

13:30 - 15:00

VISUAL PRESENTATIONS 4AV.1

Biomass strategies and policies

Room: Poster Area

CHAIRPERSONS:

Wibke BAUMGARTEN, FNR - Agency for Renewable Resources, EU/International Affairs, GERMANY

Invited

4AV.1.1

OPTIMIZING BIOMASS UTILIZATION - THE CONSUMPTION OF IMPORTED WOOD PELLETS IN NEW DEMAND SECTORS TO SUPPORT THE DUTCH BIO-BASED ECONOMY

Lotte VISSER, Utrecht University, Copernicus Institute - Energy & Resources, THE NETHERLANDS

Co-authors: R. Hoefnagels, H.M. Junginger, Copernicus Insistute, Utrecht, The Netherlands

4AV.1.2

A SUCCESSFUL EFFORT TO CREATE BIOBASED TECHNOLOGY COMMERCIALIZATION POLICY IN THE US STATE OF MINNESOTA

Brendan JORDAN, Great Plains Institute, USA

4AV.1.3

COMPETITION FOR BIOMASS TRADE TO MEET GLOBAL AND NATIONAL EMISSION TARGETS FOR BELOW 2°C TRAJECTORIES

Paul DODDS, University College London, UCL Energy Institute, UNITED KINGDOM

Co-authors: I. Butnar, O. Broad, University College London, United Kingdom; A. Welfie, P. Thornley, University of Manchester, United Kingdom

4AV.1.4

OPERATING ENVIRONMENT FOR SMALL-SCALE BIOMASS-BASED CHP PRODUCTION IN FINLAND

Antti KARHUNEN, Lappeenranta University of Technology, LUT Energy, FINLAND

Co-authors: M. Laihanen, T. Ranta, Lappeenranta University of Technology, Finland

4AV.1.7

A VILLAGE-BASED INTEGRATED BIOREFINERY MODEL FOR RURAL AREAS

Bartha SANDOR, Cercetare Silox, BIO C-Romania, ROMANIA

Co-authors: S. Bartha, B. Vajda, Green Energy Association, Sf. Gheorghe, Romania; S. Berardino, L.C. Duarte, LNEG-Lisboa, Portugal; A. Reis, F. Carvalheiro, T. Lopes da Silva, LNEG- Lisboa, Portugal; V. Velichko, BNTU, Minsk, Belarus

4AV.1.8

EUROPEAN STEEL INDUSTRY AND EMISSION REDUCTIONS BY 2020, 2030 AND 2050 - THE ROLE OF BIOENERGY AND CARBON CAPTURE AND STORAGE

Hana MANDOVA, University of Leeds, School of Chemical and Process Engineering, UNITED KINGDOM

Co-authors: S. Leduc, P. Patrizio, IASA, Laxenburg, Austria; D. Chinese, University of Udine, Italy; C. Wang, Swerea MEFOS, Lulea, Sweden; E. Wetterlund, Lulea University of Technology, Sweden; W. Gale, University of Leed, United Kingdom

4AV.1.12

REPLACING TRADITIONAL BIOMASS FOR BIOGAS IN RURAL COMMUNITIES IN NEPAL: LESSONS LEARNED FROM THE CHINESE MODEL

Lydia JOWITT, UNITED KINGDOM

Co-authors: A. Sanches-Pereira, S. Teixeira Coelho, University of São Paulo, Brazil; P. Khapung, E. Ong, University of Oxford, United Kingdom

4AV.1.17

TECHNICAL AND ECONOMIC BARRIERS TO PRODUCE BIOFUELS FROM THE FORESTS: A CASE-BY-CASE STUDY IN MEXICO

Daniel COHEN SALGADO, National Autonomous University of Mexico, Institute of Research in Ecosystems and Sustainability- Bioenergy Lab, MEXICO

Co-authors: J. Odenthal, R. Martínez-Bravo, R. Tauro, Q. Orozco-Ramírez, O. Masera, Institute of Research in Ecosystems and Sustainability, National Autonomous University of Mexico, Michoacán, Mexico; T. Arias-Chalico, E. Riegelhaupt, Bioenergy Mexican Network (REMBIO, A.C), Morelia, Michoacán, Mexico; C. García-Bustamante, National School of Higher Studies (ENES) National Autonomous University of Mexico (UNAM), Morelia, Michoacán, Mexico

4AV.1.18

THE CREATION OF BIOENERGY VILLAGES IN SOUTHEASTERN EUROPE - RESULTS FROM THE BIO-VILL PROJECT IN MACEDONIA AND SLOVENIA

Dominik RUTZ, WIP Renewable Energies, Unit Bioenergy & Bioeconomy, GERMANY

Co-authors: R. Janssen, WIP Renewable Energies, Munich, Germany; J. Adler, GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Eschborn, Germany; N. Markovska, V. Bozhikaliev, I. Sazdovski, International Centre for Sustainable Development of Energy, Water and Environment Systems - Macedoni, Skopje, Macedonia; N. Krajnc, J. Klun, P. Hafner, Slovenian Forestry Institute, Ljubljana, Slovenia Republic

4AV.1.19

DEVELOPMENT PATHWAYS FOR THE BIOECONOMY: POLICIES, INSTITUTIONS AND GOVERNANCE

Francis X. JOHNSON, Stockholm Environment Institute, SWEDEN

Co-authors: I. Virgin, Stockholm Environment Institute, Sweden; R. Diaz-Chavez, Stockholm Environment Institute, Kenya

4AV.1.23

ALTERNATIVE METHODS TO KOSOVO'S CANCEROUS ENERGY SOURCE - HOW CAN KOSOVO RE-UTILIZE ITS LIGNITE AND MITIGATE DEPENDENCY VIA GREEN ENERGY TECHNIQUES

Besmir BURANAJ HOXHA, Petro Fluids LLC, none, USA

Co-authors: B Hoxha, B Hoxha, Petro Fluids, Houston, Usa; K Sweeney, D Dulaj, UNDP, Prishtina, Kosovo; H Kurti, Statistics Agency of Kosovo, Prishtina, Kosovo

4AV.1.25

TO BE OR NOT TO BE A BIOBASED COMMODITY

Wolter ELBERSEN, Wageningen Research, Food and Biobased Products Dpt., THE NETHERLANDS

Co-authors: H.W. Elbersen, J.E.G. van Dam, WFBR, Wageningen, The Netherlands

13:30 - 15:00

VISUAL PRESENTATIONS 1AV.2

Waste valorization

Room: Poster Area

CHAIRPERSONS:

Invited

Invited

1AV.2.2

PERFORMANCE EVALUATION OF COMMERCIAL SANITARY NAPKIN INCINERATOR

Rohit BOROAH, Indian Institute of Science, Centre for Sustainable Technologies, INDIA

Co-authors: H. Chanakya, S. Dasappa, Indian Institute of Science, Bangalore, India

1AV.2.10

ORGANIC WASTE TO ENERGY IN LATIN AMERICA AND THE CARIBBEAN (LAC); STATE-OF-THE-ART LITERATURE REVIEW

Rodolfo SILVA, Universidade de São Paulo, Bioenergy, BRAZIL

Co-authors: RDSM Silva-Martínez, Universidade de São Paulo, Brazil; ASP Sanches-Pereira, Universidade de São Paulo, Brazil

1AV.2.13

ACCURATE STUDY ON THE SUPERCRITICAL WATER GASIFICATION OF BLACK LIQUOR: AN EXPERIMENTAL CAMPAIGN IN CONTINUOUS OPERATION MODE

Mauro PRESTIPINO, University of Messina, Engineering Dpt., ITALY

Co-authors: C. De Blasio, V. Alopaeus, Aalto University, Espoo, Finland; A. Galvagno, University of Messina, Italy

1AV.2.15

TOXICITY AND PROPERTIES OF BIOCHAR MINERAL COMPLEXES (BMCS) DERIVED FROM PYROLYSIS AND HTC EVALUATED BY GERMINATION TRIALS

Josephine GETZ, Dublin Institute of Technology, Environmental Sustainability & Health Institute, IRELAND

Co-authors: J. Mumme, O. Mašek, W. Buss, UK Biochar Research Centre, School of GeoSciences, University of Edinburgh, Technology, United Kingdom

1AV.2.18**POTENTIAL OF TROPICAL FRUIT WASTE IN BIOENERGY PROCESSES AND BIOPRODUCTS DESIGN**

Daniel David DURÁN ARANGUREN, Universidad de los Andes, Chemical Engineering, COLOMBIA
Co-authors: A. P. Figueroa Fajardo, M. A. Gualdrón Muñoz, R. Sierra Ramirez, J. Mejía, Universidad de los Andes, Bogotá, Colombia

1AV.2.23**IDENTIFICATION OF EU SUCCESS FACTORS FOR SUSTAINABLE WOOD WASTE VALORIZATION**

Ana Luisa FERNANDO, Universidade Nova de Lisboa, Ciências e Tecnologia Biomassa Dpt., PORTUGAL

1AV.2.24**SEPTIC TANK SLUDGES AS PART OF THE OPTIMIZED SEWAGE TREATMENT PROCESS**

Heikki SÄRKKÄ, South-Eastern Finland University of Applied Sciences, Forest, the environment and energy, FINLAND

Co-authors: H. Soininen, South-Eastern Finland University of Applied Sciences, Mikkeli, Finland

15:15 - 16:45

VISUAL PRESENTATIONS 4AV.3**Sustainability criteria and socio-economic assessments in bioenergy and bioeconomy**

Room: Poster Area

CHAIRPERSONS:

Rocio DIAZ-CHAVEZ, Stockholm Environment Institute - Africa Centre c/o World Agroforestry Centre (ICRAF), Centre for Environmental Policy, KENYA

Invited

4AV.3.1**THE NEW IEA BIOENERGY TECHNOLOGY ROADMAP: A STEP TOWARDS A SUSTAINABLE BIOECONOMY?**

Uwe R. FRITSCH, IINAS, Scientific Director, GERMANY
Co-authors: B. Kulisic, Energy Institute Hrvoje Pozar, Zagreb, Croatia; E. Thiffault, I. Lakhndhar, Research Centre on Renewable Materials, Laval University, Quebec, Canada; L. Bouthillier, University Laval, Quebec, Canada; W. White, Kingsmere Economics, Edmonton, Canada

4AV.3.2**UNCHARTED TERRITORIES: PERCEPTIONS AND EXPECTATIONS TOWARDS BIOENERGY IN CANADA**

Evelyne THIFFAULT, Laval University, Wood and Forest Science, CANADA
Co-author: A. Brown, IEA, Paris, France

4AV.3.4**CHARCOAL PRODUCTION IN KENYA. ENSURING SUSTAINABILITY IN HOTSPOTS AREAS**

Hannah WANJIRU, Stockholm Environment Institute, KENYA
Co-authors: R. Diaz-Chavez, F. Johnson, Stockholm Environment Institute, Nairobi, Kenya

4AV.3.6**ASSESSING THE SUSTAINABILITY OF MISCANTHUS BIOMASS PRODUCTION ON MARGINAL LAND**

Moritz WAGNER, University of Hohenheim, Institute of Crop Science (340b), GERMANY
Co-authors: A. Kiesel, A. Mangold, I. Lewandowski, University of Hohenheim, Stuttgart, Germany; J. Clifton-Brown, Aberystwyth University, United Kingdom

4AV.3.8**DEVELOPING A SOCIO-ECONOMIC FRAMEWORK FOR THE ASSESSMENT OF RURAL BIOREFINERY PROJECTS**

Miravo RAKOTOVAO, FRANCE
Co-authors: J. Gobert, LEESU, Ecole des Ponts et Chaussées, Champs sur Marne, France; S. Brullot, University of Technology of Troyes, France

4AV.3.9**SUSTAINABILITY ANALYSIS AS A TOOL TO DETERMINE THE ROLE OF BIOREFINERIES IN HIGH VALUE BIOPRODUCTS AND BIOFUELS PRODUCTION BASED ON LIGNOCELLULOSIC BIOMASS**

Lorena AMAYA, CIATEJ, Industrial Biotechnology, MEXICO
Co-authors: G. Magaña, Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco A.C., Zapopan, Mexico; A. Sanchez, Centro de Investigación y de Estudios Avanzados del IPN, Zapopan, Mexico

4AV.3.10**AN APPRAISAL COMPARISON OF LOCOMOTIVES POWERED BY BIODIESEL AND ELECTRICITY: AN INDIAN RAILWAYS CASE STUDY**

Charlotte STEAD, University of Leeds, UNITED KINGDOM
Co-authors: Z Wadud, C Nash, H Li, University of Leeds, United Kingdom

4AV.3.12**SUSTAINABILITY ASSESSMENT AND MONITORING OF BIOMASS PRODUCTION: THE CASE OF PLANTED FORESTS IN BRAZIL**

Manuela CZINAR, Imperial College London, Centre for Environmental Policy, UNITED KINGDOM
Co-author: R. Diaz-Chavez, Imperial College London, United Kingdom

4AV.3.14**A COMPARATIVE ASSESSMENT OF CURRENT AND FUTURE FUELS FOR THE TRANSPORT SECTOR**

Sofia POULIKIDOU, Chalmers University of Technology, SWEDEN
Co-authors: S. Heyne, CIT, Industriell Energi AB, Gothenburg, Sweden; M. Grahn, S. Harvey, Chalmers University of Technology, Gothenburg, Sweden; J. Hansson, IVL, Swedish Environmental Research Institute, Gothenburg, Sweden

4AV.3.16**SOCIAL LIFE CYCLE ASSESSMENT (S-LCA) FOR ADVANCED BIOFUEL FROM WASTE WOOD INTEGRATED IN THE STEEL INDUSTRY**

Gerfried JUNGMEIER, Joanneum Research Centre, Research Centre for Climate, Energy and Environment, AUSTRIA
Co-authors: I. Kaltenegger, Joanneum Research, Graz, Austria; W. van der Stricht, ArcelorMittal, Gent, Belgium; S. Claes, Van Gansewinkel NV, Puurs, Belgium; J. Sluijmsmans, Torr-Coal International, Sittard, The Netherlands; F. Johnsson, Chalmers Tekniska Hogskola, Göteborg, Sweden

4AV.3.18**A NEW APPROACH TO EVALUATE ILUC AND INDIRECT EFFECTS USING STATISTICS ON CROP CULTIVATION, LAND USE, TRADE AND DEFORESTATION - EXAMPLES FROM THE US**

Hans LANGEVELD, Biomass Research, THE NETHERLANDS
Co-authors: M. Chordia, M. Brandao, KTH, Stockholm, Sweden; K.L. Kline, V.H. Dale, ORNL, Oak Ridge, Usa; A. Cowie, DPI, Sydney, Australia; U.R. Fritsche, IINAS, Darmstadt, Germany; J.W.A. Langeveld, Biomass Research, Wageningen, The Netherlands

4AV.3.20**ASSESSMENT OF ECONOMIC VIABILITY AND YIELD STABILITY OF COMBINED FOOD AND ENERGY PRODUCTION SYSTEM (CFE) IN DENMARK**

Ying XU, DENMARK
Co-authors: S. García de Jalo'n, Basque Centre for Climate Change (BC3), Leioa, Spain; B.B. Ghaley, Department of Plant and Environmental Sciences, University of Copenhagen, Denmark

4AV.3.21**GENDER INCLUSION IN BIOENERGY. A CASE STUDY IN JAEN, SPAIN**

Rocio DIAZ-CHAVEZ, Stockholm Environment Institute - Africa Centre c/o World Agroforestry Centre (ICRAF), Centre for Environmental Policy, KENYA
Co-authors: L. Bani-Hashemian, Imperial College London CEP, London, United Kingdom; E. Ruiz Ramos, Universidad de Jaén, Jaén, Spain; I. Romero Pulido, Universidad de Jaén, Spain

15:15 - 16:45

VISUAL PRESENTATIONS 3AV.4

Production, evaluation and upgrade of oil-based biofuels

Room: Poster Area

CHAIRPERSONS:

Dimitrios SIDIRAS, University of Piraeus, Industrial Management and Technology Dpt., GREECE**Klaus THUNEKE**, Technology and Support Centre in the Centre of Excellence for Renewable Resources, Liquid Biofuels, Biolubricants and Process Materials, GERMANY

3AV.4.7

CO-PRODUCTION OF BIO-INSULATING OIL AND VALUE-ADDED GLYCEROL DERIVATIVES FROM SOYBEAN OIL

Eun Yeol LEE, Kyung Hee University, Department of Chemical Engineering,, KOREA

3AV.4.9

EVALUATION OF THE OPTIMAL REACTION CONDITIONS FOR THE METHANOLYSIS AND ETHANOLYSIS OF CASTOR OIL CATALYZED BY IMMOBILIZED ENZYMES

Thalles A. ANDRADE, University of Southern Denmark, Department of Chemical Engineering, Biotechnology and Environmental Technology, DENMARK

Co-authors: I.F. Al-Kabalawi, M. Errico, K.V. Christensen, University of Southern Denmark, Odense, Denmark

