Boutonne, France
S. Silvestri, L. Tomasi, G. Antonio Battisel
Fondazione Edmund Mach, San Michele, Italy
WEBio: the Web Platform to Identify Bioresources on your Territory

IBV.1.33
M. Van Der Merwe
Newcarbon, South Africa
NewCarbon Innovation for the Production and Application of Biochar, Wood Vinegar and Energy

Networking & Exhibition Visiting Time
10:00 - 10:10
The application of new challenging solid fuels and liquid fuels is addressed. Moreover, new methods to improve process control and combustion performance as well as novel approaches for combustion-based CHP technologies are outlined. This session also deals with measures aimed at increasing systems efficiency, fuel flexibility and reliability. In addition, relevant aspects regarding the energy chains of solid biofuels, from the characterization of fuel properties and analysis of factors affecting the biofuels quality and of fuel properties relevant to logistics and conversion behaviour are covered.

CHAIR & MODERATOR:
Hannariina HONKANEN
JAMK University of Applied Sciences, FINLAND

Thomas Andreas SCHLEKER
European Commission DG RTD, EU

2BV.2.1  S. Link, A. Trikkel
Tallinn University of Technology, Tallinn, Estonia
P. Yrjas
Åbo Akademi University, Turku, Finland
D. Lindberg
Aalto University, Espoo, Finland

Detection and Comparison of Ash Melting Temperature of a Biomass Blend by Using Laboratory Methods and Thermodynamic Modelling

2BV.2.2  C. Moliner, D. Bove, E. Arato
UNIGE, Genoa, Italy
R. Teruel, A. Ribes
UPV, Valencia, Spain

Incineration of Rice Straw Pellets in the Framework of LIFE LIBERNITRATE Project

2BV.2.3  G. Katsaros, S. Tassou
Brunel University, London, United Kingdom
D. Pandey
Anglia Ruskin University, London, United Kingdom
S. Retschitzegger
BEST, Graz, Austria

Modelling of Combined Heat and Power Production Unit Based on Experimental Findings of Poultry Litter Combustion in a Pilot Scale Plant.

2BV.2.5  P. Weimer, F. Kuehl, M. Pfeil, D. Denfeld, S. Pohl
Technische Hochschule Mittelhessen - University of Applied Science, Giessen, Germany

Process Performance Analysis of a Fuel Flexible Power Supply from Biogenic Residues by an Atmospheric Gas Turbine (IBC)

2BV.2.6  D. Buechner, S. Theurich, Ö. Mutlu, Th. Zeng
Deutsches Biomasseforschungszentrum, Leipzig, Germany

Renewables-Based Drying Technology for Cost-Effective Valorization of Waste from the Food Processing Industry

2BV.2.7  F. de Aquino Ximenes
NSW DPI, Sydney, Australia
W. Strauss
FutureMetrics, Bethel, USA

Opportunities for Increased Biomass Co-firing in New South Wales, Australia
2BV.2.8  J.R. Reichelt  
IBR, Bruchsal, Germany  
G. Pfrang-Stotz, B. Bergfeldt  
KIT/ITC, Eggenstein-Leopoldshafen, Germany  
Increasing the Efficiency of Energy Production in Biomass Power Plants by Technical Application of a Biofuel Catalog: First Test Results

2BV.2.9  B. Bergfeldt, G. Pfrang-Stotz  
Karlsruhe Institute for Technology, Eggenstein-Leopoldshafen, Germany  
J. Reichelt  
IBR, Bruchsal, Germany  
A New Approach to Predict Slagging and Fouling During Biomass Combustion

2BV.2.10  C. Zemann, M. Gölles  
BEST - Bioenergy and Sustainable Technologies GmbH, Graz, Austria  
F. Hammer  
LAMTEC Meß- und Regeltechnik für Feuerungen GmbH & Co. KG, Walldorf, Germany  
M. Horn  
Graz University of Technology, Austria  
Long Term Validation of a New Modular Approach for CO-Lambda-Optimization

2BV.2.11  J. Föhr, T. Ranta, R. KC  
Lappeenranta-Lahti University of Technology LUT, Mikkeli, Finland  
Tests for Truck’s Hydraulically Powered Woodchip Blower

2BV.2.14  R. KC, J. Föhr, T. Ranta  
Lappeenranta-Lahti university of technology LUT, Mikkeli, Finland  
Cost Analysis of Forest Chips Transportation with Biomass Blowing Container Truck

2BV.2.15  F. Gallucci, E. Paris, A. Palma, A. Scarfone, A. Del Giudice, V. Civitarese, V. Di Stefano  
Crea, Monterotondo, Italy  
L. Bianchini, A. Colantoni  
Tuscia, Viterbo, Italy  
Different Pellet Mixtures Obtained from Spent Coffee Grounds: Energetic Characterization

2BV.2.16  V. Civitarese, A. Acampora, G. Sperandio, A. Assirelli  
CREA-Center for engineering and agro-food processing, Monterotondo, Italy  
G. Caracciolo  
CREA-Center for olive, citrus and tree fruitengineering and agro-food processing, Forlì, Italy  

2BV.2.17  A. Acampora, V. Civitarese, G. Sperandio, A. Assirelli  
CREA-Center for engineering and agro-food processing, Monterotondo, Italy  
G. Caracciolo  
CREA-Center for olive, citrus and tree fruitengineering and agro-food processing, Forlì, Italy  
G. Roccuzzo  
CREA-Center for olive, citrus and tree fruit, Forlì, Italy  
Pellets from Hazel and Olive Groves Pruning Residues. Characterization of the Product Obtained.

Universidade de Aveiro, Portugal  
Charcoal Production from Alternative Agroforestry Woody Residues Typical of Southern Europe
2BV.2.20  L. van de Beld  
BTG Biomass technology Group, Enschede, The Netherlands  
**Smart And Flexible Heat & Power from Biomass Derived Liquids for Small-Scale CHP Application**

2BV.2.21  P. Abelha, J. Pels  
ECN part of TNO, Petten, The Netherlands  
J. Spaan  
Yilkins, Groningen, The Netherlands  
**Biocoal Pellets Use in Small Scale Boilers**

2BV.2.43  L. Velazquez-Araque, C. Muñoz-Cajiao, E. Solis-Cordero, G. Vásquez-Inca  
University of Guayaquil, Guayaquil, Ecuador  
**Eichhornia Crassipes: A New Energy Source for Biopellets Production**

*Networking & Exhibition Visiting Time*  
15:00 - 15:10
Processes and Products of Pyrolysis and Hydrothermal Processing

Within the poster session analytical pyrolysis and catalytical upgrade technologies are presented. In addition, biochar and its application as fertilizer or soil conditioner are addressed. Molten salt pyrolysis is also presented along with coupling of pyrolysis to biological biomass conversion. The session also deals with effects of HTL process parameters on process efficiencies and products, process kinetics and modelling. The session addresses many different wet substrates and integration with solar energy.