3AV.4.12

OBTAINING MAIN COMPONENTS OF LIQUID MOTOR FUELS FROM SEWAGE SLUDGE

Olga LARINA, Joint Institute for High Temperatures of the Russian Academy of Sciences, RUSSIAN FEDERATION

Co-authors: V.M. Zaichenko, I.I. Lishchiner, O.V. Malova, JIHT RAS, Moscow, Russian Federation

3AV.4.13

LAB-SCALE BIO-JET FUEL PRODUCTION AND THE SCALE-UP EVALUATION

Wei-Cheng WANG, National Cheng Kung University, Department of Aeronautics and Astronautics, TAIWAN

3AV.4.15

THE EFFECT OF ECONOMIC VARIABLES OVER A BIODIESEL PRODUCTION PLANT USING CALCIUM OXIDE AS A CATALYST

Shemelis Nigatu GEBREMARIAM, Norwegian University of Life Sciences, Faculty of Science and Technology, REALTEK, NORWAY

Co-author: J. M. Marchetti, NMBU, Ås, Norway

17:00 - 18:30

VISUAL PRESENTATIONS 3AV.5

Production and application of biobased chemicals from biomass - Part 1

Room: Poster Area

CHAIRPERSONS:

Solange MUSSATTO, Technical University of Denmark, Novo Nordisk Foundation Center for Biosustainability, DENMARK**Liang WANG**, SINTEF Energy Research, Thermal Energy Dpt., NORWAY

3AV.5.1

COMPARISON OF DIFFERENT LIGNIN ENZYMES

Luisa BLAESING, TU Bergakademie Freiberg, Institute of Chemical Technology, GERMANY

Co-authors: A. Jahn, D. Kaiser, Institute of Chemical Technology, Freiberg, Germany

3AV.5.3

IMPROVING IN-SITU LIPID EXTRACTION EFFICIENCY FROM OLEAGINOUS YEAST BIOMASS IN A LIPID EXTRACTOR FOR BIOFUEL APPLICATION

Jayita CHOPRA, IIT Kharagpur, INDIA

Co-authors: R Sen, IIT Kharagpur, Kharagpur, INDIA

3AV.5.4

PRODUCTION OF SPECIALIST CHEMICALS FROM BIO-BASED SHORT-CHAIN FERMENTATION PRODUCTS

Martin PETERS, Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Biofuels and Biorefinery, GERMANY

3AV.5.8

CHEMICAL MODIFICATION OF LIGNIN FOR THE PREPARATION OF BIOPLASTICS

Eun Yeol LEE, Kyung Hee University, Department of Chemical Engineering,, KOREA

3AV.5.9

MUSHROOM BIOTECHNOLOGY FOR CONVERSION OF LIGNOCELLULOSIC WASTES INTO FULLY BIODEGRADABLE MATERIALS AND ORGANIC FOOD

Marian PETRE, University of Pitesti, Nature Sciences, ROMANIA

Co-author: V. Petre, National College „Sfântul Sava” Bucharest, Romania

3AV.5.10

CHALLENGES IN PURIFYING PROTEINS FROM MICROALGAE

Lutz GROSSMANN, Food Physics and Meat Science, GERMANY

Co-authors: J. Hinrichs, J. Weiss, University of Hohenheim, Stuttgart, Germany

3AV.5.11

EFFICIENT BIOCATALYTIC SYNTHESIS OF IMIDAZOLE-4-ACETIC ACID

Lehe MEI, Zhejiang University, Department of Chemical and Biological Engineering, P.R. CHINA

Co-authors: Weirui Zhao, Huangru Ding, Sheng Hu, Lehe Mei, School of Biotechnology and Chemical Engineering, Ningbo Institute of Technology, Zhejiang University, Ningbo, P.R. China

3AV.5.16

CONVERSION OF GLUCOSE INTO VALUABLE 2,5-DIFORMYL FURAN BY USING NOVEL BIOMASS BASED CARBON CATALYSTS

Annu RUSANEN, University of Oulu, FINLAND

Co-authors: R. Lahti, K. Lappalainen, Kokkola University Consortium Chydenius, Kokkola, Finland; J. Kärkkäinen, U. Lassi, University of Oulu, Finland

3AV.5.18

ORGANIC ACID PRODUCTION FROM SWEET SORGHUM BAGASSE USING GREEN CHEMISTRY PRINCIPLES

George PHILIPPIDIS, University of South Florida, Patel College of Global Sustainability, USA

Co-authors: E Lo, I Dogaris, University of South Florida, Tampa, Usa

3AV.5.19

DETERMINING FACTORS FOR VANILLIN YIELD IN OXIDATIVE SOLVOTHERMAL CONVERSION OF LIGNIN IN A TWO-PHASE SYSTEM

Saša BJELIC, Paul Scherrer Institut, Energy and Environment, SWITZERLAND

Co-authors: L. Garbuio, O. Oberhänsli, R. Tschaggelar, Paul Scherrer Institut, Villigen PSI, Switzerland; G. Jeschke, ETH Zurich, Villigen PSI, Switzerland; J. van Bokhoven, Paul Scherrer Institut and ETH Zurich, Villigen PSI, Switzerland; F. Vogel, Paul Scherrer Institut and FHNW, Villigen PSI and Windisch, Switzerland

3AV.5.20

GLYCOLALDEHYDE AS A BIO-BASED PLATFORM MOLECULE FOR REDUCTIVE AMINATION REACTIONS

William FAVEERE, KU Leuven, Centre for Surface Chemistry and Catalysis, BELGIUM

Co-authors: T. Mihaylov, M. Pelckmans, F. Gillis-D'Hamers, K. Pierloot, B. Sels, KU Leuven, Leuven, Belgium; F. Van Waes, K. Moonen, Eastman, Gent, Belgium

17:00 - 18:30

VISUAL PRESENTATIONS 4AV.6**Assessment of bioenergy actions and biomass use on climate impact**

Room: Poster Area

CHAIRPERSONS:**Daniel MARAVER DE LEMUS**, European Commission - INEA, H2020 Energy Research, BELGIUM

Invited

4AV.6.3**BURNING WOOD PELLETS FOR US ELECTRICITY GENERATION? A REGIME SWITCHING ANALYSIS**

Bin MEI, University of Georgia, Warnell School of Forestry & Natural Resources, USA

4AV.6.4**HOW TO ENHANCE THE ECONOMIC VIABILITY OF STRAW BASED HEATING PLANTS IN GERMANY?**

Telse VOGEL, GERMANY

Co-authors: H. Heilmann, T. Annen, State Research Center of Agriculture and Fisheries Mecklenburg-Vorpommern, Gülzow, Germany; M. Dietze, State Research Center of Agriculture and Fisheries Mecklenburg-Vorpommern, Dummerstorf, Germany

4AV.6.5**EVALUATION OF COMPETITIVENESS OF LOCALLY AVAILABLE BIOMASS FOR DECENTRALIZED SPACE HEATING IN VILLAGES AND SMALL TOWNS**

Jan WEGER, Silva Tarouca Research Institute for Landscape, Phytoenergy and Biodiversity Dpt., CZECH REPUBLIC

Co-authors: K. Vávrová, Silva Tarouca Research Institute for Landscape and Ornamental Gardening, Publ.Res.Inst., Pruhoonice, Czech Republic; J. Knápek, J. Beranovský, Czech Technical University in Prague, Czech Republic

4AV.6.7**MARKET SHARE ESTIMATION OF BIOMETHANE AND PROMISING BUSINESS OPPORTUNITIES IN GERMANY USING A SYSTEM DYNAMICS MODELLING APPROACH**

Thomas HORSCHIG, DBFZ-German Biomass Research Centre, Bioenergy Systems Dpt., GERMANY

Co-author: D. Thrän, Helmholtz Centre for Environmental Research UFZ, Leipzig, Germany

4AV.6.8**POTENTIAL ADVANTAGES IN HEAT AND POWER PRODUCTION WHEN BIOGAS IS COLLECTED FROM SEVERAL DIGESTERS USING DEDICATED PIPELINES - A CASE STUDY IN THE PROVINCE OF WEST-FLANDERS (BELGIUM)**

Evert Jan HENGVELD, Hanze University of Applied Sciences / University of Groningen, Hanze Research Centre Energy, THE NETHERLANDS

Co-authors: J. Bekkering, W.J.T. Gemert, van, Hanze UAS, Hanze Research Centre Energy, Groningen, The Netherlands; M. Van Dael, Hasselt University, Centre for Environmental Sciences and VITO, Belgium; A.A. Broekhuis, Department of Chemical Engineering-Product Technology, University of Groningen, The Netherlands

4AV.6.9**CLIMATE VS BIOMASS SUSTAINABILITY TARGETS: ARE THEY COMPATIBLE UNDER A WELL BELOW 2 °C TRAJECTORY?**

Isabela BUTNAR, University College London, Institute for Sustainable Resources, UNITED KINGDOM

Co-authors: O. Broad, P. Dodds, University College London, United Kingdom; A. Welfle, P.Thornley, University of Manchester, United Kingdom

4AV.6.12**THE IMPORTANCE OF QUANTIFYING SOIL CARBON STORAGE AT OUTSET OF PERENNIAL ENERGY CROPS: A CASE STUDY.**

Enrico CEOTTO, CREA- Council for Agricultural Research and Economics, Research Centre for Agriculture and Environment, ITALY

4AV.6.13**EVALUATION OF THE CLIMATE BENEFIT IN COMPLEX BIOREFINERY SYSTEMS: WHEN A DYNAMIC MODELING BECOMES CRUCIAL**

Pedro HARO, Universidad de Sevilla, Chemical and Environmental Engineering, SPAIN

Co-authors: C. Aracil, Universidad de Sevilla, Spain; J. Giuntoli, Joint Research Centre (JRC), Ispra, Italy

4AV.6.14**LIFE CYCLE CO₂ EMISSION REDUCTION IN NORDIC INTEGRATED STEEL PLANT BY APPLYING BIOMASS-BASED REDUCING AGENTS**

Chuan WANG, Swerea MEFOS, SWEDEN

Co-authors: H. Suopajarvi, T. Fabritius, Process Metallurgy Research Unit, University of Oulu, Finland; E. Mousa, Swerea MEFOS, Process Integration Department, Luleå, Sweden

4AV.6.15**CLIMATE IMPACT OF ADVANCED AVIATION FUELS BASED ON HYDROGENATED VEGETABLE OILS**

Katja OEHMICHEN, DBFZ-German Biomass Research Centre, Bioenergy Systems Dpt., GERMANY

Co-authors: S. Majer, K. Zech, DBFZ, Leipzig, Germany

4AV.6.17**CARBON FOOTPRINTING FOR BIOMETHANE IN THE EU RED AND EU ETS CONTEXT**

Stefan MAJER, DBFZ-German Biomass Research Centre, Biofuels Dpt., GERMANY

Co-authors: K.O. Oehmichen, C.H. Hennig, DBFZ, Leipzig, Germany; D.T. Thrän, UFZ, Leipzig, Germany

4AV.6.18**A BIOENERGY INTEGRATED SYSTEM WITH A PROCESS ORIENTED LCA MODELLING APPROACH**

Concetta LODATO, Technical University of Denmark, Environmental Engineering Dp., DENMARK

Co-authors: D. Tonini, Joint Research Centre, Sevilla, Spain; A. Damgaard, T. F. Astrup, Technical University of Denmark, Kgs. Lyngby, Denmark

4AV.6.19**ASSESSING CARBON FOOTPRINT OF A FULL-SCALE ANAEROBIC-BASED SEWAGE TREATMENT PLANT**

CARLOS CHERNICHARO, Universidade Federal de Minas Gerais (UFMG), Department of Sanitary and Environmental Engineering, BRAZIL

Co-authors: T. Bressani-Ribeiro, L.C.S Lobato, DESA/UFMG, Belo Horizonte, Brazil; S.N Souza, COPASA, Belo Horizonte, Brazil; E.M.F Brandt, ESA/UFJF, Juiz de Fora, Brazil

4AV.6.23**TORREFIED MEDICAL COTTON WASTE FOR INDUSTRIAL LIQUID WASTE CLEANING**

George GIAKOUMAKIS, Univ. Piraeus, Research Center, Industrial Management and Technology, GREECE

Co-authors: D. Politi, D. Sidiras, Univ. Piraeus Research Center, Greece

4AV.6.24**WILL DRIED SLUDGE FROM FISH FARMING BECOME A CONTRIBUTOR OR COMPETITOR TO THE UTILIZATION OF MUNICIPAL SLUDGE?**

Lars ROHOLD, Scanship, Aquaculture, NORWAY

4AV.6.25**REMOTE SENSING QUANTIFICATION OF METHANE EMISSIONS FROM 10 BIOGAS PLANTS IN DENMARK AND GERMANY**

Anders Michael FREDENSLUND, Roskilde University, DENMARK

Co-author: C. Scheutz, Technical University of Denmark, Kongens Lyngby, Denmark

4AV.6.29**COMBUSTION QUALITY OF PALUDI PELLETS AFTER DIN EN 14961-6 FROM REWETTED FENS IN NORTHEASTERN GERMANY**

Claudia OEHMKE, University Greifswald, Institute of Botany and Landscape Ecology, GERMANY

Co-authors: W. Wichtmann, T. Dahms, University Greifswald, Institut of Botany and Landscape Ecology, Germany

08:30 - 10:00

VISUAL PRESENTATIONS IBV.1

Analysis of industrial approaches to biomass conversion

Room: Poster Area

CHAIRPERSONS:

David BAXTER, Former European Commission, Joint Research Centre, UNITED KINGDOM

Björn FREDRIKSSON MÖLLER, E.ON Gasification Development, SWEDEN

IBV.1.2

DEVELOPING A BIOMASS GASIFICATION FOR POWER PROJECT IN ITALY: LESSONS LEARNT

Gian Claudio FAUSSONE, Inser Energia, ITALY

IBV.1.4

NEW MOBILE, SLOW PYROLYSIS TECHNOLOGY DEVELOPED IN NAMIBIA BRINGS ABOUT PROCESS IMPROVEMENT, OPTIMISATION AND EFFICIENT BIOMASS CONVERSION IN THE CHARCOAL INDUSTRY

Dagmar HONSBEIN, iDeal-x integrated scientific services, NAMIBIA

Co-author: J Redecker, Redecker Retort Charcoal, Windhoek, Namibia

IBV.1.5

THERMAL BEHAVIOUR AND KINETIC ANALYSIS OF FAECAL BIOMASS AND BLENDS

Tosin ONABANJO SOMORIN, Cranfield University, Energy & Power, UNITED KINGDOM

Co-authors: T.O. Somorin, B. Fidalgo, A.J. Kolios, A. Sowale, A. Anastasopoulou, Cranfield University, Bedford, United Kingdom

IBV.1.6

WASTE-TO-FUEL TECHNOLOGY IN ALBANIA - HOW TO IMPLEMENT A RENEWABLE ENERGY SYSTEM IN EUROPE'S LARGEST ONSHORE OILFIELD

Besmir BURANAJ HOXHA, Petro Fluids LLC, none, USA

Co-authors: B. Hoxha, Petro Fluids, Houston, Usa; D Dervishi, McCain Institute, Washington D.C., Usa; K Sweeney, UNDP, Prishtina, Kosovo

IBV.1.7

MICRO-SCALE CHP TECHNOLOGIES - STATE OF THE ART

Christoph SCHMIDL, Bioenergy 2020+, Biomass Combustion Dpt., AUSTRIA

Co-authors: S. Aigenbauer, E. Höftberger, C. Mair, Bioenergy2020+, Wieselburg-Land, Austria

IBV.1.8

CFB TECHNOLOGY ADVANTAGES IN SOLID BIOMASS FUEL FIRING

Kalle NUORTIMO, Sumitomo SHI FW, FINLAND

IBV.1.9

COMBUSTION SYSTEM FOR GASEOUS AND LIQUID BIOFUELS WITH LOW POLLUTANT EMISSIONS

Jörg LEICHER, Gas- und Wärme-Institut Essen e.V., Industrial Combustion Technology, Germany

Co-authors: M. Röder, A. Giese, A. Al-Halbouni, Gas- und Wärme-Institut Essen e.V., Essen, GERMANY; D. Möntmann, M. Grote, D. Diarra, OWI Oel-Waerme-Institut, Herzogenrath, Germany

IBV.1.10

THE DALL ENERGY BIOMASS FURNACE

Jens Dall BENTZEN, Dall Energy, R&D, DENMARK

IBV.1.11

COMBUSTION OF HORSE MANURE PELLETS: PERFORMANCE AND EMISSIONS

Timothy GRIFFIN, University of Applied Sciences, Northwestern Switzerland, Institute of Biomass and

Resource Efficiency, SWITZERLAND

Co-authors: J. Wueest, N. Lohberger, FHNW, Windisch, Switzerland

IBV.1.14

ENERGY RECOVERY FROM PIG FARM AND SLAUGHTER HOUSE ORGANIC WATES

Ioana IONEL, Universitatea Politehnica Timisoara, Mechanical Engineering Dpt., ROMANIA

Co-authors: A. R. Wachter, POLITEHNICA UNIVERSITATII, Timisoara, Romania; T.V. Vintila, Banat University of Agricultural Sciences and Veterinary Medicine Timisoara, Romania; M. R. Wachter, District Heating Timisoara COLTERM S.A., Romania

IBV.1.15

THE ROLE OF OXYGEN CONCENTRATION ANALYSIS IN THE PRODUCTION OF BIOFUELS

René NOWKA, Elementar Analysensysteme, GERMANY

Co-authors: M. Ruppenthal, S. Kraus, K. Schütz, C. Schmidt, L. Lange, A. Sieper, Elementar Analysensysteme, Langenselbold, Germany

IBV.1.20

CONVERSION OF MIXED ORGANIC RESIDUE FEEDSTOCKS TO DROP-IN HYDROCARBON FUELS VIA THE IH2® TECHNOLOGY - PROCESS DEVELOPMENT TRAJECTORY

Dhairya MEHTA, Shell Technology Centre Bangalore, Novel Catalytic Materials, INDIA

Co-authors: V. N. Urade, M. Rao, Shell Technology Centre Bangalore, India; T. L. Marker, M.B. Linck, P. Ortiz-Toral, J. Wangerow, Gas Technology Institute, Des Plaines, Usa; L. Domokos, A. del Paggio, CRI Catalyst Company, Houston, Usa

08:30 - 10:00

VISUAL PRESENTATIONS 3BV.2

Production and application of biobased chemicals from biomass - Part 2

Room: Poster Area

CHAIRPERSONS:

Giuliano DRAGONE, Novo Nordisk Foundation Center for Biosustainability, DENMARK

Tanja BARTH, University of Bergen, Chemistry Dpt., NORWAY

3BV.2.1

RECOVERY OF PHOSPHATE AFTER HYDROLYSIS AND MATERIAL UTILIZATION OF ORGANIC WASTE

Jan Christoph PEINEMANN, Leuphana University, GERMANY

Co-author: D. Pleissner, Leuphana University Lüneburg, Germany

3BV.2.2

CHIRAL PESTICIDES FROM BIOMASS FEEDSTOCKS

In Taek HWANG, Korea Research Institute of Chemical Technology, Carbon Resources Institute, KOREA

Co-authors: H.S. Yeom, K.I. Lee, Korea Research Institute of Chemical Technology, Daejeon, Korea; H.J. Lee, Seoul National University, Korea

3BV.2.3

NITROGEN RECOVERY FROM LIQUID EFFLUENTS BY ACTIVATED BIOCHAR FROM TCR® PROCESS FOR THE PRODUCTION OF BIO-FERTILIZERS

Fabian STENZEL, Fraunhofer-Institut UMSICHT, Biological Process Technology, GERMANY

Co-authors: J.P. Gutierrez, V. Palchyk, A. Hornung, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany; L. Meier, City University of Applied Sciences, Bremen, Germany

3BV.2.5

PERFORMANCE ANALYSIS OF BIOMASS BASED AMMONIA PRODUCTION FROM INTEGRATED GASIFICATION

Amornchai ARPORNWICHANOP, Chulalongkorn University, Chemical Engineering Dpt., THAILAND

Co-author: S. Authayanun, Srinakharinwirot University, Nakhon Nayok, Thailand

3BV.2.7

FROM BY-PRODUCT TO VALUABLE RESOURCE - PROCESS CO2 FOR PRESENT AND FUTURE UTILIZATION TO CHEMICALS

Eric BILLIG, Umweltforschungszentrum UFZ, Bioenergie Dpt., GERMANY

Co-authors: F. Ketelsen, D. Thrän, UFZ, Leipzig, Germany; M. Decker, FZJ, Jülich, Germany; K. Raffel, T. Zevaco, J. Slama, D. Stapf, KIT, Karlsruhe, Germany

3BV.2.10**EXCESS VOLUME OF MIXING IN BLENDS OF FURAN-TYPE BIOFUEL (2- METHYLFURAN) + ALCOHOLS**

Luis FOLLEGATTI, USP, Chemical Engineering, BRAZIL

Co-authors: F.H.B. Sosa, M.C. Costa, UNICAMP, Campinas, Brazil

3BV.2.13**VALORIZATION OF LIGHT OXYGENATES IN BIO-OIL VIA CATALYTIC TANDEM REACTION INVOLVING C-C BOND FORMATION**

Kumar ROUT, NORWAY

Co-authors: I Yeboah, Jia Yang, De Chen, NTNU, TRONDHEIM, Norway

3BV.2.14**SIMULATIONS AND THERMODYNAMICS FOR RECOVERY OF LIQUID BIOFUELS FROM SYNGAS FERMENTATION PROCESSES**

Mauro TORLI, Technical University of Denmark, Department of Chemical and Biochemical Engineering, DENMARK

Co-authors: G. Kontogeorgis, P. L. Fosbøl, P. L. Fosbøl, Center for Energy Resources Engineering, Technical University of Denmark, Lyngby, Denmark

3BV.2.19**METAL IMPREGNATED BIOCHAR FOR THE REMOVAL AND CONTROLLED RELEASE OF PHOSPHORUS**

Dong-Jin KIM, Hallym University, Department of Environmental Sciences and Biotechnology, REPUBLIC OF KOREA

Co-authors: H. Shin, Hallym University, Chuncheon, REPUBLIC OF KOREA

13:30 - 15:00**VISUAL PRESENTATIONS 5BV.3****Bioenergy integration in energy systems**

Room: Poster Area

CHAIRPERSONS:**Jeffrey SKEER**, IRENA-International Renewable Energy Agency, GERMANY**Evert Jan HENGVELD**, Hanze University of Applied Sciences / University of Groningen, Hanze Research Centre Energy, THE NETHERLANDS**5BV.3.3****REGIONAL FEASIBILITY OF BIOMASS-BASED SMALL-SCALE CHP PRODUCTION**

Mika LAIHANEN, Lappeenranta University of Technology, LUT Energy Dpt., FINLAND

Co-authors: A. Karhunen, T. Ranta, Lappeenranta University of Technology, Finland; S. Mynttinen, South-Eastern Finland University of Applied Science, Mikkeli, Finland

5BV.3.4**CHALLENGES FOR BIOGAS PRODUCTION AND USE IN BRAZIL AND LESSONS TO LEARN FROM DENMARK**

Bruno CARMO, Universidade de São Paulo, Mechanical Engineering, BRAZIL

Co-authors: S. Coelho, V. P. Garcilasso, M. Mariano, J. F. Escobar, University of São Paulo, Brazil; J. B. Holm-Nielsen, Aalborg University, Denmark; R. Lybæk, Roskilde University, Denmark

5BV.3.5**POWER-TO-GAS INTEGRATION TO BIOGAS GENERATION FROM VINASSE IN SUGARCANE ETHANOL INDUSTRY**

Suani COELHO, University of São Paulo, Institute of Energy and Environment, BRAZIL

Co-authors: A. B. Gallo, M. M. Santos, C. L. Joppert, S. T. Coelho, E. Moutinho dos Santos, IEE-USP; RCGI-USP, São Paulo, Brazil

5BV.3.10**THE PERSPECTIVES OF BIOMETHANE TO CONTRIBUTE TO INCREASE THE NATURAL GAS SUPPLY IN THE STATE OF SÃO PAULO**

Suani COELHO, University of São Paulo, Institute of Energy and Environment, BRAZIL

Co-authors: V. P. Garcilasso, M. M. dos Santos, A. S. Pereira, D. Perecin, M. Poveda, N. E. Coluna, S. T. Coelho, IEE-USP, São Paulo, Brazil

5BV.3.11**EUBCE STUDENT AWARDEE PRESENTATION****BIOENERGY SYSTEM AND THE POTENTIAL FOR THEIR INTEGRATION FOR VILLAGE ENERGY SELF SUFFICIENCY**

Vandit VIJAY, IIT Delhi, INDIA

Co-authors: PMV Subbarao, Ram Chandra, Indian Institute of Technology Delhi, New Delhi, India

5BV.3.14**GAS ELECTRIC HYBRID HEAT PUMPS - A SOCIO- AND PRIVATE ECONOMIC FEASIBILITY STUDY**

Tara SABBAGH AMIRKHZI, DTU, Management Engineering, DENMARK

5BV.3.15**ON-DEMAND BIOGAS PRODUCTION FROM INTERMITTENT FEEDING OF SUGAR BEET SILAGE IN CO-FERMENTATION WITH MAIZE SILAGE**

Kerstin MAURUS, Ulm University, Institute for Systematic Botany and Ecology, GERMANY

Co-authors: S. Ahmed, M. Kazda, Ulm University, Germany

13:30 - 15:00**VISUAL PRESENTATIONS 2BV.4****Towards new combustion technologies and emission reduction**

Room: Poster Area

CHAIRPERSONS:**Marco BARATIERI**, Free University of Bolzano, Faculty of Science and Technology, ITALY**Markku PAANANEN**, JAMK University of Applied Sciences, Dynamic Bioenergy, Cluster Manager, FINLAND**2BV.4.1****OPTIMIZATION OF COMBUSTION IN MODERN WOOD STOVES RESULTING IN HIGH EFFICIENCY STOVE WITH LOW EMISSIONS**

Morten Gottlieb JESPERSEN, Danish Technological Institute, Biomass and combustion technology, DENMARK

Co-authors: A.M. Frey, R. Lyngsø Hvidberg, M. Gottlieb Jespersen, J. Sig Andersen, Danish Technological Institute, Aarhus, Denmark

2BV.4.2**ASSESSMENT OF ORGANIC MICROPOLLUTANTS (PCDD/FS AND PCBS) FROM BIOMASS COMBUSTION IN A SMALL CHP FACILITY**

Francesco GALLUCCI, CREA-IT, ITALY

Co-authors: L. Pari, L. Longo, M. Carnevale, E. Santangelo, Council for agricultural research and economics - Research Centre for Engineering and Agro-Food Proc, Monterotondo, Italy; A. Colantoni, Tuscia University - Department of Agriculture and Forestry Science, Viterbo, Italy; V. Paolini, E. Guerriero, National Research Council of Italy - Institute of Atmospheric Pollution Research (CNR-IIA), Monterotondo, Italy

2BV.4.3**EMISSIONS OF PARTICULATE MATTER FROM AGROPELLETS COMBUSTION**

Martin LISY, Brno University of Technology, FME, Energy Institute, CZECH REPUBLIC

Co-authors: M. Baláš, P. Milčák, D. Jecha, J. Pospíšil, Brno University of Technology, Czech Republic

2BV.4.4**METHOD TO MONITOR THE FUNCTION OF ELECTROSTATIC PRECIPITATORS IN BIOMASS COMBUSTION PLANTS BY CAPTURING THE OPERATION PARAMETERS**

Bastian ALT, Technical University of Munich, Associate Professorship of Regenerative Energy Systems, GERMANY

2BV.4.5**THE BIOMASS DUST-FUELED ENGINE**

Luke STOVER, CIRAD, BioWooEB, FRANCE

Co-authors: B. Piriou, G. Vařtilingom, CIRAD, Montpellier, France; X. Rouau, INRA, France

2BV.4.6**PRESENT AND FUTURE OF MIXED PELLETS BASED ON AGRICULTURAL CROPS RESIDUES (HERBACEOUS AND WOODY) FOR THEIR USE IN THE RESIDENTIAL SECTOR (MHWPELLET PROJECT)**

Paula CANALIS-MARTINEZ, Universidad de Zaragoza, Ingeniería Mecánica, SPAIN

Co-authors: P. Canalis-Martínez, J. Royo, D. Quintana, University of Zaragoza, Spain

2BV.4.7**EFFECT OF DEWATERING WOOD DERIVED PYROLYSIS LIQUID BIOFUEL ON ITS PROPERTIES, CHARACTERISTICS, AND COMBUSTION BEHAVIOR IN A DIESEL ENGINE FOR POWER GENERATION**

Muhammad KHAN, University of Toronto, Mechanical and Industrial, CANADA

Co-author: Murray Thomson, University of Toronto, Canada

2BV.4.8**STUDY OF A NOVEL LATENT HEAT STORAGE SYSTEM IN A STOVEPIPE**

Øyvind SKREIBERG, SINTEF Energy Research, Thermal Energy Dpt., NORWAY

Co-authors: A. Sevault, SINTEF Energy Research, Trondheim, Norway; N.E. Haugen, SINTEF - NTNU, Trondheim, Norway

2BV.4.9**BIOMASS CONVERSION WITH A FLUIDIZED BED-FIRED STIRLING ENGINE IN A MICRO-SCALE CHP PLANT**

Tanja SCHNEIDER, Friedrich-Alexander-University Erlangen-Nuremberg, Chair of Energy Process Engineering, GERMANY

Co-authors: D. Müller, J. Karl, Chair of Energy Process Engineering, Friedrich-Alexander-University Erlangen-Nuremberg, Germany

2BV.4.11**EXPERIMENTAL INVESTIGATION OF AN INTEGRATED ENERGY SYSTEM FOR A DOMESTIC-SCALE SANITATION SYSTEM**

Tosin ONABANJO SOMORIN, Cranfield University, Energy & Power, UNITED KINGDOM

Co-authors: T.O. Somorin, B.idalgo, A.J. Kolios, A. Sowale, A. Anastasopoulou, Cranfield University, Bedford, United Kingdom

2BV.4.12**SEMI-MOBILE BIOENERGY FROM AGRICULTURAL AND FOREST RESIDUES IN CHILE**

Samir BINDER, Fraunhofer-Institut UMSICHT, GERMANY

Co-authors: N. Jäger, J. Neumann, A. Apfelbacher, R. Daschner, A. Hornung, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany

2BV.4.13**PARTICULATE MATTER EMISSION AND ITS CHEMICAL SPECIES FROM CO-COMBUSTION OF LIGNITE AND AGRICULTURAL RESIDUES**

Suthum PATUMSAWAD, National Science and Technology Development Agency, Cluster and Program Management Office, THAILAND

Co-author: N. Mantananont, King Mongkut University of Technology North Bangkok, Thailand

2BV.4.14**INFLUENCE OF THE GRATE ON PERFORMANCE OF A DOWNDRAFT HOUSEHOLD STOVE**

Jörg HO, Fachhochschule Südwestfalen, GERMANY

Co-author: W. Wiest, South Westphalia University of Applied Sciences, Meschede, Germany

2BV.4.15**PERFORMANCE AND EVALUATION OF COMBUSTION TESTS ON RAW AND TORREFIED BIOMASS FUELS: APPLICATION IN SMALL AND MEDIUM-SCALE DOMESTIC FURNACES**

Dimitrios-Sotirios KOURKOUMPAS, Centre for Research & Technology Hellas, Chemical Process & Energy Resources Institute, GREECE

Co-authors: N. Kienzl, C. Strasser, BIOENERGY 2020+, Graz, Austria; D. Kourkoumpas, Clean Energy/ CERTH, Athens, Greece; R. Isemin, Clean Energy, Tambov, Russian Federation; N. Margaritis, Clean Energy / CERTH, Ptolemais, Greece; A. Mikhalev, O. Milovanov, D. Klimov, Clean Energy, Tambov, Russian Federation; P. Grammelis, CERTH, Athens, Greece

2BV.4.17**REDUCTION OF NOX EMISSIONS FROM AUTOMATED BOILERS BY MULTIPLE AIR STAGING**

Christoph MANDL, Bios Bioenergiesysteme, AUSTRIA

Co-authors: I. Oberberger, BIOS BIOENERGIESYSTEME, Graz, Austria; H. Knautz, POLYTECHNIK Luft- u. Feuerungstechnik, Weisenbach, Austria

2BV.4.19**ENHANCING THE HEATING VALUE OF PRETREATED BARLEY STRAW**

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

Co-author: A Nazos, Univ. Piraeus, Piraeus, Greece

2BV.4.20**WOOD PELLET MILLING PERFORMANCE IN A SUSPENSION-FIRED POWER PLANT**

Marvin MASCHKE, Technical University of Denmark, Department of Chemical and Biochemical Engineering, DENMARK

Co-authors: M. Puig-Arnavat, P.A. Jensen, S Clausen, U.B. Henriksen, J. Ahrenfeldt, Department of Chemical and Biochemical Engineering, DTU, Lyngby, Denmark; J Wadenbäck, Amager Power Plant, HOFOR A/S, Copenhagen S, Denmark

2BV.4.22**MODELLING WASTE WOOD COMBUSTION AND THE FATE OF TRACE ELEMENT SPECIES IN A 250 KW PILOT-SCALE**

Wahyu MEKA, Imperial College London, Chemical Engineering, UNITED KINGDOM

Co-authors: M. Boot-Handford, M. Bui, N. MacDowell, P. Fennell, Imperial College London, United Kingdom

2BV.4.24**IGNITION AND COMBUSTION OF SINGLE PARTICLES OF BIOMASS UNDER AIR AND O₂/CO₂ ATMOSPHERES**

Juan RIAZA, University of Edinburgh, Institute for Energy System, UNITED KINGDOM

Co-author: H. Chalmers, University of Edinburgh, United Kingdom

2BV.4.27**COMBUSTION OF WOODY BIOMASS IN A PILOT SCALE REAL FLAME SWIRL BURNER TEST RIG**

Richard NOWAK DELGADO, Technical University of Munich, Institute for Energy Systems, GERMANY