CHAIR & MODERATOR:
Ralph P. OVEREND
Biomass & Bioenergy Journal, CANADA

Lasse ROSENDAHL
Aalborg University, DENMARK

3BV.3.1 C. Baehr, K. Raffelt, N. Dahmen
Institute for Catalysis Research and Technology, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany
Carbon Dioxide Solubilities in Pyrolysis Oil and Related Single Components

3BV.3.3 A.F. Ruy
Mechanical Engineering Dpt., Federal University of Santa Catarina, Florianopolis, Brazil
M. Puglia, N. Morselli, G. Allesina
BEE Lab, University of Modena and Reggio Emilia, Modena, Italy
An Explicit Finite-Differences Heat Conduction Model for Slow Pyrolysis Time Calculation

3BV.3.4 M. Carnevale, E. Santangelo, E. Paris, A. Palma, M. Salerno, V. Di Stefano, F. Gallucci
CREA, Monterotondo, Italy
A. Colantoni
Università della Tuscia, Viterbo, Italy
V. Paolini, F. Petracchini
CNR, Montelibretti, Italy
Thermogravimetric Analysis of Olive Tree Pruning as Pyrolysis Feedstock

3BV.3.6 M. Briand, G. Haarlemmer, A. Roubaud, M. Peyrot, A. Pito, P. Fongarland
CEA, Grenoble, France
Kinetic Model for Hydrothermal Decomposition of Food Residues and Distribution of Reaction Products into Different Phases

3BV.3.7 M.S. Haider, M.A. Isik, D. Castello, T.H. Pedersen, L.A. Rosendahl
Aalborg University, Denmark
Demetallization of Nitrogen Rich Biocrudes from Hydrothermal Liquefaction and the Deleterious Effect of Basic Nitrogen Containing Compounds: A Real Challenge is Ahead

3BV.3.8 P. Nanou, J.R. Pels, F. Sebastiani, C.M. van der Meijden
TNO, Petten, The Netherlands
H. Kuipers
Wasserschap Zuiderzeeland, Lelystad, The Netherlands
W. Driessen, J. Vogelaar
Paques, Balk, The Netherlands
Demonstration of a Continuous TORWASH® Pilot Plant for Sewage Sludge Dewatering
Hydrothermal Treatment of the Black Liquor: Study of the Degradation of Organic Components to Produce Interesting Phenolic Compounds

Exploitation of Lignocellulosic Biomass from Para-Pharmaceutical and Herbal Medicine Production.


Hydrothermal Carbonisation and Mono-Incineration of Sewage Sludge - An Energetic Evaluation

Critical Review on Engineering Aspects of Fast Hydrothermal Liquefaction

Advanced Characterization of Supercritical HTL Biocrude from Digested Sewage Sludge

Investigation of the Bio-Crude Composition Derived from the Hydrothermal Liquefaction of Spirulina, Miscanthus and Sewage Sludge by Liquid Chromatography - High-Resolution Mass Spectrometry

Char Phase Behavior of Hydrothermal Conversion of Alkali Lignin in Subcritical Temperatures

Advanced Characterization of Supercritical HTL Biocrude from Digested Sewage Sludge
Dynamic Behaviour of a Single Biomass Particle in Bubbling Fluidised Bed Reactors

Fraunhofer Institute for Environmental, Safety, and Energy Technology, Sulzbach-Rosenberg, Germany
Thermo-Catalytic Reforming of Biological and Woody Biomass Wastes

3BV.3.28  S. Dell’Orco
University of Florence, Department of Industrial Engineering, Italy
E. Miliotti, A.M. Rizzo, D. Chiaramonti
RE-CORD, Scarperia e San Piero, Italy
L. Rosi
University of Florence, Chemistry Department, Sesto Fiorentino, Italy
Hydrothermal Liquefaction of Ethanol Biorefinery Lignin Cake Co-product: Effect of Process Conditions and Additives

3BV.3.40  F. Patuzzi
Free University of Bolzano, Faculty of Science and Technology, Italy
Apple Pomace Hydrothermal Carbonization for Downstream Valorization of Residues After Subcritical Water Extraction

3BV.3.43  L. Todaro, V. Lo Giudice, N. Moretti
University of Basilicata, Potenza, Italy
P. Cetera, L. Pari
Council for Agricultural Research and Economics - Research Centre for Engineering and Agro-Food Proc, Monterotondo, Italy
G. Bochicchio
National Research Council of Italy - Institute of BioEconomy (CNR-IBE), San Michele all’Adige, Italy
High Calorific Value and Ash Content of Lignin Derived from Turkey Oak Wood: Combined Effect of Steaming and Thermal Treatment

3BV.3.44  B. Wirth, M. Pohl
DBFZ, Leipzig, Germany
Anaerobic Treatment of Various Process Waters from Hydrothermal Carbonization (HTC): Challenges and Opportunities

Networking & Exhibition Visiting Time  16:10 - 16:20
Biorefinery process innovations and developments and assessments are the theme of this session, based on a wide range of mainly biomass process residues and including algae, for a range of bio-based products.

**CHAIR & MODERATOR:**
Yukihiko MATSUMURA  
Hiroshima University, JAPAN

Andreas APFELBACHER  
Fraunhofer-Institut UMSICHT, GERMANY

**3BV.4.1 A. Van Zomeren**  
ECN part of TNO, Bio-Energy Dpt., The Netherlands  
**Production of Bio-Based Building Materials from Lignin of Lignocellulosic Biomass Residues**

**3BV.4.2 G.P. Nogueira, C.K.N. Cavaliiero**  
University of Campinas, Brazil  
M.O.S. Dias  
Federal University of São Paulo, São José dos Campos, Brazil  
**Eucalyptus Forest Residues as Feedstock for Biorefineries: Process Design and Simulation**

**3BV.4.3 G. Van Rensburg, S. Marx, R. Kruger, L. Pieterse**  
North-West University, Potchefstroom, South Africa  
**Increasing the Phenolic Content of the Aqueous Phase from Hydrothermal Liquefaction for Ease of Downstream Recovery**

**3BV.4.4 G. Rapp, R. Trethowan**  
The University of Sydney, Plant Breeding Institute, I.A. Watson International Grains Research Centre, Sydney, Australia  
V. Garcia-Montoto, B. Bouyssiere  
CNRS / UNIV Pau & Pays de l’Adour, Institut des Sciences Analytiques et de Physico-Chimie pour l’Env, Pau, France  
S. Thiebaud-Roux  
Université de Toulouse, INP-ENSIACET, LCA (Laboratoire de Chimie Agro-Industrielle), F-31030 Toulouse, Toulouse, France  
A. Montoya  
School of Chemical and Biomolecular Engineering, The University of Sydney, NSW 2006, Sydney, Australia  
P. Pratt  
Valtris Enterprises France, Z.I. Baleycourt CS 10095, 55103 Verdun Cedex, Verdun, France  
K. Mozet, A. Dufour, L. Coniglio  
Université de Lorraine - Ecole Nationale Supérieure des Industries Chimiques de Nancy, Laboratoire R, Nancy, France  
**Dry-Purification by Natural Adsorbents of Indian Mustard Seed Oil Ethyl Biodiesel and Biolubricants: Towards a Low-Cost and Environmentally-Friendly Production Route**

**3BV.4.5 C. Carriel Schmitt, K. Raffelt, N. Dahmen**  
Karlsruhe Institute of Technology, Germany  
**Sequential Hydrotreatment of Beech Wood Fast Pyrolysis Bio-Oil With Nickel Catalysts**
Korea Institute of Energy Research, Gwangju, South Korea  
**Electrotrophic CO2 Conversion with Rhodobacter Sphaeroides**

3BV.4.7  C.A. Salman  
Mälardalen University, Västerås, Sweden  
**How Can Future CHP Plants also Produce Jet Biofuels?**

3BV.4.8  N Detsios, K Atsonios, P Grammelis  
CERTH, Athens, Greece  
P Dieringer, C Heinze, J Ströhle  
TUDA, Darmstadt, Germany  
A.M. Kougioumtzis  
CERTH, Greece  
**Advanced Fischer-Tropsch biofuels production from syngas derived from Chemical Looping Gasification: A preliminary process simulation study**

3BV.4.20  A. Sánchez, S. Martínez-Victoria  
Unidad Guadalajara de Ingeniería Avanzada, Centro de Investigación y Estudios Avanzados (CINVESTAV), Zapopan, Jalisco, Mexico  
**Continuous Versus Batch Acid Pretreatment in 2G Bioethanol Production. What is Best?**

*Networking & Exhibition Visiting Time*  
17:20 - 18:30
VISUAL PRESENTATIONS 3CV.1

09:00 - 10:00 Biotechnological Approaches and Conversion Routes to Biobased Materials and Chemicals

This session covers a wide range of primarily biotechnological conversion routes for biomass to chemicals and materials, and also a wide range of chemical approaches to conversion of biomass to chemicals and materials.