Co-authors: C. Wolf, S. Fendt, H. Spliethoff, Technical University of Munich, Germany

2BV.4.29**DEFINING THE TEMPERATURE RANGE OVER WHICH ALUMINOSILICATE ADDITIVES CAN CAPTURE VOLATILE POTASSIUM SPECIES DURING PULVERIZED FUEL COMBUSTION**

David NICHOLS, University of Nottingham, UNITED KINGDOM

Co-authors: C. Snape, R. Irons, University of Nottingham, United Kingdom

2BV.4.31**EFFECT OF ALUMINOSILICATE-BASED ADDITIVES UPON THE RESISTIVITY OF BIOMASS ASH**

Lee ROBERTS, University of Leeds, Chemical and Process Engineering, UNITED KINGDOM

Co-authors: J. M. Jones, W. F. Gale, A. Williams, P. E. Mason, University of Leeds, United Kingdom

15:15 - 16:45

VISUAL PRESENTATIONS 3BV.5

Biorefineries: assessments and innovative technologies

Room: Poster Area

CHAIRPERSONS:

Maria GEORGIADOU, European Commission, DG Research, Directorate General for Research, BELGIUM

Wouter HUIJGEN, Royal COSUN, R&D, THE NETHERLANDS

3BV.5.2**OPERATIONAL EXPERIENCE AN A PILOT SCALE GREEN BIOREFINERY, EXTRACTING AND SEPARATING LEAF PROTEIN CONCENTRATE FOR PRODUCTION OF ANIMAL FEED**

Morten AMBYE-JENSEN, Aarhus Universitet, Department of Engineering, DENMARK

Co-authors: C-W. Hsieh, D. Moore, Aarhus University, Denmark

3BV.5.5**BIORESCUE: GETTING HIGH ADDED VALUE PRODUCTS FROM MUSHROOM COMPOST**

Ines DEL CAMPO, CENER, Biomass Energy Dpt., SPAIN

Co-authors: I. Alegria, E. Otazu, CENER, Sarriguren, Spain; D. Gaffney, M. Iglesias, Monaghan Mushrooms, Ireland; P. Ihalainen, MetGen, Kaarina, Finland; V. Faraco, UNINA, Naples, Italy; F. Wurm, S. Beckers, MPIP, Mainz, Germany; D. Hayes, Celnigis, Limerick, Ireland; R. Diaz-Chavez, M. Rack, Imperial College London, United Kingdom; J. Etxaniz, CTECH, Chester, United Kingdom; B. Julliard, Greenovate, Brussels, Belgium; M Perez, Zabala Innovation, Pamplona, Spain

3BV.5.6**LIQUEFIED BIOMASS - A FEEDSTOCK FOR ADHESIVES AND POLYURETHANES, A SOURCE OF NANOCELLULOSE AND A FUEL FOR GAS TURBINE**

Matjaz KUNAVER, National Institute of Chemistry, Polymer Chemistry and Technology Dpt., SLOVENIA REPUBLIC

3BV.5.7**GREEN RESIDUES - A PROMISING FEEDSTOCK FOR GREEN BIOREFINERIES? NEW FINDINGS FROM THE GERMAN SMIBIO CASE STUDY.**

Ingo BALL, WIP Renewable Energies, Unit Bioenergy & Bioeconomy, GERMANY

Co-authors: R. Janssen, D. Rutz, WIP Renewable Energies, Munich, Germany

3BV.5.9**PRE-TREATMENT OF LIGNOCELLULOSIC BIOMASS USING CAVITATION FOR ENHANCING BIOGAS YIELD**

Sanjay NAGARAJAN, Queen's University Belfast, School of Chemistry and Chemical Engineering, UNITED KINGDOM

Co-authors: R. Walsh, V. Ranade, Queen's University Belfast, United Kingdom

3BV.5.10**A NOVEL CLOSED-CIRCUIT CIRCULATION SYSTEM ABOUT INTEGRATED ETHANOL-METHANE FERMENTATION PROCESS BASED ON THE SUBCRITICAL WATER PRETREATMENT OF CORN STOVER**

Xin LU, Northwest A&F University, College of Food Science and Engineering, P.R. CHINA

3BV.5.11**COMBINED PRODUCTION OF POLYHYDROXYALKANOATES (PHA) AND 1,3-PROPANEDIOL FROM CRUDE GLYCEROL**

Anna BURNIOL-FIGOLS, Technical University of Denmark (DTU), Chemical and Biochemical Engineering, DENMARK

Co-authors: A. Burniol Figols, C. Varrone, A.E. Daugaard, I.V. Skiadas, H.N. Gavala, Technical University of Denmark (DTU), Lyngby, Denmark

3BV.5.12**CENER'S SECOND GENERATION BIOFUELS CENTER: A KEY BIOFUEL RESEARCH INFRASTRUCTURE FOR SHARING KNOWLEDGE**

Ines DEL CAMPO, CENER, Biomass Energy Dpt., SPAIN

Co-authors: J. Gil, D. Sanchez, CENER, Sarriguren, Spain

3BV.5.15**TECHNO-ECONOMIC EVALUATION OF A NEW BIOMASS-TO-LIQUID PROCESS CONCEPT FOR REDUCED BIOFUEL PRODUCTION COST**

Zoé BéALU, German Aerospace Centre (DLR), GERMANY

Co-authors: R-U. Dietrich, German Aerospace Center (DLR), Stuttgart, Germany; S. Tuomi, I. Hannula, P. Simell, VTT Technical Research Centre of Finland Ltd, Espoo, Finland; T. Böltken, M. Selinsek, INERATEC GmbH, Karlsruhe, Germany; J. Hájek, Unipetrol Centre for Research and Education, Litvínov- Záluží, Czech Republic

3BV.5.16**SYNGAS FERMENTATION - A BIOTECHNOLOGICAL WAY TO UTILIZE SYNTHESIS GAS**

Ina Katharina STOLL, Karlsruhe Institute of Technology, IKFT Dpt., GERMANY

Co-authors: S. Herbig, Karlsruhe Institute of Technology (KIT) Karlsruhe Institute of Technology (KIT), IKFT, Eggenstein-Leopoldshafen, Germany; N. Boukis, J. Sauer, Karlsruhe Institute of Technology (KIT), IKFT, Eggenstein-Leopoldshafen, Germany

3BV.5.19**A REVIEW ON THE BIOREFINERY OPTIONS UNDER RESEARCH IN EUROPE: MARKET STUDY OF POTENTIAL PRODUCTS, TECHNOLOGY TRLS AND RESEARCH INFRASTRUCTURES**

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

Co-authors: M. Bampaou, Tz. Kraia, S. Voutetakis, CERTH, Thessaloniki, GREECE

3BV.5.20**AN ENVIRONMENTAL ASSESSMENT OF BIOREFINING OF RUBBER DANDELION TO RUBBER AND BIOPLASTIC**

Gerfried JUNGMEIER, Joanneum Research Centre, Research Centre for Climate, Energy and Environment, AUSTRIA

Co-authors: M. Hingsamer, L. Canella, Joanneum Research Forschungsgesellschaft mbH, Graz, Austria; I. van der Meer, F. Kappen, Wageningen University and Research, The Netherlands; P. van Dijk, KeyGene NV, Wageningen, The Netherlands; H. Muylle, Instituut voor Landbouw-, Visserij- en Voedingsonderzoek, Melle, Belgium; J. Kirschner, Botanický Ústav AV ČR, V.V.I., Prague, Czech Republic; N. Gevers, Apollo Tyres Global R&D BV, Enschede, The Netherlands; S. Hruschka, GEA Westfalia Separator Group, Oelde, Germany

3BV.5.21**PROCESS DESIGN, SIMULATION AND TECHNOECONOMICAL ASSESSMENT OF A BIOREFINERY UTILIZING SACCHARINA JAPONICA MACROALGAE**

Boris BRIGLJEVIC, Pukyong National University, Chemical Engineering department, KOREA

Co-authors: J. Liu, Pukyong National University, Busan, Korea; P. Fasahati, University of Wisconsin-Madison, Madison, Usa

15:15 - 16:45

VISUAL PRESENTATIONS 4BV.6**Environmental impacts of bioenergy: new analyses**

Room: Poster Area

CHAIRPERSONS:**Patricia THORNLEY**, SUPERGEN Bioenergy Hub, UNITED KINGDOM*Invited***4BV.6.1****BIOCHAR APPLICATION ON THE ENERGY GRASS GIANT REED: YIELD AND NITROGEN UPTAKE**

Enrico CEOTTO, CREA- Council for Agricultural Research and Economics, Research Centre for Agriculture and Environment, ITALY

Co-authors: F. Ginaldi, G.A. Cappelli, CREA-AA, Bologna, Italy

4BV.6.2**ENVIRONMENTAL IMPACTS AND ECONOMIC PERFORMANCE OF MAJOR OIL CROPS IN ITALY**

Alessandro SUARDI, CREA- Council for Agricultural Research and Economics, Centro di ricerca Ingegneria e Trasformazioni Agroalimentari, ITALY

Co-authors: L. Pari, D. Coaloa, CREA, Monterotondo (RM), Italy; M. B. Forleo, UNIMOL, Campobassi, Italy; N. Palmieri, UNIMOL, Campobasso, Italy

4BV.6.3**IMPACT OF WOOD PELLETT DEMAND ON BIODIVERSITY IN THE SOUTHEASTERN US**

Anna DUDEN, Utrecht University, Copernicus Institute of Sustainable Development, THE NETHERLANDS

Co-authors: M.J. Rubino, N.M. Tarr, North Carolina State University, Raleigh, Usa; P.A. Verweij, F. van der Hilst, Utrecht University, Utrecht, The Netherlands; A.P.C. Faaij, University of Groningen, The Netherlands

4BV.6.6**LIFE CYCLE ASSESSMENT (LCA) OF THE THERMOCHEMICAL CONVERSION OF BIOMASS FOR THE PRODUCTION OF FUEL, ELECTRICITY AND HEAT**

Martina HAASE, KIT, ITAS, GERMANY

Co-author: C. Rösch, KIT, Karlsruhe, Germany

4BV.6.7**AN EXPERT KNOWLEDGE APPROACH FOR DESIGNING SUSTAINABLE FOREST BIOMASS SUPPLY CHAINS**

Ichrak LAKHDHAR, University Laval, Wood Science and Forestry, CANADA

Co-authors: IL ichrak Lakhddhar, ET Evelyne Thiffault, Université Laval, Quebec, Canada

4AV.6.10**THE IMPACTS OF LARGE-SCALE BIOENERGY ON GLOBAL SPATIAL PATTERNS OF LAND USE CHANGE AND CLIMATE OVER THE NEXT CENTURY**

Charlotte WEAVER, UNITED KINGDOM

Co-author: P. Forster, University of Leeds, Leeds, United Kingdom

4BV.6.11**EXPLORING THE POTENTIAL BIOMASS TRADE FROM NORTH AMERICA TO NORTHERN EUROPE AND SUBSEQUENT ENVIRONMENTAL CONSEQUENCES**

Raghu KC, Lappeenranta University of Technology, Laboratory of Bioenergy, FINLAND

Co-author: T. Ranta, Lappeenranta University of Technology, Mikkeli, Finland

4BV.6.14**LIFE CYCLE ASSESSMENT OF BIOENERGY SYSTEMS: THE LACK OF CONSISTENCY CHECKS AT THE ROOTS OF DIVISIVE RESULTS**

Alessandro AGOSTINI, ENEA Research Centre, DTE-BBC-BBE, ITALY

Co-authors: J. Giuntoli, L. Marelli, EC - JRC, Ispra, Italy; S. Amaducci, UCSC, Piacenza, Italy

4BV.6.15**LIFE CYCLE ASSESSMENT OF HYDROGEN PRODUCTION FROM BIOREFINERY RESIDUES**

Nadia CERONE, ENEA Research Centre, Technical Unit for Trisaia Technologies, ITALY

Co-authors: F. Zimbardi, V. Fatta, L. Contuzzi, ENEA, Rotondella, Italy

4BV.6.16**BIODIVERSITY, ECOSYSTEM SERVICES AND BIOENERGY: A SYSTEMATIC REVIEW ON THE EFFECTS OF BIOENERGY PRODUCTION ON RELEVANT ECOSYSTEMS**

Claudia BULGHERONI, European Commission, JRC, Directorate C - Energy, Transport & Climate, ITALY

Co-authors: J. Giuntoli, L. Marelli, JRC, Ispra, Italy

4BV.6.17**CAMELINA AND CRAMBE VS. TROPICAL OIL CROPS: WHAT ARE THE ENVIRONMENTAL BENEFITS?**

Guido REINHARDT, IFEU-Institut Heidelberg, Biomass & Food, GERMANY

Co-authors: N. Rettenmaier, H. Keller, T. Wagner, ifeu - Institute for Energy and Environmental Research, Heidelberg, Germany

4BV.6.19**HOW TO MEET CHALLENGES OF EMISSION CONTROL FOR BIOMASS COMBUSTION IN SMALL AND MEDIUM SCALE APPLICATIONS IN GERMANY**

Wibke BAUMGARTEN, FNR - Agency for Renewable Resources, EU/International Affairs, GERMANY

Co-author: A. Stanev, FNR e.V., Guelzow-Pruezen, Germany

4BV.6.23**STUDY OF THE POTENTIAL ECOLOGICAL RISK OF HEAVY METALS IN THE RESIDUE FROM THERMAL CONVERSION OF A SEWAGE SLUDGE**

Pedro HARO, Universidad de Sevilla, Chemical and Environmental Engineering, SPAIN

Co-authors: A. Ronda, V.F. de Almeida, J. Salinero, D. Fuentes, S. Nilsson, Universidad de Sevilla, Spain

17:00 - 18:30**VISUAL PRESENTATIONS 3BV.7****Biorefineries: trends, business models and processing**

Room: Poster Area

CHAIRPERSONS:**Gerfried JUNGMEIER**, Joanneum Research Centre, Research Centre for Climate, Energy and Environment, AUSTRIA*Invited***3BV.7.6****SYNGAS BIOMETHANATION BY ENRICHED ANAEROBIC SLUDGE IN A TRICKLE BED REACTOR**

Konstantinos ASIMAKOPOULOS, Technical University of Denmark, Chemical and Biochemical Engineering, DENMARK

Co-authors: H. Gavala, I. Skiadas, Technical University of Denmark, Lyngby, Denmark

3BV.7.9**BIOREFINING OF EUCALYPTUS BIOMASS USING ORGANIC SOLVENT GAMMA-VALEROLACETONE**

Raymond TREVORAH, RMIT, School of Engineering, AUSTRALIA

Co-author: M Othman, RMIT University, Melbourne, Australia

3BV.7.10**SYNGAS FERMENTATION BY MIXED MICROBIAL CONSORTIA: ENRICHMENT AND CONTINUOUS FERMENTATION**

Antonio GRIMALT ALEMANY, Technical University of Denmark, Department of Chemical and Biochemical Engineering, DENMARK

Co-authors: I. V. Skiadas, H. N. Gavala, Technical University of Denmark, Kgs. Lyngby, Denmark

3BV.7.11**INTEGRATED BIOREFINERY CONCEPT FOR THE FULL VALORIZATION OF SUSTAINABLY GROWN LIGNOCELLULOSIC BIOMASS**

Philipp GRANDE, GERMANY

Co-authors: Dennis Weidener, Walter Leitner, RWTH Aachen University, Institute for Technical and Macromolecular Chemistry ITMC, Germany; Pablo Domínguez de María, Sustainable Momentum, SL Ap., Las Palmas de Gran Canaria, Spain; Ulrich Schurr, Forschungszentrum Jülich, Institute of Bio- and Geosciences, IBG-2: Plant Sciences, Jülich, Germany; Björn Usadel, Holger Klose, RWTH Aachen University, Institute of Botany and Molecular Genetics IBMG, Germany

3BV.7.12**HYDROPROCESSING MODELING TOOLKIT FOR PROCESS DESIGN**

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

Co-authors: M. Bampaou, Ath. Papadopoulos, S. Bezergianni, P. Seferlis, S. Voutetakis, CERTH, Thessaloniki, GREECE

3BV.7.15**CONSTRUCTION OF THERMOSTABLE CELLULASES**

Kazuhiko ISHIKAWA, National Institute of Advanced Industrial Science & Technology, Biomedical Research Institute, JAPAN

3BV.7.17**FRACTIONATION OF OLIVE WOODY WASTE (OWW) OBTAINED AFTER MILLING BY HYDROTHERMAL PRETREATMENTS - STEAM EXPLOSION AND HOT WATER**

Francesco ZIMBARDI, ENEA Research Centre, Energy Technologies Dpt., ITALY

Co-authors: K. Zaafouri, Carthage University, Tunisia; E. Viola, V. Valerio, A. Romanelli, ENEA, Rotondella, Italy