CHAIR & MODERATOR:
Solange MUSSATTO
Technical University of Denmark, DENMARK
Tanja BARTH
University of Bergen, NORWAY

3CV.1.1 G. Penloglou, A. Pavlou
CERTH/CPERI, Thessaloniki, Greece
C. Kiparissides
CERTH/CPERI & AUTh, Thessaloniki, Greece
Biodegradable Plastics from Food Industry Wastes

3CV.1.2 S. Morin, A. Richel
University of Liege Gembloux Agro Bio-Tech, Belgium
Critical Insight of the Cellulose Fibres Modification: A Study Case with Laccase Assisted Ferulic Acid Modifications

3CV.1.3 L. Blaesing, A. Jahn, M. Bertau
Technical University Bergakademie Freiberg, Germany
Comparison of Laccase and Peroxidase to Depolymerize Lignin

3CV.1.4 B. Hocevar, M. Grilc, B. Likozar
National Institute of Chemistry, Ljubljana, Slovenia Republic
M. Zula
Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia Republic
Selective Biobased Adipic Acid Synthesis from C6 Sugars

3CV.1.5 S. Pedrazzi, G. Allesina, P.E. Santangelo, M. Romagnoli, P. Tartarini
University of Modena and Reggio Emilia, Modena, Italy
Char as a Material for Fuel Cell Manufacturing

3CV.1.7 S. Selivanovskaya, N. Danilova, K. Karamova, P. Galitskaya
Kazan Federal University, Russian Federation
Composting of Chicken Manure with Biochar as a Tool to Reduce Antibiotic Resistance Genes Pollution of the Environment

3CV.1.8 A. Kovalcik
Brno University of Technology, Czech Republic
How Can Food Waste Oils Contribute to the Circular Economy?

3CV.1.9 M. Longis, A. Lemoine, P. Neubauer, S. Junne
Technische Universität Berlin, Germany
Parallel Cultivation Method for Standardized Measurements of Metabolic Activity and Acid Potential in Dark Fermentation with Biogenic Residues

status of 19-06-2020
3CV.1.10  D. Klüh, M. Gaderer  
TU Munich, Straubing, Germany  
Simulation of Renewable n-Hexane Production via Kolbe Electrolysis of Butyric Acid

3CV.1.11  D. Politi, D. Sidiras  
University of Piraeus, Greece  
Modified Wheat Straw For Adsorptive Removal of Hexavalent Chromium from Various Water Sources

3CV.1.12  K. Carbone, A. De Angelis  
Consiglio per la ricerca e l'analisi dell'economia agraria (CREA), Roma, Italy  
E. Santangelo  
Consiglio per la ricerca e l'analisi dell'economia agraria (CREA), Monterotondo, Italy  
L. Micheli  
Università degli Studi di Roma "Tor Vergata", Roma, Italy  
R. Frosinini, E. Gargani  
Consiglio per la ricerca e l'analisi dell'economia agraria (CREA), Firenze, Italy  
C.A. Migliori  
Consiglio per la ricerca e l'analisi dell'economia agraria (CREA), Torino, Italy  
A. Mazzucato  
Università degli Studi della Tuscia, Viterbo, Italy  
Green Synthesis of Silver Nanoparticles from Hyperpigmented Tomato Skins and Preliminary Evaluation of the Insecticidal Activity

3CV.1.14  A. Normand, A.M. Charrier  
CINaM, Marseille, France  
R.H. Farahi, A. Passian  
ORNL, Oak Ridge, USA  
A.L. Lereu  
Institut Fresnel, Marseille, France  
Investigate Wood Morphogenesis Using Correlative Measurements at the Nanoscale

3CV.1.15  E. Montet  
LGP2 and ADEME, Grenoble, France  
C. Chirat, D. Lachenal  
LGP2, Grenoble, France  
Production of High Quality Cellulose by a Chlorine-Free Process

3CV.1.16  B. Hocevar, A. Prašnikar, M. Grilc, B. Likozar  
National Institute of Chemistry, Ljubljana, Slovenia Republic  
S. Gyergyek  
Jožef Stefan Institute, Ljubljana, Slovenia Republic  
Oxidation State of Rhenium and Related Catalyst Activity for the Dehydroxylation of Aldaric Acids to Adipic Acid

3CV.1.19  E. Vági, Á. Kolay Kovács, M. Tolner, M. Molnár, E. Székely  
Budapest University of Technology and Economics, Hungary  
Optimization of Extraction of Bioactives from Different Wastes and By-Products of Agro- and Food Industry

3CV.1.22  J. Boon, H.A.J. van Dijk, J. van Kampen, B.J. Vreugdenhil  
TNO, Petten, The Netherlands  
Biofuels and Biochemicals by Separation Enhanced Reactions Maximising Carbon and Energy Efficiency
3CV.1.24 A. Zareihassangheshlaghi, D. Enke
Institute of Chemical Technology, Leipzig University, Linnéstr. 3, 04103 Leipzig, Germany,
Leipzig, Germany
H. Beidaghy Dizaji, T. Zeng
DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Department Thermo-
chemical Conversion., Leipzig, Germany
P. Huth, T. Ruf, R. Denecke
Wilhelm-Ostwald Institute for Physical and Theoretical Chemistry, Leipzig University,
Linnéstr. 2, 0, Leipzig, Germany
**Evolution of Metal Impurities on Surface and in Bulk of Biogenic Silica from Rice Husk During Combustion**

FCT/UNL, Lisbon, Portugal
**Bionanocomposites of Chitosan Reinforced with Nanocellulose from Giant Reed Residues: Development and Physical Characterization**

3CV.1.27 C. Jarauta-Córdoba, M. Gómez, J. Marcos, C. Bartolomé
CIRCE, Zaragoza, Spain
J.L. Pinilla, I. Suelves
Instituto de Carboquimica, Zaragoza, Spain
**Agrobibiomass-Derived Activated Carbons as Potential Materials for Supercapacitors: Wheat Straw and Corn Stalk Case Studies**

3CV.1.28 J. Marcos
CIRCE Technological Center, Zaragoza, Spain
C. Jarauta-Córdoba, C. Bartolomé
CICIRCE Technological Center RCE Technological Center, Zaragoza, Spain
M. Gómez
CIRCE Technological Center CIRCE Technological Center, Zaragoza, Spain
**Use of Natural Fibers for Enhancing Polymeric Materials**

3CV.1.31 R. Picchio, R. Venanzi
Tuscia University, Viterbo, Italy
L. Pari, F. Latterini, A. Suardi, V. Alfano, S. Bergonzoli
CREA, Monterotondo, Italy
**A New Mobile Kiln Prototype for Charcoal Production**

3CV.1.35 S. Hassan
Technological University Dublin, Ireland
**Production and Purification of Pectinase and Xylanase from Fermentation of Brewers’ Spent Grain by Mucor Sp.**

3CV.1.42 P.J. de Wild, S. Grootjes
ECN part of TNO, Petten, The Netherlands
**BIOBASICS BIOmass for ruBber, Asphalt, Shipping fuels and Innovative Chemical Specialties**

3CV.1.43 G. Singh, P. Hariprasad, S. Sharma
Indian Institute of Technology, New Delhi, India
**Valorization of Paddy Straw for Synthesis of Nanosilica using Sapindus Mukorossi and its potential application as Biopesticide**

**Networking & Exhibition Visiting Time**

10:00 - 10:10
This visual presentation session concerns innovations in biochemical conversion of biomass, including feedstock pre-treatments, enzymatic hydrolysis, fermentation systems and downstream processing. Also covered are tradeable intermediate bioenergy carriers derived from forestry, agricultural biomass (residues) and organic wastes used for biochemicals/materials and bioenergy applications. In addition, this session also deals with renewable hydrocarbons and transesterification for biofuels production.

**CHAIR & MODERATOR:**
Dimitrios SIDIRAS  
University of Piraeus, GREECE

Guillaume BOISSONNET  
Commissariat à l’Energie Atomique, FRANCE

**3CV.2.2**  
L. Amaya-Delgado, E. Reyes-Jacitno  
CIATEJ AC, Guadalajara, Mexico

A. Sanchez  
CINVESTAV-Gdl, Guadalajara, Mexico

**Butanol Production from Corn Stover Ethanol Vinasse by Clostridium Saccharobutylicum BAA-117**

**3CV.2.3**  
F. Pires, V. Van-Dunem, L. Sanfins, L.C. Duarte, F. Girio, F. Carvalheiro  
LNEG, Lisbon, Portugal

**Optimization of a Mild Organosolv Ethanol-Based Process for the Selective Fraction of Eucalyptus Globulus Residues**

**3CV.2.4**  
A.M. Raspolli Galletti, S. Gori  
Dip. di Chimica e Chimica Industriale - Università di Pisa, Italy

G. Caposciutti, G. Pasini, M. Antonelli, S. Frigo  
Dip. di Ingegneria dell’Energia, dei Sistemi, del Territorio e delle Costruzioni, Univ. Pisa, Italy

**Advanced Biofuel n-Butyl Levulinate and its Utilisation in CI Internal Combustion Engine**

**3CV.2.5**  
E.A. Silveira, M.S. Santanna, A. Caldeira-Pires  
Mechanical Engineering Dpt., University of Brasília, Brazil

S.M. Luz, R.M. Leão  
Engineering Materials Integrity Program, University of Brasília, Brazil

P. Rousset  
French Agriculture Research Centre for International Development, Montpellier, France

**Thermal Upgrading of Sustainable Woody Material: Experimental and Numerical Torrefaction Assessment**

**3CV.2.7**  
M. Puglia, J. Tioli, P. Tartarini  
Università degli Studi di Modena e Reggio Emilia, Modena, Italy

V. Marchesini, G. Tassoni  
WAMGROUP, Modena, Italy

**Temperature and Residence Time Influence on the Cattle Manure Separated Solid Phase Carbonization**

**3CV.2.10**  
L. Macedo, I.A. Sá, L.G.O. Galvão, B.S. Chaves  
Forest Products Laboratory, Brazilian Forest Service, Brasilia, Brazil

N.P.B. Souto  
Faculty of Gama, University of Brasília, Brasilia, Brazil

E.A. Silveira  
Mechanical Engineering Dpt., University of Brasilia, Brazil

**Effect of Torrefaction Treatment Temperature on the Quality of Amazonian Wood Pellets for Energy Purposes**
3CV.2.11  T. Marker, M. Linck, P. Ortiz-Toral, J. Wangerow  
Gas Technology Institute, Chicago, USA  
Cool GTL® A New Process for Direct Biogas Conversion to Liquid Fuels

3CV.2.12  M.C. Vivas-Cuellar  
Universidad Nacional de Ingeniería, Lima, Peru  
E. A. Collado Domínguez, M. Pérez Bravo  
Universidad Nacional de Ingeniería, Lima, Peru  
O.G. Marin Flores  
Washington State University, Pullman, USA  
Transesterification of Jatropha Curcas Oil in Peru: Variables Affecting the Yields of Fatty Esters

3CV.2.33  L. Wang, M. Olsen, Ø. Skreiberg  
SINTEF Energy Research, Trondheim, Norway  
A. Budai, S. Weldon, D. Rasse  
Norwegian Institute of Bioeconomy Research, Ås, Norway  
Effect of Pyrolysis Conditions on Biochar Production from Spruce Wood and Bark

3CV.2.34  L. Wang, Ø Skreiberg  
SINTEF Energy Research, Trondheim, Norway  
L. Riva, H.K. Nielsen  
University of Agder, Grimstad, Norway  
P. Bartocci, F. Fantozzi  
University of Perugia, Italy  
Effect of Pyrolysis Conditions and Use of Condensates as Binder on Densification of Biocarbon

Networking & Exhibition Visiting Time  15:00 - 15:15
VISUAL PRESENTATIONS 2CV.3

15:10 - 16:10  Innovations in Feedstock and Modeling Towards Enhanced Implementation of Gasification

This session covers both integrated gasification and CHP systems as well as fuel characterization and emissions. In addition, posters also focus on various gasification feedstocks, the influence on different gasification agents, modelling and process condition. Gas cleaning and upgrading of syngas are discussed as well as techno-economical aspects.

CHAIR & MODERATOR:
David BAXTER
Former European Commission, Joint Research Centre, EU

Wiebren DE JONG
Delft University of Technology, THE NETHERLANDS

2CV.3.1  F. Ottani, N. Morselli, M. Puglia, G. Allesina
Beelab, University of Modena and Reggio Emilia, Modena, Italy
Implementation of Engine Exhaust Gas Recirculation in a Fixed Bed Gasification Reactor

2CV.3.2  D. Basso, E. Cordioli, F. Patuzzi, M. Baratieri
Free University of Bolzano, Italy
S. Dal Savio
NOI Spa, Bolzano, Italy
Analysis on the Possible Strategies to Improve Woody Biomass Gasification in South Tyrol: Results from the Wood-UP project

2CV.3.3  M. Puglia, N. Morselli, F. Ottani, P. Tartarini
Università degli Studi di Modena e Reggio Emilia, Modena, Italy
Implementation of a Portable Petrol - Powered Generator Fueled through a Tabletop Biomass Gasifier

2CV.3.6  F. El Abdellaoui
HEIG-vd/ IGT, TIN Dpt., Switzerland
Thermogravimetric Analysis and Kinetics of Woody Biomass Pyrolysis in an Oxidative Atmosphere

2CV.3.11  D. Antolini, F. Patuzzi, M. Baratieri
Unibz, Bolzano, Italy
T.S. Tanoh, F.J. Escudero Sanz
IMT-mines Albi, Albi, France
Fuel Flexibility of a Pilot Plant Gasifier Using Torrefied Pellet as Feedstock