3BV.7.19**VALORIZATION OF A SIDE-STREAM FROM THE ORGANOSOLV PROCESS FOR SUSTAINABLE PRODUCTION OF ADDED-VALUE COMPOUNDS**

Gemma EIBES, University of Santiago de Compostela, Department of Chemical Engineering, SPAIN

Co-authors: T.A. Lú-Chau, B. Gullón, J.C. Martínez-Patiño, M. García-Torreiro, M.T. Moreira, J.M. Lema, Universidade de Santiago de Compostela, Spain

3BV.7.20**CONCENTRATED GLUCOSE AS AN INDUSTRIAL FERMENTABLE SUGAR PRODUCED FROM MISCANTHUS WITH KRICTBIOSUGAR® PROCESS**

Ju-Hyun YU, Korea Research Institute of Chemical Technology, Center for bio-based chemistry, KOREA
Co-authors: H.-Y. Kim, C.-D. Jeong, K.-S. Hong, I.-Y. Eom, I.-C. Kim, B.-K. Song, Korea Research Institute of Chemical Technology, Daejeon, Korea; J. J., Korea Research Institute of Chemical Technology, Ulsan, Korea; E. B. Song, Il-Kwon Kim, Daesang Corporation, Icheon, Korea

3BV.7.23**SYNGAS TRANSFORMATION TECHNOLOGIES TO PRODUCE BIOFUELS AND BIOCHEMICALS - A TECHNO-ECONOMICAL REVIEW**

Petr SEGHRMAN, Czech Technical University in Prague, Department of Process Engineering, CZECH REPUBLIC
Co-authors: T. Jirout, L. Krátký, Czech Technical University in Prague, Prague, Czech Republic

17:00 - 18:30**VISUAL PRESENTATIONS 1BV.8****Experiences on algae cultivation and benefits from an integrated biomass production**

Room: Poster Area

CHAIRPERSONS:

Scott TURN, University of Hawaii, Hawaii Natural Energy Institute, USA

Floor VAN DER HILST, Utrecht University, Energy & Resources, Copernicus Institute, THE NETHERLANDS

1BV.8.2**PRODUCTION OF HIGH VALUE ALGAL BIOMASS IN EFFLUENT STREAMS**

Bernhard DROSG, Bioenergy 2020+, AUSTRIA
Co-authors: Sara Merin, Katharina Meixner, Tanja Tscheppe, Bioenergy2020+, Tulln, Austria; Ralf Hermann, Proman Consulting, Auersthal, Austria; Christian Hirst, Fisch von Hirst, Waidhofen, Austria

1BV.8.5**EFFECT OF PHOSPHORUS LIMITATION ON THE FATTY ACID AND PHOSPHOLIPID SYNTHESIS IN CHLYMYDOMONAS SP UNDER LONG TERM CULTURES**

Huda QARI, UNITED KINGDOM
Co-authors: D. Sigeo, D. Drucker, University of Manchester, United Kingdom

1BV.8.6**PHYTOSTEROLS AND OTHER HIGH VALUABLE PRODUCTS INVESTIGATION FROM TETRAELEMIS SUECICA GROWTH TESTS**

Giulia LOTTI, RE-CORD, UNIFI, ITALY
Co-authors: D.C. Casini, D.C. Chiaramonti, RE-CORD Consortium, Florence, Italy; G.P. Pellegrineschi, University of Milan, Italy

1BV.8.7**THE EFFECTS OF ALGAL EXTRACELLULAR SECRETION (AES) ON THE GROWTH, METABOLISM AND MEDIUM RECYCLE OF TWO SCREENED MICROALGAE SCENEDESMUS SDEC-8 AND CHLORELLA SDEC-18**

Ze YU, P.R. CHINA
Co-authors: H.Y. Pei, Q.J. Hou, C.L. Nie, L.J. Zhang, Shandong University, Jinan, P.R. China

1BV.8.8**SCALE-UP CULTURE OF SPIRULINA SUBSALSIA BIOMASS FROM SEAWATER COMBINED WITH MONOSODIUM GLUTAMATE RESIDUE**

Liqun JIANG, Shandong University, Environmental Science and Engineering, P.R. CHINA
Co-authors: H.Y. Pei, Y.Z. Li, C.L. Nie, Shandong University, Jinan, P.R. China

1BV.8.9**OPPORTUNITIES AND CHALLENGES IN APPLICATION OF CO-CULTIVATION SYSTEM WITH SEAWATER AND WASTEWATER FOR MICROALGAE CULTIVATION: A REVIEW**

Zhigang YANG, Beijing Elion Smart Energy Technology, P.R. CHINA
Co-authors: H.Y. Pei, L.J. Zhang, L.Q. Jiang, X.D. Wang, S.Q. Chen, C.L. Nie, Shandong University, Jinan, P.R. China

1BV.8.10**CAN MARICULTURE WASTEWATER BECOME FEED FOR MICROALGAE CULTIVATION?**

Lijie ZHANG, Shandong University, School of Environmental Science and Engineering, P.R. CHINA
Co-authors: H.Y. Pei, L.Q. Jiang, Q.J. Hou, Z.G. Yang, Z.Yu, X.D. Wang, S.Q. Chen, C.L. Nie, Shandong University, Jinan, P.R. China

1BV.8.13**SALTGAE MAKES WASTEWATER A BIOMASS RESOURCE TO BE VALORISED RATHER THAN A COST TO BE MINIMIZED**

Drilona SHTJEFNI, EUBIA, BELGIUM
Co-authors: R. Reinhardt, AlgEN, Ljubljana, Slovenia Republic; I. Lozano, Campus de Cantoblanco, Madrid, Spain

1BV.8.15**DETERMINING THE CO-PRODUCT POTENTIAL OF MICROALGAE CAKE**

Elizabeth NIXON, Eastern Illinois University, Biological Sciences, USA
Co-author: TC Canam, Eastern Illinois University, Charleston, Usa

1BV.8.17**NUMERICAL INVESTIGATION OF HYDRODYNAMIC CONDITIONS IN A PILOT TUBULAR PHOTOBIOREACTOR**

Vojtech BELOHLAV, Czech Technical University in Prague, Process Engineering Dpt., CZECH REPUBLIC
Co-authors: E. Eggetti, GEMMA - Group of Environmental Engineering and Microbiology, Department of Civil and Environmental E, Barcelona, Spain; T. Jirout, L. Kratky, Department of Process Engineering, Czech Technical University in Prague, Czech Republic

1BV.8.18**LIGNOCELLULOSIC MATERIALS AS CARRIERS FOR ALGAL BIOFILM CULTIVATION: EFFECTS OF MATERIAL SURFACE ROUGHNESS AND PARTICLE SIZE**

Qi ZHANG, Huazhong University of Science and Technology, School of Energy and Power Engineering, P.R. CHINA
Co-author: shiping jin, School of Energy and Power Engineering, Huazhong University of Science and Technology, wuhan, P.R. China

1BV.8.20**BIOFUEL FROM MARINE MICRO ALGAE (INDIAN SPECIES): MARINE ENVIRONMENT TO LAB AND LAB TO LAND TECHNOLOGY**

SELVAKUMAR PALANISAMY, CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Environment Technology Division, INDIA
Co-authors: P. Selvakumar, H. Ajit, CSIR-NIIST, Environmental Technology, Trivandrum, India; B. Sivaprasad, K. Umadevi, P. Janakiram, Marine Living Resources, Andhra University, Visakhapatnam, India

1BV.8.22**ENERGY STORAGE AND BALANCING POWER FOR 100% RENEWABLE ENERGY HYBRID SYSTEMS: THE POTENTIAL OF JATROPHA FOR RURAL ELECTRIFICATION IN HOT SEMI-ARID AREAS**

Georg GRUBER, Vereinigte Werkstätten für Pflanzenöltechnologie, R&D, GERMANY
Co-authors: B. Dalheimer, University of Goettingen, Germany

1BV.8.23**MODELING AND OPTIMIZATION OF INTEGRATED BIOMASS LOGISTICS NETWORKS FOR BIOFUEL PRODUCTION**

Krystel CASTILLO, The University of Texas at San Antonio, USA
Co-authors: M Aboytes, K Castillo-Villar, Texas Sustainable Energy Research Institute, San Antonio, Usa

1BV.8.26**BIOMASS PRODUCTION AND FEEDSTOCK DIVERSIFICATION FOR ADVANCED BIOFUELS: THE BECOOL PROJECT**

Myrsini CHRISTOU, Center for Renewable Energy Sources and Saving, Biomass Dpt., GREECE
Co-authors: E. Alexopoulou, CRES, Pikermi, Greece; A. Monti, W. Zegada-Lizarazu, UNIBO, Bologna, Italy; J. Carrasco, C.S. C.S.Ciria, CIEMAT, Madrid, Spain; L. Pari, A. Suardi, CREA, Rome, Italy

1BV.8.27**FUTURE POTENTIAL OF BIOGAS AS A PART OF SUSTAINABLE AGRICULTURE - CASE STUDY OF NORTH SAVO, FINLAND**

Erika WINQUIST, Natural Resources Institute Finland, FINLAND
Co-authors: T Palosu, H Lehtonen, Natural Resources Institute Finland, Helsinki, Finland

1BV.8.28**ASSESSING OPTIONS FOR THE SUSTAINABLE INTENSIFICATION OF AGRICULTURE FOR INTEGRATED PRODUCTION OF FOOD AND NON-FOOD PRODUCTS AT DIFFERENT SCALES (SUSTAG)**

Christoph MÜLLER, Potsdam Institute for Climate Impact Research, GERMANY

Co-authors: I. Mouratiadou, F. van der Hilst, B. Wicke, Utrecht University, The Netherlands; A. Beblek, R. Berges, agrathae, Müncheberg, Germany; A. Biewald, B. Bodirsky, Potsdam Institute for Climate Impact Research, Germany; F. Ewert, T. Stella, Leibniz Centre for Agricultural Landscape Research, Müncheberg, Germany; T. Gaiser, T. Heckekei, H. Webber, Y. Zhang, University of Bonn, Germany; H. Lehtonen, T. Palosuo, E. Winquist, National Resources Institute Finland, Helsinki; I. Lorite, Instituto Andaluz de Investigación y Formación Agraria, pesquera, alimentaria y de la producción eco, Cordoba, Spain; R. Rötter, University of Göttingen, Germany; M. Ruiz-Ramos, Universidad Politécnica de Madrid, Spain

1BV.8.30**AGROFORESTRY SYSTEMS IN EUROPE - ROLES AND FUNCTIONS IN DIVERSE SOCIO-ECONOMIC CONTEXTS**

BB GHALEY, University of Copenhagen, Department of Plant and Environmental Sciences, DENMARK

Co-authors: J. Smith, S. Westaway, The Organic Research Centre, Newbury, United Kingdom; A. Pisanelli, M. Lauteri, National Research Council, Institute of Agro-environmental and Forest Biology, Porano, Italy; E. Fereres, R. Calderón, Department of Agronomy, University of Cordoba, Spain; R. Borek, R. Wawer, Institute of Soil Science and Plant Cultivation – State Research Institute, Pulawy, Poland; M. Sandor, A. Gliga, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania, Romania

1BV.8.31**ASSESSMENT OF THE POTENTIAL OF GREEN FLOATING FILTERS FOR BIOENERGY PRODUCTION**

Dimitrios-Sotirios KOURKOUMPAS, Centre for Research & Technology Hellas, Chemical Process & Energy Resources Institute, GREECE

Co-authors: Maria Curt, UPM, Madrid, SPAIN; Sven Kallen, VOLTERRA, Barcelona, Spain; Marc Buevinc, BIOSTREAM, Doetinchem, Greece; Manuel Zapatero, COMRA, El Arenal, SPAIN; Spyros Kiartzis, HELPE, Thessaloniki, Greece; Paloma Diaz, Pedro Luis Aguado, UPM, Madrid, Spain; Stella Bezerghianni, CERTH/CPERI, Thessaloniki, Greece; Panagiotis Grammelis, CERTH/CPERI, Athens, Greece

1BV.8.33**DESIGN OF PILOT PLANT AND INDUSTRIAL PHOTOBIOREACTORS: A CRITICAL TECHNICAL STUDY**

Terézia ZÁKOVÁ, Czech Technical University in Prague, Faculty of Mechanical Engineering, Department of Process Engineering, CZECH REPUBLIC

Co-authors: T. Záková, T. Jirout, L. Krátký, Czech Technical University in Prague, Faculty of Mechanical Engineering, Department of Process Engin, Czech Republic

1BV.8.34**LAB SCALE CULTIVATION OF BALTIC ULVA INTestinalIS IN DIFFERENT LIGHT AND NUTRIENT CONDITIONS: EFFECTS ON GROWTH AND MORPHOLOGY**

Karina BALINA, Riga Technical University, Institute of Energy Systems and Environment, LATVIA

Co-authors: A. Gruduls, F. Romagnoli, Riga Technical University, Institute of Energy Systems and Environment, Riga, Latvia

1BV.8.36**SELECTION AND ESTABLISHMENT OF CROPS IN ABANDONED AND UNUSED LAND FOR ENERGY PURPOSES AT CAMBRILS AGRICULTURAL COOPERATION IN SPAIN**

Dimitrios-Sotirios KOURKOUMPAS, CENTRE FOR RESEARCH & TECHNOLOGY HELLAS, Chemical Process & Energy Resources Institute, GREECE

Co-authors: A. Papadelis, P. Grammelis, E. Kakaras, Centre for Research & Technology Hellas/Chemical Process and Energy Resources Institute CERTH/CPERI, Kozani, Greece; S. Karellas, National Technical University of Athens / Laboratory of Steam Boilers and Thermal Plants (NTUA / LSB), Greece

1BV.8.37**MASS CULTURE OF CHLORELLA PYRENOYDOSA USING OLIVE-MILL WASTEWATER**

Sebastián SÁNCHEZ VILLASCLARAS, University of Jaén, Chemical Engineering, Environmental and Materials Dpt., SPAIN

Co-authors: M. Maaitah, R. Órpez, University of Jaén, Spain; G. Hodaifa, A.M. Romero, University 'Pablo de Olavide', Sevilla, Spain

1BV.8.38**CULTIVATION OF SCENEDESMUS OBLIQUUS IN MIXTURES OF URBAN AND OLIVE-OIL MILL WASTEWATERS FOR THE DUAL APPLICATION OF ALGAL BIOMASS PRODUCTION AND WASTEWATER TREATMENT**

Sebastián SÁNCHEZ VILLASCLARAS, University of Jaén, Chemical Engineering, Environmental and Materials Dpt., SPAIN

Co-authors: G. Hodaifa, A.M. Romero, University 'Pablo de Olavides', Sevilla, Spain; M. Maaitah, R. Órpez, S. Sánchez, University of Jaén, Spain

08:30 - 10:00

VISUAL PRESENTATIONS ICV.1**Experiences and environmental impact of biomass implementation**

Room: Poster Area

CHAIRPERSONS:**Lorenzo DI LUCIA**, Imperial College, Centre for environmental policy, UNITED KINGDOM**Nathalie DEVRIENDT**, In den Roden Schilt Consulting, Separation and Conversion Technology Unit, BELGIUM**ICV.1.1****"MEDITERRANEAN" SOLID BIOFUELS FROM AGRO-INDUSTRIAL RESIDUES IN GREECE: MARKET STATUS AND PROSPECTIVES FOR THE DOMESTIC HEATING SECTOR**

Emmanouil KARAMPINIS, Centre for Research and Technology Hellas, Chemical Process and Energy Resources Institute, GREECE

Co-authors: M.A. Kougioumtsis, P. Grammelis, Centre for Research and Technology Hellas Centre for Research and Technology Hellas, Athens, Greece; E. Kakaras, Centre for Research and Technology Hellas, Athens, Greece

ICV.1.4**NEW SALIX DASYCLADOS AND POPULUS X WOOSTI CLONES SELECTED IN LATVIA FOR MULTI FUNCTIONAL USE**

Dagnija LAZDINA, LSFRI Silava, Forest regeneration and establishment, LATVIA

ICV.1.7**FINDING ROBUST STRATEGIES TO OVERCOME BIOMASS SUPPLY RISKS**

Peter RAUCH, University of Natural Resources and Life Sciences, AUSTRIA

ICV.1.9**IS BIO-FOSSIL FUEL A THING?**

Jean-Michel LAVOIE, Université de Sherbrooke, Chemical Engineering Dpt., CANADA

Co-author: B Rego De Vasconcelos, Université de Sherbrooke, Sherbrooke, Canada

ICV.1.10**DEVELOPMENT OF A SUSTAINABLE EUROPEAN BIOECONOMY - THE CONTRIBUTION OF THE BBI DEMONSTRATION PROJECT GRACE**

Andreas KIESEL, University of Hohenheim, Biobased Products and Energy Crops, GERMANY