2CV.3.12  R. Borooah
Free University of Bozen-Bolzano, Italy
Energy Valorization of Forestry Residues Through a Small-Scale Open Top Gasifier

2CV.3.13  H. Honkanen
JAMK University of Applied Sciences, Jyväskylä, Finland
K. Puolamäki
JAMK University of Applied Sciences, Saarijärvi, Finland
Demonstration of Poultry Manure Combustion and Gasification in Small-Scale Applications
2CV.3.14  P. Kumar  
IIT, Delhi, India  
Experimental and Numerical Analysis of Heat Dissipation from a Cylindrical Biomass Pellet for Gasification

2CV.3.16  M.J. Hermoso-Orzáez  
University of Jaén, Spain  
R. Mota-Panizio, L. Carmo-Calado, P. Brito  
VALORIZA-IPP Portalegre, Portalegre, Portugal  

2CV.3.17  D.S. Pandey  
Anglia Ruskin University, Chelmsford, United Kingdom  
G. Katsaros, S.A. Tassou  
Brunel University, London, United Kingdom  
S. Tuomi  
Technical Research Centre of Finland, Espoo, Finland  
Air-Steam Gasification of Poultry Litter in a Bubbling Fluidised Bed Reactor

2CV.3.18  P. Brito  
IPP, Portalegre, Portugal  
L. Calado, R. Panizio  
Valoriza, Portalegre, Portugal  
A. Rodrigues  
INIAV, I.P., Oeiras, Portugal  
L. Nunes  
UA, Aveiro, Portugal  
Overall Comparison of Maritime Pine Biomass Chips Gasification with and without Pre-Torrefaction

2CV.3.19  S. Piazzi, L. Menin, D. Antolini, F. Patuzzi, M. Baratieri  
Free University of Bozen-Bolzano, Italy  
Studies on Conversion of Biomass-Residues to Syngas for Biofuels through Steam Gasification

2CV.3.20  P. Kumar  
IIT Delhi, India  
Thermo-Physical Properties of Agricultural Residues for Syngas Production Using Thermo-Gravimetric Analysis

2CV.3.22  S. Pedrazzi, N. Morselli, M. Puglia, M. Parenti, F. Ottani  
University of Modena and Reggio Emilia, Modena, Italy  
Equilibrium Modeling of Hemp Hurd Gasification

2CV.3.23  L. Carmo-Calado, R. Mota-Panizio, P. Brito  
VALORIZA -IPP Portalegre, Portalegre, Portugal  
M.J. Hermoso-Orzáez  
University of Jaén, Spain  
Biomass Gasification - A Comparison of Syngas Yield Between a Commercial Downdraft Gasifier and a Prototype Downdraft Gasifier

2CV.3.24  P. Leuter, P. Johne, S. Fendt, H. Spliethoff  
Technical University Munich, Germany  
Conception And Design of a Modular Facility for Synthesis Gas Purification from the Entrained Flow Gasification of Biogenic Residues for the Fermentative Production of Basic Chemicals
2CV.3.25  D. Barisano, L. Bianco, E. D'Amico, F. Nanna, A. Villone
ENEA, Rotondella, Italy
**Syngas Cleaning Via Wet Scrubbing and Bioremediation of Produced Wastewater - Integrated Approach**

2CV.3.46  M. Szul
Instytut Chemicznej Przeróbki Wegla, Poland
**Use of CO2 in Pressurized, Fluidized Bed Gasification of Waste Biomasse**

*Networking & Exhibition Visiting Time*  16:10 - 16:20
VISUAL PRESENTATIONS 1CV.4

16:20 - 17:20  Biomass Potentials and Integrated Biomass Production for Energy Purposes

This session presents case studies and methodologies for biomass resource assessment in different countries and regions of the world and also covers a wide range of innovative applications of agricultural and forestry residues for energy use; among others, these include rice husks, artichoke, vine prunings in the wine production process, vinasse, and miscanthus.

CHAIR & MODERATOR:
Ana Luisa FERNANDO
Universidade Nova de Lisboa, PORTUGAL

1CV.4.1  E. Garbolino
MINES ParisTech, Sophia Antipolis, France
G. Hinojos Mendoza
ASES Ecological & Sustainable Services, Aubenas, France
D. Heredia Corral, C. Gutierrez
ASES Inteligence geoespacial, Mexico, Mexico
R. Soto
ASES Ediciones & Ingeniería ecológica, Chihuahua, Mexico
W. Daniel
University of Antwerp, Wilrijk, Belgium

Expected Net Primary Productivity Evolution towards 2100 in Mexico Country: Implications for Wood Energy Supply Chain

1CV.4.3  S. Pedrazzi, N. Morselli, M. Puglia, G. Santunione, E. Turi, M. Parenti, F. Ottani
University of Modena and Reggio Emilia, Modena, Italy

Hemp By-Products Valorization

1CV.4.5  S.T. Coelho, V.P. Garcilasso, M.M. Santos, D. Perecin
GBIO/IEE/USP, São Paulo, Brazil

Brazilian Sugar/alcohol Sector: Biomass Residues for Efficient Energy Conversion Pathways

1CV.4.6  V. Voltr, M. Hruska
IAEI, Prague, Czech Republic
L. Nobilis
ECO Trend Research Centre, Prague, Czech Republic
P. Fuksa
University of Life Sciences, Prague, Czech Republic

Procedure Of Economic, Energy and Environmental Evaluation of Crop Production in the Czech Republic

1CV.4.7  M. Pfeil, S. Konradi, S. Pohl
Technische Hochschule Mittelhessen - University of Applied Science, Giessen, Germany
D. Denfeld
Technische Hochschule Mittelhessen - University of Applied Science, Gissen, Germany

Potentials of Biogenic Resources for Sustainable and Environmentally Friendly Energy Use in Cuba (BioReSCu)

1CV.4.8  S. Chan, R. Ogoshi, S. Turn
University of Hawaii, Honolulu, USA

Feedstocks for Sustainable Jet Fuel Production: An Assessment of Land Suitability in Hawaii

1CV.4.9  G. Ferrari, F. Marinello, A. Pezzuolo
University of Padova, Legnaro, Italy

Valorisation of Agricultural By-Products in Different Agro-Energy Districts: A Case Study in Northeast Italy
1CV.4.10  M. Christou  
CRES, Pikermi, Greece  
J. Carrasco, C. Martin, P. Perez  
CIEMAT, Madrid, Spain  
**Agricultural/forest Residues for Advanced Biofuels**

1CV.4.11  R. Picchio, R. Venanzi  
Tuscia University, Viterbo, Italy  
L. Pari, F. Latterini, A. Suardi, S. Bergonzoli, V. Alfano  
CREA, Monterotondo, Italy  
**Analysis of Woody Biomass Obtainable from Abruzzo Forests**

1CV.4.12  R. Picchio, R. Venanzi  
Tuscia University, Viterbo, Italy  
L. Pari  
CREA, Monterotondo, Ivory Coast  
F. Latterini, A. Suardi, W. Stefanoni, N. Palmieri  
CREA, Monterotondo, Italy  
**Italian Coppices and Their Economic Income**

1CV.4.14  V. Schnorf, V. Burg, G. Bowman  
WSL, Birmensdorf, Switzerland  
E. Trutnevyte  
Université de Genève, Genève, Switzerland  

1CV.4.15  K. Bao, R. Padsala, C. Kesnar, V. Coors, B. Schroeter  
University of Applied Sciences Stuttgart, Germany  
**GIS-Based Assessment of Regional Biomass Potentials for Heat and Power Generation at the Example of Ludwigsburg County, Germany**

1CV.4.16  C. Gunnarsson, J. Lund, J. Casimir, Á. Myrbeck  
RISE, Uppsala, Sweden  
**Sustainable Straw Potential In Sweden - A Case Study to Supply Straw for Ethanol Production**

1CV.4.17  R. Gaudel, M. Aalto, T. Ranta  
LUT University, Mikkeli, Finland  
**Sustainable Promotion of Wood Supply Through Digitalization and Networking**

1CV.4.18  F. Salamut  
University of Mauritius, Reduit, Mauritius  
**Assessing the Potential of Developing Energy Crops on Marginal Lands in Mauritius**

1CV.4.19  M. Puglia, G. Torri, V. Martinelli, P. Tartarini  
Università degli Studi di Modena e Reggio Emilia, Modena, Italy  
**Vine Prunings Agro-Energetic Chain: Experimental and Economical Assessment of Vine Pellets Use in Gasification Power Plants**

1CV.4.20  M. Von Cossel, I. Lewandowski  
Department of Biobased Products and Energy Crops (340b), Institute of Crop Science, University of Ho, Stuttgart, Germany  
Y. Iqbal  
College of Bioscience and Biotechnology, Hunan Agricultural University, Changsha, P.R. China  
**Intercropping miscanthus with flower-rich biennial wild plant species**
1CV.4.21 M.M.R. Poveda, S.T. Coelho  
GBIO/IEE/USP, São Paulo, Brazil
Integration of Vinassee Biogas in the Energy Matrix of Ribeirão Preto, State of São Paulo

1CV.4.22 A.P.S. Silva  
IPT and IEE/USP, São Paulo, Brazil
S.T. Coelho  
IEE/USP, São Paulo, Brazil
Biomass Residues from Sustainable Forest Management in Brazil.

1CV.4.23 M. Bachilava  
Agricultural University of Georgia, Tbilisi, Italy
N. Goginashvili  
Scientific-Research Center of Agriculture, Tbilisi, Georgia
F. Bertaina  
Biopoplar, Cuneo, Italy
Early Growth Performance of New Poplar Clones for Georgia
This poster session addresses a wide range of biomass substrates for biogas production, biomass pretreatment methods, co-digestion, gas cleaning and technologies for biogas upgrading to biomethane for pipeline injection. Also addressed are biogas process performance optimization, enhanced methane yield as a function of biomass substrate and integration of anaerobic digestion with other process wastes and residues.

CHAIR & MODERATOR:
Ioana IONEL
Politehnica University of Timisoara, ROMANIA
Bernhard DROSG
BEST - Bioenergy and Sustainable Technologies, AUSTRIA

2CV.5.1 C. Vasmara, R. Marchetti
CREA-ZA, San Cesario Sul Panaro (Modena), Italy
S. Cianchetta, S. Galletti, E. Ceotto
CREA-AA, Bologna, Italy
Enhancing Methane yield from Giant Reed (Arundo donax L.) through Pre-treatment and Co-digestion with Pig Slurry

2CV.5.2 D. Arias, C. Veluchamy, B. Gilroyed
University of Guelph, Ridgetown, Canada
Biogas Production and Process Performance of a Plug Flow Reactor Co-Digesting Swine Manure and Corn Stover

2CV.5.3 Ie. Morozova, H. Oechsner, B. Hülsemann, A. Lemmer
University of Hohenheim, Stuttgart, Germany
Assessment of Biogas Potential from Energy Crops in Ukraine

2CV.5.4 V. Dubrovskis, I. Plume, I Straume
Latvia University of Live Sciences and Technologies, Jelgava, Latvia
Degradation Of Colored Papers By Anaerobic Fermentation

2CV.5.6 V. Dubrovskis, A. Adamovics, I. Plume, M. Valko
Latvia University of Life Sciences and Technologies, Jelgava, Latvia
Anaerobic Co-Digestion of Cows Manure, Maizes Silage, Grass Silage and Flour, Theoretical, Laboratory Scale and Biogas Plant Yields

2CV.5.9 Y.M. Gu, S.Y. Park, J.H. Lee
Korea Institute of Ceramic Engineering and Technology, Cheongju, South Korea
B. Sang
Hanyang University, Seoul, South Korea
T.H. KIM
Hanyang University, South Korea
Improved Bioavailability of Foodwastes Using Attrition Ball Mill Pretreatment: From Laboratory Scale to Pilot Scale

2CV.5.10 S. Mlinar, R. Freitag
Chair for Process Biotechnology, University of Bayreuth, Germany
Mixing Intensity as a Key Parameter for the Kinetics Control of Anaerobic Digestion

IEE/ USP, São Paulo, Brazil
B.A. Pereira, T.F. Sawatani, R.C. Contrera
EP/ USP, São Paulo, Brazil
Evaluation of Using Slaughterhouse’s Waste In Biogas Production for Energy Recovery
2CV.5.15  K. Dinh, K. Crippen, R. Bora  
GTI, Des Plaines, USA  
**Developing an On-Line Analyzer to Monitor Trace Constituents in Biomethane for Pipeline Injection**

2CV.5.16  S. O’Connor, E. Ehimen, S.C. Pillai, J. Bartlett  
Institute of Technology Sligo, Ireland  
G. Lyons, C. Johnson  
Agri-Food and Biosciences Institute, Hillsborough, United Kingdom  
**Guaranteeing Steady Energy Outputs from a Farm-Scale Anaerobic Digestion Plant Despite Seasonal Environmental Factors and Feedstock Supply Variability**

2CV.5.17  R. Bora, K. Dinh, K. Crippen  
GTI, Des Plaines, USA  
**ASTM D8230-19 - A Standardized Testing Method for Siloxanes in Biomethane**

2CV.5.19  R. Bora, A. Harmon  
GTI, Des Plaines, USA  
M. Deshusses, T. Dupnock  
Duke University, Durham, USA  
**Evaluating Biogas Cleaning Technologies: Bio-trickling Filter Application for Removal of Siloxanes in Biogas**

2CV.5.21  F.L. Kakar, E.E Elbeshbishy  
Ryerson University, Toronto, Canada  
**Anaerobic Digestion of Thickened Waste Activated Sludge; Hydrothermal Pretreatment Impact**

Institute of Energy and Environment, University of São Paulo, Brazil  
**Domestic Wastewater Valorization Analyses and the Challenging Energy Recovery Potential in Terms of Biological Methane Production: A Case Study for a Northeastern Brazilian State**

Zhejiang University, Hangzhou, P.R. China  
S Ulf, W.N. Zhang  
Mid Sweden University, Sundsvall, Sweden  
**Biomethanation from Pyrolysis- Anaerobic Fermentation of Biomass**

**16:20 - 18:20**  Algae Industry Workshop

**17:20 - 18:30**  Networking & Exhibition Visiting Time
This poster session covers a range of topics, including agroforestry residues, harvesting methods and properties of the biomass for subsequent conversion to energy, and includes a number of cases for the production, quality and use of biochar. In addition, the contribution of aquatic biomass to the societal change towards a bio-based economy are presented. Finally, this session addresses a range of research projects focused on the recovery and the valorization of municipal and industrial waste in terms of both materials and energy recovery.