Co-authors: I. Lewandowski, A. Kruse, Universität Hohenheim, Stuttgart, Germany; S. Amaducci, Università di Cattolica del Sacro Cuore, Piacenza, Italy; G. Anderer, AVA-BioChem, Muttens, Switzerland; S. Babbini, MOGU, Inarzo, Italy; M. Bonaccorso, Cluster SPRING, Milano, Italy; J. Clifton-Brown, Aberystwyth University, United Kingdom; W. Cracroft-Eley, Terravesta Assured Energy Crops Science and Technology Department, Lincoln, United Kingdom; B.-J. van Dinter, Vandinter Semo BV, Scheemda, Netherland Antilles; C. Giardi, Novamont, Novara, Italy; H. Höfte, INRA, Paris, France; V. Jurisic, University of Zagreb Faculty of Agriculture, Croatia; U. Kühn, Gießereitechnik Kuehn, Buscheritz, Germany; I. Lo Russo, CMF Greentech, Cavezzo, Italy; E. De Maupeou, Novabiom SAS, Chartres, France; M. Ištuk, INA d.d., Zagreb, Croatia; F. Peterlongo, Indena, Milano, Italy; J.-L. Pradel, Addiplast SA, Saint-Pal-de-Mons, France; L. Trindade, Wageningen UR, Plant Breeding, Netherland Antilles

ICV.1.11**DENMARK BIOETHANOL PROJECT PLAN ANALYSIS OF THREE DIFFERENT RAW MATERIALS**

Yangsheng LU, International Starch Institute, DENMARK

ICV.1.13**A SMALL-SCALE ESP FOR REDUCTION OF PARTICULATE MATTER EMISSIONS FROM RESIDENTIAL WOOD STOVES**

Seyednezamaddin AZIZADDINI, DTU, Chemical Engineering, DENMARK

Co-authors: J.B. Illerup, W. Lin, DTU, Lyngby, Denmark; P. Hermansen, PHX innovation, Langeskov, Denmark

ICV.1.14**THE ENVIRONMENTAL IMPACT OF BIOENERGY FOR RESIDENTIAL HEATING: LIFE CYCLE ASSESSMENT (LCA) OF RENEWABLE HEATING WITH PYROLYSIS OIL FROM FIVE DIFFERENT BIOMASS FEEDSTOCKS**

Jurjen SPEKREIJSE, BTG Biomass Technology Group, THE NETHERLANDS

Co-authors: M. Vis, D. Van den Berg, BTG Biomass Technology Group BV, Enschede, THE NETHERLANDS

ICV.1.15**GHG-EMISSIONS OF RAPESEED OIL FUEL - IMPACT OF SPECIFIC DATA AND BALANCE METHODS**

Daniela DRESSLER, Technology and Support Centre in the Centre of Excellence for Renewable Resources,

Liquid Biofuels, Biolubricants and Process Materials, GERMANY

Co-authors: T. Thuneke, E. Remmele, Technology and Support Centre (TFZ), Straubing, Germany

ICV.1.17**APPLICATION OF HERBACEOUS BIOMASS OBTAINED FROM LANDSCAPE MANAGEMENT FOR GENERATION OF BIOGAS ENERGY**

Klaus LENZ, Syncom F&E Beratung, Research & Development Consulting, GERMANY

Co-authors: M. Bajaj, S. Kuehner, SYNCOM, Ganderkesee, Germany; J. Doležal, CZ Biom, Prague, Czech Republic

ICV.1.18**BUSINESS OPPORTUNITIES IN SUBCONTRACTING OF LANDSCAPE MANAGEMENT ACTIVITIES**

Klaus LENZ, Syncom F&E Beratung, Research & Development Consulting, GERMANY

Co-authors: S. Kühner, M. Bajaj, SYNCOM, Ganderkesee, Germany; A Clalüna, Landwirtschaftskammer Niedersachsen, Hannover, Germany

08:30 - 10:00

VISUAL PRESENTATIONS 2CV.2

Biomass gasification for power generation

Room: Poster Area

CHAIRPERSON:**Wolter PRINS**, Ghent University, Bioresources Processing Dpt., BELGIUM**2CV.2.1****EXPERIMENTAL AND NUMERICAL APPROACH TO IMPROVE THE PERFORMANCE OF A SMALL CHP WOOD GASIFICATION PLANT**

Stefano FRIGO, University of Pisa, Energy, Systems, Territory and Construction Engineering Dpt., ITALY

Co-authors: R.Gabbriellini, M.Seggiani, University of Pisa, Italy

2CV.2.2**EFFECT OF FEEDSTOCK CONCENTRATION ON SUPERCRITICAL WATER GASIFICATION OF GUAIACOL**

Nattacha PAKSUNG, Hiroshima University, Department of Mechanical Science and Engineering, JAPAN

Co-authors: Y. Matsumura, S. Inoue, P. Changsuwan, Hiroshima University, Japan; T. Inoue, Fukken, Hiroshima, Japan; Y. Kawai, Chuden Plant, Hiroshima, Japan; T. Noguchi, Toyo Koatsu, Hiroshima, Japan; H. Tanigawa, The Chugoku Electric Power, Higashi-Hiroshima, Japan

2CV.2.3**ASSESSMENT OF FOUR WAYS OF GAS PURIFICATION BY BIOMASS GASIFICATION**

Marek BALAS, Brno University of Technology, Energy Department, CZECH REPUBLIC

Co-authors: M. Lisy, P. Milcak, J. Pospisil, Brno Univerzity of Technology, Czech Republic

2CV.2.7**CHEMICALLY ENHANCED BIOCHAR FOR SYNGAS FILTERING PURPOSES**

Simone PEDRAZZI, University of Modena and Reggio Emilia, of Engineering "Enzo Ferrari" - Bio Energy Efficiency Laboratory (BEELAB), ITALY

Co-authors: G. Allesina, L. Sebastianelli, M. Puglia, N. Morselli, P. Tartarini, University of Modena and Reggio Emilia, Italy

2CV.2.9**ASSESSMENT OF A NOVEL BIOMASS-COAL GASIFICATION-BASED SYSTEM FOR HYDROGEN AND POWER CO-GENERATION INTEGRATED WITH CHEMICAL LOOPING TECHNOLOGY**

Ioana IONEL, Universitatea Politehnica Timisoara, Mechanical Engineering Dpt., ROMANIA

Co-authors: D. Cebrucean, V. Cebrucean, Politehnica University of Timisoara, Romania

2CV.2.15**THERMAL DEGRADATION AND TAR REMOVAL POTENTIAL OF BIOMASS CHAR FROM COMMERCIAL GASIFIERS**

Eleonora CORDIOLI, Free University of Bolzano, Faculty of Science and Technology, ITALY

Co-authors: F. Patuzzi, M. Baratieri, Free University of Bolzano, Italy

2CV.2.16**WASTE GASIFICATION FOR POWER GENERATION: ASSESSMENT OF INDUSTRIAL AND NON-INDUSTRIAL ALKALINE RESIDUES AS SORBENTS FOR ACID GAS REMOVAL**

Pedro HARO, Universidad de Sevilla, Chemical and Environmental Engineering, SPAIN

Co-authors: J. Arroyo, V.F. de Almeida, J. Salinero, F. Vidal-Barrero, A. Gómez-Barea, Universidad de Sevilla, Spain

2CV.2.17**BIOSYNGAS FOR ELECTRICITY GENERATION USING FUEL CELLS - A GAS QUALITY ASSESSMENT**

Rakesh N, Indian Institute of Science, Bangalore, Centre for Sustainable Technologies, INDIA

Co-authors: S. Dasappa, Indian Institute of Science, Bangalore, Bangalore, INDIA

2CV.2.18**MODELLING OF A 3 MWTH BFB GASIFIER IN ASPENPLUSTM**

Kyriakos PANOPOULOS, Centre for Research & Technology Hellas, Chemical Process & Energy Resources

Institute, GREECE

Co-authors: D. Grimekis, S. Karelis, NTUA, Athens, Greece; M.A. Delgado Calvo, CIUDEN, Ponferrada, Spain

2CV.2.19**GASIFICATION AND WINE INDUSTRY: REPORT ON THE USE VINE PRUNING AS FUEL IN SMALL-SCALE GASIFIERS**

Nicolò MORSELLI, Università degli Studi di Modena e Reggio Emilia, ITALY

Co-authors: G. Allesina, S. Pedrazzi, M. Puglia, F. Allegretti, P. Tartarini, BEELab, Department of engineering "Enzo Ferrari", University of Modena and Reggio Emilia, Italy

2CV.2.21**FATE OF RADIOACTIVE CAESIUM DURING WOODY BIOMASS GASIFICATION**

Kenji KOIDO, Fukushima University, Faculty of Symbiotic Systems Science, JAPAN

Co-author: T. Iwasaki, Fukushima University, Japan

2CV.2.22**GASIFICATION BASED SYNCHRONIZED PRODUCTION OF FUELS AND ELECTRICITY FROM WOODY BIOMASS - A TECHNO-ECONOMIC ANALYSIS**

Stefano PIAZZI, ITALY

Co-authors: S. Shivananda Ail, D. Basso, F. Patuzzi, M. Baratieri, Free University of Bolzano, Italy; S. Kumar, Indian Institute of Technology, Mumbai, India

2CV.2.23**COLD FLOW VIDEO ANALYSIS OF CHAR DISTRIBUTION IN THE INDIRECT MILENA GASIFIER**

Alexander GROOTJES, Energy Research Centre of the Netherlands, Bio Energy, THE NETHERLANDS

Co-authors: B.J. Vreugdenhil, J. Kuipers, ECN, Petten, The Netherlands; R.W.R. Zwart, DRT, Maassluis, The Netherlands

2CV.2.24**TECHNO-ECONOMIC PERFORMANCE ANALYSIS AND LIFE CYCLE ASSESSMENT OF BIOMASS GASIFICATION POWER PLANT WITH/WITHOUT A TAR-CONTROLLED SYSTEM**

Zhongyuan LI, University of Manchester, School of Mechanical, Aerospace & Civil Engineering, UNITED KINGDOM

Co-authors: P Gilbert, University of Manchester, United Kingdom; I Watson, Z Khan, University of Glasgow, United Kingdom

13:30 - 15:00

VISUAL PRESENTATIONS 3CV.3

Optimisation of pyrolysis processes and pyrolysis products

CHAIRPERSONS:

Andreas APFELBACHER, Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY

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

3CV.3.2

OPTIMIZING CATALYTIC TAR-DEOXYGENATION OF FAST PYROLYSIS VAPORS

Andreas ESCHENBACHER, DTU, Chemical Engineering, DENMARK

Co-authors: P. A. Jensen, U. B. Henriksen, J. Ahrenfeldt, A. D. Jensen, DTU Chemical Engineering, Technical University of Denmark, Lyngby, Denmark

3CV.3.4

ADVANCED RENEWABLE GASOLINE FROM WASTE BIOMASS - EXPERIMENTAL INVESTIGATION OF A NOVEL TRANSPORTATION FUEL

Andreas APFELBACHER, Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY

Co-authors: J. Neumann, A. Hornung, N. Jäger, R. Daschner, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany; M. Taschek, D. Edenharter, TUAS Amberg-Weiden, Amberg, Germany

3CV.3.7

CARBONIZATION OF RESIDUAL BIOMASS FROM RIVER MAINTENANCE USING WASTE HEAT FROM GASIFICATION POWER PLANTS

Marco PUGLIA, University of Modena and Reggio Emilia, ITALY

Co-authors: S. Pedrazzi, G. Allesina, N. Morselli, P. Tartarini, Beelab, University of Modena and Reggio Emilia, Italy

3CV.3.8

PHYSICAL ACTIVATION OF SEWAGE SLUDGE CHAR WITH CO₂ FOR H₂S REMOVAL FROM BIOGAS

Nadia RUIZ-GOMEZ, University of Zaragoza, SPAIN

Co-authors: M. Ayiania, M. Garcia-Perez, Washington State University, Pullman, Usa; I. Fonts, Centro Universitario de la Defensa, Zaragoza, Spain; G. Gea, University of Zaragoza, Spain

3CV.3.9

PREDICTION OF BIOMASS PYROLYSIS PLANT PRODUCTS

Antonio AGRIFOGLIO, University of Catania, Electric, Electronics and Computer Engineering Department (DIEEI), ITALY

Co-authors: A. Fichera, A. Gagliano, Electric, Electronics and Computer Engineering Department (DIEEI), University of Catania, Italy; L. Falqui, R&D Project Manager of Plastica Alfa, Caltagirone, Italy

3CV.3.10

THE CATALYTIC FAST PYROLYSIS OF ACID-WASHED SACCHARINA JAPONICA ALGA IN FLUIDIZED-BED REACTOR FOR UPGRADING BIO-OIL

Hoang Vu LY, Kangwon National University, Chemical Engineering, REPUBLIC OF KOREA

Co-authors: J.H. Choi, H.C. Woo, Pukyong National University, Busan, Republic of Korea; S.-S. Kim, Kangwon National University, Samcheok, Republic of Korea; J. Kim, Kyung Hee University, Yongin, Republic of Korea

3CV.3.11

FRACTIONAL CATALYTIC FAST PYROLYSIS OF BAMBOO IN A BUBBLING FLUIDIZED-BED REACTOR

Hoang Vu LY, Kangwon National University, Chemical Engineering, REPUBLIC OF KOREA

Co-authors: S.-S. Kim, Kangwon National University, Samcheok, Republic of Korea; J. Kim, Kyung Hee University, Yongin, Republic of Korea

3CV.3.12

STABILIZATION OF PYROLYSIS OILS BY SOLVENT ADDITIONS

Clarissa BAEHR, Karlsruhe Institute of Technology, Institute of Catalysis Research and Technology, GERMANY

Co-authors: K. Raffelt, N. Dahmen, Karlsruhe Institute of Technology, Germany

3CV.3.13

PYROLYSIS OF GIANT REED (ARUNDO DONAX L.) FOR BIOCHAR PRODUCTION

Francesco GALLUCCI, CREA-IT, ITALY

Co-authors: M. Carnevale, L. Longo, A. Del Giudice, E. Santangelo, CREA Research Centre for Engineering and Agro-Food Processing, Monterotondo, Italy; V. Paolini, E. Guerriero, National Research Council of Italy - Institute of Atmospheric Pollution Research (CNR-IIA), Monterotondo, Italy

3CV.3.15

MECHANISTIC STUDY OF GUAIACOL FAST PYROLYSIS USING DFT CALCULATIONS, MICROKINETIC MODEL AND EXPERIMENTS

Yerrayya ATTADA, IIT MADRAS, CHEMICAL ENGINEERING, INDIA

Co-authors: U. Natarajan, R. Vinu, Indian Institute of Technology Madras, Chennai, India

3CV.3.16

INFLUENCE OF THE SUPPORT ON NI BASED CATALYSTS FOR HYDROGEN PRODUCTION IN THE BIOMASS PYROLYSIS-CATALYTIC STEAM REFORMING

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

Co-authors: L. Santamaria, G. Lopez, M. Amutio, M. Artetxe, I. Barbarias, M. Cortazar, M. Olazar, University of the Basque Country (EHU-UPV), Bilbao, Spain

3CV.3.17

INVESTIGATION OF THE PYROLYSIS CHARACTERISTICS OF MACROALGAE SPECIES ULVA LACTUCA, MISCANTHUS AND WOOD CHIPS MIXTURES

Christos TSEKOS, THE NETHERLANDS

Co-authors: M. Del Grosso, W. de Jong, Technical University of Delft, The Netherlands

3CV.3.20

EFFECT OF BIOMASS PRETREATMENT ON SLOW PYROLYSIS CHARACTERISTICS

Panagiotis EVANGELOPOULOS, Royal Institute of Technology (KTH), Materials Science and Engineering, SWEDEN

Co-authors: S. Arvelakis, National Technical University of Athens, Greece; W. Yang, Royal institute of technology, Stockholm, Sweden

3CV.3.21

ANALYSIS OF PRODUCED TARS FROM FRICTIONAL PYROLYSIS UNDER DIFFERENT SETTINGS - THE INFLUENCE OF REFLUX CONDENSATION

Marco BARATIERI, Free University of Bolzano, Faculty of Science and Technology, ITALY

Co-authors: S. Vakalis, J. Ahmad, F. Patuzzi, Free University of Bozen - Bolzano, Italy

3CV.3.25

PELLETIZATION AND PYROLYSIS OF METALLURGICAL BIOCHAR

Lorenzo RIVA, University of Agder, NORWAY

Co-authors: U. Essmann, Münster University of Applied Science, Münster, Germany; G. R. Surup, H. K. Nielsen, University of Agder, Grimstad, Norway

3CV.3.26

HYDRODEOXYGENATION OF PYROLYSIS BIO-OILS FROM ABLATIVE FLASH PYROLYSIS OF STRAW: AN ANALYTICAL STUDY

Martin STAŠ, University of Chemistry and Technology Prague, Department of Petroleum Technology and Alternative Fuels, CZECH REPUBLIC

Co-authors: M. Auersvald, P. Straka, J. Tomášek, D. Kubicka, University of Chemistry and Technology Prague, Prague, Czech Republic