CHAIR & MODERATOR:
Emmanuel GARBOLINO
ASES France R & D / Climpact Data Science, FRANCE
Raphael SLADE
Imperial College London, UNITED KINGDOM

1DV.1.1 L. Pari, A. Suardi, V. Alfano, N. Palmieri, W. Stefanoni, P. Mattei
Consiglio per la ricerca in agricoltura e l’analisi dell’economia agraria, Unità di ricerca per l’in, Monterotondo (Rome), Italy
S. Bergonzoli
Consiglio per la ricerca in agricoltura e l’analisi dell’economia agraria, Unità di ricerca per l’in, Treviglio (BG), Italy
Recovery of Crop By-Product: Harvesting of Wheat Chaff

1DV.1.2 S. Sánchez Villasclaras
University of Jaén, Chemical Engineering, Environmental and Materials Dpt., Spain
Use of Olive Mill Wastewaters and Urban Wastewater as Nutrient Medium and CO2 Biofixation for Biomass Production of Microalgae

1DV.1.3 G. Santunione
University of Modena and Reggio Emilia, Modena, Italy
E. Turi
University of Modena and Reggio Emilia rsity of Modena and Reggio Emilia, Modena, Italy
R. Paris
Centro d ricerca per l’Agricoltura e le Colture Industriali, Bologna, Italy
G. Grassi
Centro d ricerca per l’Agricoltura e le Colture Industriali, Rovigo, Italy
Production and Use of Co-Composted Biochar as Soil Amendment for Cannabis Sativa SP. Growth

1DV.1.4 G. Hodaifa, A. Malví
University of Pablo de Olavide, Seville, Spain
M. Maaitah, S. Sánchez
University of Jaén, Spain
Chlorella Pyrenoidosa Culture in Flocculated Olive Oil Mill Wastewater with the Double Benefit of Biomass Generation and Wastewater Treatment

1DV.1.5 F. Gallucci, B. Vincenti, E. Paris, A. Palma, M. Carnevale, M. Salerno
CREA, Monterotondo, Italy
E. Guerriero
CNR, Montelibretti, Italy
A. Proto
Università Mediterranea di Reggio Calabria, Reggio Calabria, Italy
Chemical and Physical Characterization of Pellet Composed by Biomass of Different Essences.
1DV.1.7  C. Driemeier, D.R. Negrão, L.Y. Ling, C.A. Oliveira Filho
CNPEM, Campinas, Brazil
Multi-Scale Understanding of Mineral Impurities in Agroindustry Residues: The Cases of Sugarcane Bagasse and Straw

1DV.1.9  A. Del Giudice, A. Scarfone, E. Paris, F. Gallucci, E. Santangelo
CREA, Monterotondo (RM), Italy
Qualitative Assessment of Residual Biomass from Turkey Oak (Quercus Cerris, L.) Coppicing in Central Italy

1DV.1.10  A. Assirelli, M. Pagano, E. Santangelo, C. Cedrola, R. Tomasone
CREA-Research center for engineering and agro-food processing, Monterotondo (Rm), Italy
Residues from Mechanized Nut Harvesting: Preliminary Tests to Valorize Walnut Husks for Biochar Production and Possible Use as Soil Amendment

1DV.1.11  M.-A. Kougioumtzis, I.-P. Kanaveli, E. Karampinis, P. Grammelis, E. Kakaras
CERTH, Athens, Greece
Monitoring Feedstock Losses Over 6 Months Storage of Harvested Olive Tree Prunings in Piles. Comparison of Piles with or without Coverage

1DV.1.12  R. Picchio, R. Venanzi
Tuscia University, Viterbo, Italy
L. Pari, F. Latterini, A. Suardi, P. Mattei, S. Lazar
CREA, Monterotondo, Italy
Thinning: Working Times, Productivities and Utilization Costs in a Pine Forest

1DV.1.13  L. Pari, A. Suardi, S. Bergonzoli, W. Stefanoni, S. Lazar
CREA, Monterotondo, Italy
M. Sundberg, C. Gunnarson, N. Jonsson
RISE, Uppsala, Sweden
Chaff and Straw Harvesting Test in Sweden: Machine Performance and Quality of the Work

1DV.1.14  L. Pari, A. Suardi, V. Alfano, S. Bergonzoli, F. Latterini, S. Lazar
CREA, Monterotondo, Italy
M. Karampinis, M. Kougioumtzis
CERTH, Thermi, Greece
Olive Tree’s Pruning Harvesting Using the Greek Modified Mulcher Fotopoulos FSR2000, Machine Performances and Biomass Quality Evaluation

1DV.1.15  C. Howard, V.C. Griess
University of British Columbia, Vancouver, Canada
Potential for Climate Change Mitigation in B.C.: Utilizing Harvest Residues for the Production of Regional Heat and Liquid Biofuels

1DV.1.18  A. Assirelli
CREA-Center for engineering and agro-food processing, Monterotondo (Rm), Italy
F. Stagno, G. Roccuzzo
CREA-Center for olive, citrus and tree fruit, Forlì, Italy
R. Roberti
Agromillora, Subirats, Spain
L. Catalano
Agrimeca, Turi, Italy
A Novel Approach to Direct Field Separation of Almond Hulls

1DV.1.20  S. Hassan
TU Dublin, Ireland
Optimization of Process Conditions Using Response Surface Methodology for Fermentable Sugars Release from Ultrasound Pretreated Brewers’ Spent Grain
1DV.1.23  S. Bergonzoli  
CREA, Italy  
R. Leal  
LNBR/CNPEM, São Paulo, Brazil  
**Innovative Solution for Sugarcane Straw Recovery**

1DV.1.24  P. Cetera, L. Pari  
Council for Agricultural Research and Economics - Research Centre for Engineering and Agro-Food Proce, Monterotondo, Italy  
M. Bruno, L. Milella, L. Todaro  
University of Basilicata, Potenza, Italy  
M. Fioravanti  
University of Florence, Italy  
**From Biomass of Poplar Utilizations to Byproducts**

1DV.1.25  J. Tallec  
Capacites, Saint Nazaire, France  
**Integrated Approach to Microalgae Cultivation as an Urban Wastewater Treatment Step**

1DV.1.26  B. Ievina, F. Romagnoli  
Institute of Energy systems and environment, Riga Technical university, Riga, Latvia  
**Effect of Light Intensity on the Growth of Three Microalgae in Laboratory Batch Cultures**

1DV.1.27  M.D. Curt, P.L. Aguardo, M.I. Martin-Girela, A. Martinez, J. Fernandez  
Universidad Politecnica de Madrid, Spain  
M. Zapatero  
COMRA, El Arenal, Spain  
**The Resilience of Typha Domingensis Pers. To Nutrient-Depleted Water in a Floating Biomass Production System**

1DV.1.28  J Walter, I Aubel, M Bertau  
Freiberg University of Mining and Technology, Freiberg, Germany  
**Valorisation of Industrial Wastewater Streams Containing Metal-Organic Residues**

1DV.1.29  A. Ronda, P. Haro, S. Nilsson, D. Fuentes-Cano, A. Gómez-Barea  
Universidad de Sevilla, Seville, Spain  
**Techno-Economic and Environmental Analysis of Pyrolysis, Gasification and Incineration Waste-to-Energy Technologies: Application to Mediterranean Regions**