3CV.3.27

INDUSTRIAL SCALE FAST PYROLYSIS OF BROWN SEAWEED: PROCESS DESIGN, SIMULATION AND ANALYSIS OF THREE CASES

Jay LIU, Pukyong National University, Department of Chemical Engineering, KOREA

Co-authors: B. Brilgjevic, Pukyong National University, Busan, Korea; J. H. Choi, Institute for Cleaner Production, Busan, Korea

3CV.3.29**OXIDATIVE PYROLYSIS OF VARIOUS BIOMASS IN FIXED BED: YIELDS, COMPOSITION AND PROPERTIES OF THE PRODUCTS**

Xuan-Huynh PHAM, CIRAD, UPR1 14 BioWooEB, FRANCE

Co-authors: B. Piriou, L. Van de Steene, CIRAD, UPR BioWooEB, Montpellier, France; S. Salvador, RAPSODEE, CNRS UMR 5203, Mines-Albi, Albi, France

3CV.3.30**MILD AND DEEP HYDRODEOXYGENATION OF PYROLYSIS OIL OVER NICKEL CATALYSTS**

Caroline CARRIEL SCHMITT, Karlsruhe Institute of Technology, IKFT Dpt., GERMANY

Co-authors: M. Rapp, IMT - KIT, KARLSRUHE, Germany; K. Raffelt, N. Dahmen, IKFT - KIT, KARLSRUHE, Germany

3CV.3.33**PYROLYSIS OF CASSAVA PEELS IN TOP-LIT UP-DRAFT PYROLYSIS (TLUD-PYRO) REACTOR**

Sajid LATIF, University of Hohenheim, Agricultural Engineering in the Tropics and Subtropics Dpt., GERMANY

Co-authors: S. Awiszus, K. Intani, J. Müller, Universität Hohenheim, Stuttgart, Germany

13:30 - 15:00

VISUAL PRESENTATIONS 2CV.4**Progresses in gasification for synthesis gas production**

Room: Poster Area

CHAIRPERSONS:**Nikolaos BOUKIS**, Karlsruhe Institute of Technology, Institute of Catalysis Research and Technology, GERMANY**Serge BIOLLAZ**, PSI - Paul Scherrer Institut, Thermal Processes & Combustion, SWITZERLAND**2CV.4.1****ASSESSMENT OF SYNGAS PRODUCED FROM GASIFICATION OF OLIVE TREE PRUNING IN A DOWN-DRAFT REACTOR**

Francesco GALLUCCI, CREA-IT, ITALY

Co-authors: L. Longo, M. Carnevale, M. Salerno, E. Santangelo, Council for agricultural research and economics - Research Centre for Engineering and Agro-Food Proc, Monterotondo, Italy; E. Guerriero, V. Paolini, National Research Council of Italy - Institute of Atmospheric Pollution Research (CNR-IIA), Monterotondo, Italy; A. Colantoni, Tuscia University - Department of Agriculture and Forestry Science, Viterbo, Italy

2CV.4.2**EXPERIMENTAL INVESTIGATIONS OF COMBINED BIOMASS AND CO₂ GASIFICATION IN A DOWN-DRAFT GASIFIER**

Francesco PATUZZI, Free University of Bolzano, Faculty of Science and Technology, ITALY

Co-authors: D. Antolini, S. Shivananda Ail, M. Baratieri, Free University of Bozen-Bolzano, Italy; M. Grigiane, Department of Civil, Environmental and Mechanical Engineering, Trento, Italy

2CV.4.6**GASIFICATION OF CELLULOSE AND LIGNIN WITH WATER VAPOR**

Humberto Horge JOSÉ, Federal University of Santa Caterina, Dep. of Chemical Engineering and Food Engineering, BRAZIL

Co-authors: R.L. Costa, R.F.P.M. Moreira, E. Virmond, H.J. Jose, Federal University of Santa Catarina, Florianópolis, Brazil

2CV.4.8**CHARACTERIZATION OF CHAR FROM WOOD GASIFICATION**

Zsuzsa SÁROSSY, Technical University of Denmark, Chemical and Biochemical Engineering, DENMARK

Co-authors: Z. Sarossy, G. Ravenni, J. Ahrenfeldt, U. B. Henriksen, DTU, Roskilde, Denmark

2CV.4.9**A NOVEL COST MANAGEMENT STRATEGY FOR SELEXOL SYNGAS PURIFICATION PROCESS USING OPTIMAL INTEGRATION OF EJECTOR TECHNOLOGY**

Hamed BASHIRI, Natural Resources Canada, CanmetENERGY, CANADA

Co-authors: O. Ashrafi, A. Esmaili, P. Navarri, Natural Resources Canada, CanmetENERGY, Varennes, Canada

2CV.4.10**INFLUENCE OF THE CATALYST SUPPORT ON THE STEAM REFORMING PERFORMANCE OF TAR MODEL COMPOUNDS**

Benedetta DE CAPRARIIS, Sapienza University of Rome, Department of Chemical Engineering, ITALY

Co-authors: P. De Filippis, A.D. Hernandez, M. Scarsella, Sapienza University of Rome, Italy

2CV.4.12**ON THERMAL DECOMPOSITION OF BIOGAS DIGESTATE TO SYNGAS**

Stanislaw SZWAJA, Czestochowa University of Technology, POLAND

Co-authors: A. Poskart, M. Zajemska, D. Musial, Czestochowa University of Technology, Czestochowa, Poland; A. Magdziarz, University of Science and Technology, Cracov, Poland

2CV.4.13**MGO MODIFIED CHAR SUPPORTED CATALYSTS FOR DRY REFORMING OF CH₄ - PRELIMINARY INVESTIGATIONS FOR VALORIZATION OF BIOMASS-DERIVED CHAR AS ACTIVE CATALYSTS**

Francesco PATUZZI, Free University of Bolzano, Faculty of Science and Technology, ITALY

Co-authors: V. Benedetti, S.S. Ail, M. Baratieri, Free University of Bozen-Bolzano, Italy

2CV.4.14**INVESTIGATION OF A FLUIDISED BED TAR REFORMING REACTOR FOR BIO-SNG APPLICATIONS**

Philipp JOHNE, Institute for Energy Systems, Technical University of Munich, GERMANY

Co-authors: F. Fischer, S. Fendt, H. Spliethoff, TUM, Chair for Energy Systems, Garching, Germany

2CV.4.16**CFD SIMULATION OF BIO-SLURRY GASIFICATION USING A SECTIONAL APPROACH**

Quentin FRADET, German Aerospace Center (DLR), Institute of Combustion Technology, GERMANY

Co-authors: N. Fernando, M. Braun-Unkhoff, U. Riedel, German Aerospace Center (DLR), Stuttgart, Germany

2CV.4.18**PREDICTING REACTIVITY AND CONVERSION PROFILE OF AGRO-INDUSTRIAL RESIDUES IN STEAM GASIFICATION PROCESSES: A KINETIC APPROACH**

Mauro PRESTIPINO, University of Messina, Engineering Dpt., ITALY

Co-authors: O. Karlström, A. Brink, Åbo Akademi University, Turku, Finland; A. Galvagno, University of Messina, Italy

2CV.4.19**SIMULATION OF THE THERMO-CHEMICAL CONVERSION OF PRUNING OF APPLE TREES USING COCO SIMULATOR**

Cristina MOLINER, University of Genova, ITALY

Co-authors: F. Marchelli, LUB, Bolzano, Italy; B. Bosio, E. Arato, UNIGE, Genova, Italy

2CV.4.20**CO₂ GASIFICATION OF BIOCHARS PREPARED FROM AGROINDUSTRIAL WASTE: A KINECT STUDY**

Humberto Horge JOSÉ, Federal University of Santa Caterina, Dep. of Chemical Engineering and Food Engineering, BRAZIL

Co-authors: J. L. F. Alves, J. C. G. Da Silva, R. F. P. M. Moreira, Laboratory of Energy and the Environmental Processes, Federal University of Santa Catarina, Department, Florianópolis, Brazil; R. F. De Sena, Laboratory of Activated Carbon, Federal University of Paraiba, Department of Chemical Engineering, 5, João Pessoa, Paraiba, Brazil

2CV.4.22**HYDROGEN FROM BIOMASS BY OXY-STEAM GASIFICATION - A QUANTITATIVE ANALYSIS OF CASES**

Arvind GUPTA, IISc Bangalore, INDIA

Co-authors: S. Dasappa, Indian Institute of Science Bangalore, INDIA

15:15 - 16:45

VISUAL PRESENTATIONS 2CV.5

Anaerobic digestion and biogas production

Room: Poster Area

CHAIRPERSONS:

Jens BORN, Jahr, Chemical Technology, GERMANY

Bernhard DROSG, Bioenergy 2020+, AUSTRIA

2CV.5.7

CASE STUDY: WHEY VALORIZATION AS METHANE IN A TWO-PHASE PROCESS

Pamela PRINCIPI, SUPSI DTI MEMTI, Bio-Environmental technologies Lab, SWITZERLAND

Co-author: R. Koenig, Mechanical Engineering and Materials Technology Institute, Department of Innovative Technologies, Un, Manno, Switzerland

2CV.5.12

RAPESEED OIL AS CO-SUBSTRATE TO IMPROVE THE OPTIMIZATION OF ANAEROBIC CO-DIGESTION PROCESS IN SEMI-CONTINUOUS REGIME

Ana Isabel PARRALEJO ALCOBENDAS, Cicytex, SPAIN

Co-authors: L.Royano Barroso, M. J. París González, J. González Cortés, CICYTEX, Guadajira, Spain; J. F. González González, University of Extremadura, Badajoz, Spain

2CV.5.21

EFFECT OF COMBINED PRETREATMENT ON SOLUBILIZATION AND BIOGAS PRODUCTION FROM SCENEDESMUS BIOMASS

Ece KENDIR, Hacettepe university, Environmental Engineering, TURKEY

Co-author: Aysenur Ugurlu, Hacettepe University, Ankara, Turkey

2CV.5.25

ANAEROBIC DIGESTION OF ALGAL RESIDUES AFTER A SUPERCRITICAL CARBON DIOXIDE EXTRACTION

Eugen SPIELMANN, Ruhr-Universität Bochum, Lehrstuhl für Thermodynamik, GERMANY

Co-authors: R. Span, Ruhr-University Bochum, Germany; M. Gerber, Bochum University of Applied Sciences, Bochum, Germany

2CV.5.27

PRE-TREATMENT OF LIGNOCELLULOSIC BIOMASS WITH EXTRACELLULAR ENZYMES SECRETED BY AEROBIC FUNGI TRAMETES TROGII

Çagri AKYOL, Bogaziçi University, Institute of Environmental Sciences, TURKEY

Co-authors: M. Bozan, B. Ince, Bogaziçi University, Istanbul, Turkey; A. Kocyigit, Ege University, Istanbul, Turkey; O. Ince, Istanbul Technical University, Istanbul, Turkey; S. Aydin, Nisantasi University, Istanbul, Turkey

2CV.5.28

ANAEROBIC DIGESTION OF DIFFERENT ORGANIC FEEDSTOCKS BY CONTINUOUS BIOREACTORS

Heikki SÄRKKÄ, South-Eastern Finland University of Applied Sciences, Forest, the environment and energy, FINLAND

Co-authors: T. Saario, A. Mykkänen, H. Soininen, South-Eastern Finland University of Applied Sciences, Mikkelä, Finland

2CV.5.29

DEVELOPING TECHNIQUE ANAEROBIC DIGESTION IN THE CONTEXT OF RENEWABLE ENERGY SOURCES

Grzegorz WALOWSKI, INSTITUTE OF TECHNOLOGY AND LIFE SCIENCES, Department of Renewable Energy Resources, POLAND

2CV.5.31

BOOSTING BIOGAS WITH HYDROLYTIC ENZYMES - EFFECT OF CELLULASE PRETREATMENT OF WHEAT STRAW ON SUGAR RELEASE, ONSET AND ULTIMATE GAS PRODUCTION

Knut Olav STRÆTKVERN, Inland Norway Univ. of Appl. Sci., Dep. of Biotechnology, NORWAY

Co-author: E. Y. Christensen, Norconsult AS, Sandvika, Norway

2CV.5.32

INFLUENCE OF MIXING ON THE PROCESS STABILITY OF ANAEROBIC DIGESTION

Eugen SPIELMANN, Ruhr-Universität Bochum, Lehrstuhl für Thermodynamik, GERMANY

Co-authors: M. Gerber, Hochschule Bochum, Germany; Z. Rehman, Ruhr-Universität Bochum, Germany

2CV.5.34

MONITORING THE MIXING OF AN ARTIFICIAL MODEL SUBSTRATE IN A SCALEDOWN LABORATORY DIGESTER

Mirco LORENZON, University of Padova, Department of Biology of the university of Padova., ITALY

Co-authors: F. Conti, University of Padova, Italy; A. Saidi, M. Sonnleitner, M. Goldbrunner, Technische Hochschule Ingolstadt, Germany

2CV.5.35

BIOTECHNOLOGY TO INVESTIGATE THE BIOGAS-PRODUCING MICROBIAL COMMUNITY IN BIOMASS

Martina TRENTINI, University of Padua, ITALY

Co-authors: M. Lorenzon, F. Conti, University of Padua, Italy

2CV.5.37

EFFECTS OF THERMAL HYDROLYSIS PRETREATMENT ON PHYSICO-CHEMICAL PROPERTIES OF WASTEWATER SLUDGE AND ENHANCEMENT OF BIOGAS PRODUCTION POTENTIAL

Soon Woong CHANG, Kyonggi University, Department of Environmental Energy & Engineering, KOREA

Co-authors: D.D. Nguyen, S.J. Yeob, Kyonggi University, Suwon, Korea; J.T. Kim, Fivetek, Seongnam, Korea

2CV.5.40

ON THE EFFECT OF THE PARTICLE SIZE AND ITS RELATIONSHIP WITH GAS PRODUCTION

Ravi DHAVALSWARAPU, Indian Institute of Science, Centre for Sustainable Technologies, INDIA

Co-authors: H. Chanakya, S. Dasappa, Indian Institute of Science, Bangalore, India

2CV.5.41

TRACE SULPHUR AND ORGANIC COMPOUNDS IN BIOGAS FROM DIFFERENT BIOMASS SOURCES

Serge BIOLLAZ, PSI - Paul Scherrer Institut, Thermal Processes & Combustion, SWITZERLAND

Co-authors: A. S. Calbry-Muzyka, J. Schneebeli, Paul Scherrer Institut, Villigen-PSI, Switzerland

2CV.5.42

ANAEROBIC DIGESTION ENHANCEMENT VIA BIOAUGMENTATION OF THE MICROBIAL COMMUNITY: AN APPLICATION TO SHRIMP PROCESSING WASTE

Nadia CERONE, ENEA Research Centre, Technical Unit for Trisaia Technologies, ITALY

Co-authors: A. Gaetani, G. Dottorini, ENEA & Sapienza University, Rome, Italy; V. Mazzurco Miritana, L. Lona, G. Lembo, ENEA & Tuscia University, Rome & Viterbo, Italy; G. Massini, ENEA, Rome, Italy

2CV.5.43

SEQUENTIAL ANAEROBIC CO-DIGESTION OF CHICKEN LITTER WITH AGRO-INDUSTRIAL WASTES IN SEMI-SOLID CONDITIONS AND COMPARISON WITH THEIR WET ANAEROBIC DIGESTION PERFORMANCES

Zubayeda ZAHAN, RMIT University, Civil Environmental and Chemical Eng, AUSTRALIA

Co-author: M. Othman, RMIT University, Melbourne, Australia

2CV.5.49

FRESH BOVINE MANURE STANDARDIZATION TO START UP ANAEROBIC DIGESTION IN A LOW-COST BIODIGESTER

Mabel QUINTERO, Universidad Industrial de Santander, Santander, COLOMBIA

Co-authors: A. M. Arboleda Ordóñez, Y. T. Pinzón Rodríguez, M. S. Alzate Moncada, M. J. Quintero Silva, Universidad Industrial de Santander, Bucaramanga, Colombia

2CV.5.52

ANAEROBIC DIGESTION OF WASTE OF COFFEE PRODUCTION AND DAMAGED SUNFLOWER SEEDS

Imants PLUME, Latvia University of Agriculture, Institute of Agricultural Energetics, LATVIA

Co-authors: V. Dubrovskis, I. Straume, Latvia University of Agriculture, Jelgava, Latvia

2CV.5.58**THE ROLE OF BIOGAS IN THE FUTURE DANISH ENERGY SYSTEM**

Henrik MØLLER, Aarhus University, Engineering, DENMARK

Co-authors: H.B Moller, U Jørgensen, L Harmelin, Aarhus University, Denmark; S.S Jensen, Aarhus University, Roskilde, Denmark

15:15 - 16:45

VISUAL PRESENTATIONS 3CV.6

Hydrothermal liquefaction of different biomass feedstocks

Room: Poster Area

CHAIRPERSONS:**Lasse ROSENDAHL**, Aalborg University, Energy Technology Dpt., DENMARK**Ralph P. OVEREND**, Biomass & Bioenergy Journal, "Elsevier", CANADA**3CV.6.1****PRODUCING DROP-IN FUELS FROM SWINE MANURE: HYDROTHERMAL LIQUEFACTION AND BIO-CRUDE HYDROTREATING**