1DV.1.30  Md. S. Islam, R.M. Sebastian, V. Kurian, A. Kumar  
University of Alberta, Edmonton, Canada  
**An Integrated GIS-based Framework for Optimal Siting of Biorefineries**

1DV.1.31  I. Ionel  
Politehnica University of Timisoara, Romania  
**Bio-Energy from Municipal Waste - A Potential Economic and Friendly Environmental Solution in Romania**

1DV.1.34  M.S. Santanna  
Mechanical Engineering Dpt.t, University of Brasília, Brazil  
E.A. Silveira  
Mechanical Engineering Department, University of Brasília, Brazil  
L. Macedo  
Forest Products Laboratory, Brazilian Forest Service, Brasília, Brazil
L.G.O. Galvão  
Forest Products Laboratory, Brazilian Forest Service, Brazil  
A. Caldeira-Pires  
Mechanical Engineering Department, University of Brasília, Brasilia, Brazil  
**Torrefaction of Lignocellulosic Municipal Solid Waste: Thermal Upgrade for Energy Use**

1DV.1.45  
M. Altunoz, M. Puglia, N. Morselli, J. Tioli, G. Allesina, S. Pedrazzi, L. Arru  
University of Modena and Reggio Emilia, Modena, Italy  
**Gas Consumption and Growth Performance of N. Oleoabundans in the 30 L Photobioscrubber**

*Networking & Exhibition Visiting Time*  
10:00 - 10:10
1DV.2.1  B. Valpradinhos, L. Gomes, C. Rodrigues, M. Gonçalves, A.L. Fernando
FCT NOVA, Lisboa, Portugal
J. Costa
FCT NOVA/ISEC, Lisboa, Portugal

Combining Camelina Sativa Production with Phytodepuration of Contaminated Effluents Obtained in Hydrothermal Carbonization Processes - An Opportunistic Approach

1DV.2.2  L. Pari, A. Suardi, V. Alfano, N. Palmieri, W. Stefanoni, P. Mattei
Consiglio per la ricerca in agricoltura e l’analisi dell’economia agraria, Unità di ricerca per l’in, Monterotondo (Rome), Italy
S. Bergonzoli
Consiglio per la ricerca in agricoltura e l’analisi dell’economia agraria, Unità di ricerca per l’in, Treviglio (BG), Italy

Effect of Wood Debranching on Eucalyptus Storage Performance

1DV.2.3  L. Pari, A. Suardi, V. Alfano, N. Palmieri, W. Stefanoni, P. Mattei
Consiglio per la ricerca in agricoltura e l’analisi dell’economia agraria, Unità di ricerca per l’in, Monterotondo (Rome), Italy
S. Bergonzoli
Consiglio per la ricerca in agricoltura e l’analisi dell’economia agraria, Unità di ricerca per l’in, Treviglio (BG), Italy

Giant Reed Storage, Assessment of Comminuted Biomass Behaviour

1DV.2.4  L. Pari, V. Alfano
CREA, Rome, Italy
G. Magagnini, G. Grassi
CREA, Rovigo, Italy

Seed Losses Evaluation during Hemp Harvesting with a Modified Combine Header

1DV.2.5  M. Krzyzaniak, M.J. Stolarski
3B, Olsztyn, Poland

Camelina: The Multipurpose Oil Crop Cultivated on Marginal Land in the North-Eastern Poland

1DV.2.6  J. Lund, C. Gunnarsson
RISE, Uppsala, Sweden

Broadening of the Raw Material Base for Straw Based Ethanol Production by Adding Ley in the Crop Rotation

1DV.2.7  L. Gomes, A.L. Fernando
Universidade Nova de Lisboa, Almada, Portugal
J. Costa
Instituto Superior de Educação Científica, Lisboa, Portugal
F. A. Santos
Universidade Estadual do Rio Grande do Sul, Porto Alegre, Brazil
F. Zanetti, A. Monti
Università di Bologna, Bologna, Italy

Switchgrass Cultivation Potential in Soils Contaminated with Heavy Metals
1DV.2.11  S. Marsac, C. Quod, E.A. Sanner  
Arvalis, Baziège, France  
T. Habas, C. Richard, C. Flamin  
ENGIE, Paris, France  
**Towards Regional Recommendations for Energy Cover Crops in Double Cropping Systems A New Stakeholder Collaboration**

1DV.2.12  B. Cumbane, L. Gomes, C. Rodrigues, A.L. Fernando  
FCT NOVA, Caparica, Portugal  
J. Costa  
FCT NOVA/ISEC, Caparica/Lisboa, Portugal  
F. Zanetti  
UNIBO, Bologna, Italy  
A. Monti  
UNIBO, Caparica, Italy  
E. Alexopoulou  
CRES, Pikermi, Greece  
**Comparing the Growth and Yield of Kenaf (Hibiscus Cannabinus L.) Produced in Two Different Climatic Types in Soils Contaminated by Zinc, Copper, Chromium and Lead**

1DV.2.14  M.J. Stolarski, M. Krzyzaniak  
3B, Olsztyn, Poland  
**Selected Non-Food Crops Cultivated For Industrial and Energy Purposes in Poland**

1DV.2.15  M. Von Cossel, A. Mangold, I. Lewandowski  
Department of Biobased Products and Energy Crops (340b), Institute of Crop Science, University of Ho, Stuttgart, Germany  
Y. Iqbal  
College of Bioscience and Biotechnology, Hunan Agricultural University, Changsha, P.R. China  
**Methane Yield Potential of Miscanthus Established under Maize**

1DV.2.16  M. Von Cossel  
Department of Biobased Products and Energy Crops (340b), Institute of Crop Science, University of Ho, Stuttgart, Germany  
**Biomass from Perennial Wild Plant Mixtures - Lessons from 10 Years of Research and Practice**

1DV.2.17  M. Von Cossel  
Department of Biobased Products and Energy Crops (340b), Institute of Crop Science, University of Ho, Stuttgart, Germany  
**Methane Yield Performance of Perennial Wild Plant Species Common Tansy, Common Knapweed and Mugwort**

1DV.2.18  N. Rezaie  
CREA, Rome, Italy  
E. D’Andrea, G. Matteucci  
ISAFoM, Ercolano, Italy  
**How Different Forest Management Options Affect Woody Biomass Quality?**

1DV.2.20  E. Santangelo, C. Beni, E. Paris, A. Del Giudice, F. Gallucci  
Consiglio per la ricerca e l’analisi dell’economia agraria (CREA), Monterotondo, Italy  
M. Zacchini, F. Pietrini  
Consiglio Nazionale delle Ricerche (CNR), Monterotondo, Italy  
**Effect of Groundwater Level on Giant Reed (Arundo Donax, L.) Plants Grown in Mesocosms**
1DV.2.21  L. Pari, W. Stefanoni, A. Suardi, N. Palmieri, S. Bergonzoli, V. Alfano, S. Lazar
CREA, Monterotondo, Italy
Cultivation Of Castor in Romania: A Case of Study

1DV.2.31  M. Sanz, J.E. Carrasco, J. Pérez, P. Pilar Ciria
CIEMAT, Madrid, Spain
Biomass Yield of Siberian Elm Under Different Crop Conditions on Marginal Agricultural Land

Networking & Exhibition Visiting Time  11:10 - 11:20
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*(status of 19 June 2020)*

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