Daniele CASTELLO, Aalborg University, Dept. of Energy Technology, DENMARK

Co-authors: F. Conti, T.H. Pedersen, S.S. Toor, Aalborg University, Denmark

3CV.6.4**FORMATION OF NITROGEN-CONTAINING HETEROCYCLES DURING HYDROTHERMAL LIQUEFACTION OF MODEL COMPOUNDS AND SEWAGE SLUDGE**

Yujie FAN, Karlsruhe Institute of Technology, Institute of Catalysis Research and Technology, GERMANY

Co-authors: U. Hornung, N. Dahmen, Karlsruhe Institute of Technology, Germany; A. Kruse, University of Hohenheim, Stuttgart, Germany

3CV.6.5**SIMULTANEOUS PRODUCTION OF BIOCRUDE OIL AND RECOVERY OF NUTRIENTS THROUGH HYDROTHERMAL LIQUEFACTION OF ORGANIC WASTES**

Federica CONTI, Aalborg University, Energy Technology, DENMARK

Co-authors: T. Pedersen, D. Castello, S. Toor, Aalborg University, Denmark

3CV.6.6**SEWAGE SLUDGE FILTRATION EMPLOYING BIOMASS FILTER AID WITH SUBSEQUENT FUEL PRODUCTION VIA HYDROTHERMAL LIQUEFACTION**

Patrick BILLER, Aarhus University, DENMARK

Co-authors: I Johannsen, LDM Ottosen, Aarhus University, Denmark

3CV.6.7**A STUDY OF REACTION PATHWAYS IN FORMIC ACID ASSISTED HYDROTHERMAL CONVERSION OF LIGNIN USING ¹³C ENRICHED REACTANTS AND NMR ANALYSIS**

Tanja BARTH, University of Bergen, Chemistry Dpt., NORWAY

Co-authors: H.V. Halleraker, S. Ghoreishi, C. Löhre, UiB, Bergen, Norway

3CV.6.8**WET PARTIAL OXIDATION OF GUAIACOL INTO CARBOXYLIC ACIDS USING HYDROGEN PEROXIDE**

Viken Márk KAPRIELIAN, Aalborg Universitet, DENMARK

Co-authors: Md.H. Islam, A. Bakó, M.E. Tertsch, R.P. Nielsen, M. Maschietti, Aalborg University, Esbjerg, Denmark

3CV.6.9**INFLUENCE OF HYDROTHERMAL PRE-TREATMENT ON BIOFUEL PRODUCTION FROM MICROALGAE**

Iram RAZAQ, University of Leeds, School of Chemical and Process Engineering, UNITED KINGDOM

Co-authors: A.B. Ross, University of Leeds, United Kingdom; P. Biller, Aarhus Institute of Advanced Studies, Denmark

3CV.6.10**HYDROTHERMAL LIQUEFACTION AND PARTIAL OXIDATION OF MICROALGAE**

Tsilla BENSABATH, Université d'Aix-Marseille, M2P2, FRANCE

Co-authors: O. Boutin, J.-H. Ferrasse, Université d'Aix-Marseille, Aix en Provence, France

3CV.6.11**HYDROTHERMAL LIQUEFACTION OF ALGAE**

Daniel J. NOWAKOWSKI, Aston University, CEAC / BERG, UNITED KINGDOM

Co-authors: C.M. Thomas, A.V. Bridgewater, G. Griffiths, EBRI, Aston University, Birmingham, United Kingdom

3CV.6.12**PRODUCTION OF HIGH QUALITY BIOCRUDE FROM RICE STRAW VIA HYDROTHERMAL LIQUEFACTION**

Yerraya ATTADA, IIT MADRAS, CHEMICAL ENGINEERING, INDIA

Co-authors: A.K Shree Vishnu, S. Shreyas, S.R. Chakravarthy, R. Vinu, Indian Institute of Technology Madras, Chennai, India

3CV.6.14**TECHNO-ECONOMIC ANALYSIS OF THE FAST HYDROLYSIS OF WOODY BIOMASS IN SUB- OR SUPER-CRITICAL WATER**

Mario ALMEIDA CALADO, Imperial College, Chemical Engineering, UNITED KINGDOM

Co-authors: M. Calado, N. Mac Dowell, C. Tighe, Imperial College London, United Kingdom

3CV.6.16**CAN WE MARRY PIPELINE TRANSPORTATION WITH HYDROTHERMAL PROCESSING?**

Mayank KUMAR, University of Alberta, CANADA

Co-authors: K. Javed, A.O. Oyedun, M. Vaezi, A. Kumar, University of Alberta, Edmonton, Canada

3CV.6.17**HYDROTHERMAL LIQUEFACTION IN AN INTEGRATED BIO-REFINING PLATFORM**

Ib JOHANSEN, Aarhus University, Engineering, DENMARK

Co-authors: B.S. Kielsgaard, D. More, P. Biller, Dept. Engineering, Aarhus University, Aarhus, Denmark

3CV.6.18**HOT WATER EXTRACTION FOR PROTEIN AND AMINO ACIDS RECOVERY FROM BREWER'S SPENT GRAINS**

Fen QIN, DTU, Novo Nordisk Foundation Center for Biosustainability, DENMARK

Co-authors: Astrid Z. Johansen, Solange I. Mussatto, Novo Nordisk Foundation Center for Biosustainability, DTU, Kongens Lyngby, Denmark

3CV.6.20**HYDROTHERMAL CO-PROCESSING OF PLASTICS AND BIOMASS WASTE STREAMS**

Thomas Helmer PEDERSEN, Aalborg University, Energy Technology Dpt., DENMARK

Co-author: F. Conti, Aalborg University, Denmark

3CV.6.21**DEACTIVATION PATHWAYS OF SULFONATED CARBON CATALYSTS DURING BIOMASS CONVERSION REACTIONS UNDER HYDROTHERMAL CONDITIONS**

David SCHOLZ, Paul Scherrer Institut, Bioenergy and Catalysis Laboratory, SWITZERLAND

Co-authors: O. Kröcher, F. Vogel, Paul Scherrer Institut, Villigen, Switzerland

3CV.6.22**FACILE SYNTHESIS OF MO/AL₂O₃-TiO₂ CATALYSTS USING SPRAY PYROLYSIS AND THEIR CATALYTIC ACTIVITY FOR HYDRODEOXYGENATION**

The Ky VO, Kyung Hee University, Chemical Engineering, KOREA

Co-authors: Jinsoo Kim, Seung-Soo Kim, Department of Chemical Engineering, Kyung Hee University, Suwon, Korea

17:00 - 18:30

VISUAL PRESENTATIONS 2CV.7

Biogas treatment and upgrading

Room: Poster Area

CHAIRPERSONS:

Ioana IONEL, Universitatea Politehnica Timisoara, Mechanical Engineering Dpt., ROMANIA

Jens Bo HOLM-NIELSEN, Aalborg University, Energy Technology Dpt., DENMARK

2CV.7.4

EVALUATION OF BIOMETHANE PRODUCTION POTENTIAL FROM VARIOUS ORGANIC WASTES AND KINETIC MOLDING ANALYSIS

Soon Woong CHANG, Kyonggi University, Department of Environmental Energy & Engineering, KOREA

Co-authors: D.D. Nguyen, J.H. Jeung, J.T. Kim, Kyonggi University, Suwon, Korea

2CV.7.10

CARBON MEMBRANES FOR BIOGAS UPGRADING: TECHNO-ECONOMIC FEASIBILITY ANALYSIS

Xuezhong HE, Norwegian University of Science and Technology, Department of Chemical Engineering, NORWAY

Co-author: Y. Chu, Norwegian University of Science and Technology, Trondheim, Norway

2CV.7.11

THE ROLE OF BIOGAS IN THE ITALIAN ENERGY'S SCENARIO: THE CASE OF "TEMPIO" FARM

Daniela SICA, University of Salerno, Department of Management & Innovation Systems, ITALY

Co-authors: O. Malandrino, Department of Business Sciences-Management and Innovation Systems (DISA-MIS), Salerno, Italy; S. Supino, Department of Human Science and Promotion of the Quality of Life, Roma, Italy

2CV.7.12

TECHNICAL AND ECONOMIC ANALYSIS OF THE RECONVERSION OF AN EXISTING BIOGAS PLANT TO BIOMETHANE PRODUCTION: A CASE STUDY

Giulio DE NOTARISTEFANI DI VASTOGIRARDI, Università degli Studi di Napoli Federico II, Industrial Engineer, ITALY

Co-authors: M. Dentice d'Accadia, F. Calise, Università degli Studi di Napoli Federico II, Naples, ITALY

2CV.7.13

HYDROGEN AND METHANE PRODUCTION FROM TWO-PHASE THERMOPHILIC ANAEROBIC CODIGESTION OF WASTE ACTIVATED SLUDGE AND ORGANIC FRACTION OF MUNICIPAL SOLID WASTE

Giulia MORETTO, University Ca' Foscari Venice, Environmental Sciences, ITALY

Co-authors: F. Micolucci, Aalborg University, Denmark; S. Piovesan, M. Gottardo, P. Pavan, University Ca' Foscari of Venice, Italy

2CV.7.14

HYDROGEN AND METHANE PRODUCTION BY CODIGESTION OF ORGANIC SOLID WASTE AND WASTE ACTIVATED SLUDGE IN A DISCONTINUOUS PROCESS

Ivan MORENO-ANDRADE, Universidad Nacional Autonoma de Mexico, Instituto de ingenieria, MEXICO

Co-authors: M.J. Berrocal-Bravo, B. Pérez-Aragón, Laboratory for Research on Advanced Processes for Water Treatment, Institute of Engineering, Unvers, Queretaro, Mexico

2CV.7.18

INCREASED GAS PRODUCTION AND REDUCTION OF GHG EMISSIONS BY UP-FRONT REDUCTION AND RECOVERY OF METHANE

Henrik MØLLER, Aarhus University, Engineering, DENMARK

Co-authors: V. Mosek, L. Feng, Aarhus University, Denmark

2CV.7.19

CO₂ PARTIAL PRESSURE IN THE REACTOR SLURRY AND ITS RELATIONSHIP TO METHANE PRODUCTION

Kerstin MAURUS, Ulm University, Institute for Systematic Botany and Ecology, GERMANY

Co-authors: M. Kazda, D. Schropp, S. Ahmed, F. Bengelsdorf, Ulm University, Germany; M. Zak, renergon, Kreuzlingen, Switzerland

2CV.7.20

MODIFIED GOMPertz KINETIC STUDY OF METHANE PRODUCTION FROM ANAEROBIC DIGESTION OF RECYCLED SLUDGE PAPER MILL

Mohammed BAKRAOUI, Ibn Tofail University faculty of science, physical, MOROCCO

Co-authors: F. Karouach, S. Belhadj, Y. Joute, H. El Bari, Renewable Energy and Environment laboratory, Faculty of Science-Kenitra, Ibn Tofail University, Kenitra, Morocco

2CV.7.24

EFFECT OF FURFURAL ON METHANE PRODUCTION FROM OF HYDROTHERMALLY PRE-TREATED BAGASSE

Martín Darío HERNANDEZ, Instituto de Ingeniería UNAM, LIPATA, MEXICO

Co-authors: M. D. Hernández-Ramírez, I. Figueroa-González, G. Buitrón, Laboratory for Research on Advance Processes for Water Treatment, Querétaro, Mexico; A. Sánchez, Bioenergy Futures Laborator, Guadalajara, Mexico

2CV.7.25

DIRECT METHANATION OF BIOGAS BY FLUIDISED BED: LONG-DURATION DEMONSTRATION

Serge BOLLAZ, PSI - Paul Scherrer Institut, Thermal Processes & Combustion, SWITZERLAND

Co-authors: T. J. Schildhauer, J. Witte, A. S. Calbry-Muzyka, Paul Scherrer Institut, Villigen-PSI, Switzerland; A. Kunz, energie360° AG, Zurich, Switzerland

2CV.7.26

IN-SITU BIOGAS UPGRADING: CONTRIBUTION OF HOMOACETOGENESIS TO METHANE PRODUCTION.

Nathalia DOS REIS VECHI, Aarhus University, Department of engineering, DENMARK

Co-authors: N.R Vechi, L.M. Agneessens, L.D.M. Ottosen, A. Feilberg, M.V.W. Kofoed, Aarhus University, Aarhus, Denmark

17:00 - 18:30

VISUAL PRESENTATIONS 1CV.8

Evaluations of biomass potentials for the biobased economy

Room: Poster Area

CHAIRPERSONS:

Tapio RANTA, Lappeenranta University of Technology, School of Energy Systems, FINLAND

Invited

1CV.8.1

ASSESSING SWEET SORGHUM-BASED ETHANOL POTENTIAL UNDER WATER-ENERGY-FOOD NEXUS FRAMEWORK

Xiaoxi YAN, INSTITUTE OF GEOGRAPHIC SCIENCES AND NATURAL RESOURCES RESEARCH, Chinese Academy of Sciences, P.R. CHINA

Co-authors: D. Jiang, J.Y. Fu, M.M. Hao, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences; Colleg, Beijing, P.R. China

1CV.8.4

TERRESTRIAL LASER SCANNING IN VOLUME AND BIOMASS MODELLING - OVERVIEW

Ville KANKARE, University of Helsinki, Department of Forest Sciences, FINLAND

Co-authors: N. Saarinen, M. Vastaranta, J. Pyörälä, M. Holopainen, University of Helsinki, Finland; X. Liang, J. Hyypä, Finnish Geospatial Research Institute, Masala, Finland

1CV.8.5

OPTABIUM METHOD: BUILDING AND ASSESSING SUSTAINABLE AGRICULTURAL BIOMASS SUPPLIES

Hélène PREUDHOMME, Agro-Transfert, FRANCE

Co-authors: E. Nguyen, Chambre d'agriculture des Hauts de France, Amiens, France; G. Rautureau, Chambre d'agriculture de l'Aisne, Laon, France; C. Flamin, Coop Energie, Laon, France; X. Teterel, Chambre d'agriculture de l'Oise, Beauvais, France; O. Scheurer, UniLasalle, Beauvais, France; R. Six, Chambre d'agriculture de la Somme, Amiens, France

1CV.8.8

ELECTRIC POWER FROM AGRICULTURAL RESIDUAL BIOMASS (ARB), IN COLOMBIA. OPTION OF RURAL DEVELOPMENT AFTER THE CIVIL WAR

German LOPEZ, Universidad Distrital Francisco José de Caldas, COLOMBIA
Co-authors: C.B. Clara Buritica, Universidad Distrital FJC, Bogota, Colombia; E.S. Electro Silva, Universidad UNIFEI, Itajuba, Brazil

1CV.8.9**CURRENT STATUS AND PROSPECTS FOR BIOFUEL PRODUCTION IN POLAND**

Krystian BUTLEWSKI, Institute of Technology and Life Sciences, Biomass Processing Technologies Dpt., POLAND

1CV.8.10**ASSESSMENT OF EUROPEAN UNION'S AGRICULTURAL RESIDUE POTENTIALS AVAILABLE FOR HIGH-ADDED VALUE PRODUCTS: CURRENT STATE AND FUTURE DEVELOPMENT**

Lars WIETSCHHEL, University of Augsburg, GERMANY
Co-authors: A. Thorenz, A. Tuma, University of Augsburg, Germany

1CV.8.13**MODELLING-BASED PROCEDURE TO EVALUATE ENERGY CROPS PRODUCTIVITY IN MARGINAL HUMID AREAS OF LOW PO VALLEY (NORTHERN ITALY)**

Enrico CEOTTO, CREA- Council for Agricultural Research and Economics, Research Centre for Agriculture and Environment, ITALY

Co-authors: F. Ginaldi, G.A. Cappelli, CREA-AA, Bologna, Italy

1CV.8.16**BIOMASS ENERGY POTENTIAL AND TECHNOLOGICAL OPTIONS FOR LIVESTOCK MANURE MANAGEMENT IN EXTENSIVE PRODUCTION SYSTEMS IN MEXICO**

Oscar SILVÁN HERNÁNDEZ, UJAT, DACBIOL, MEXICO

Co-authors: O. Silván-Hernández, Universidad Autónoma de Guadalajara, VILLAHERMOSA, Mexico; M. Macías-Valadez, L. Pampilón-González, Universidad Juárez Autónoma de Tabasco, VILLAHERMOSA, Mexico; F. De la Cruz-Burelo, Centro del Cambio Global y la Sustentabilidad en el Sureste, VILLAHERMOSA, Mexico

1CV.8.19**FOSTERING SUSTAINABLE FEEDSTOCK PRODUCTION FOR ADVANCED BIOFUELS ON UNDERUTILIZED LAND IN EUROPE**

Marco COLANGELI, GBEP - FAO, Climate and Environment Dpt., ITALY

Co-authors: M. Morese, L. Traverso, Food and Agriculture Organization of the United Nations, Rome, Italy

1CV.8.22**THE INTENSE PROJECT: INTENSIFY PRODUCTION, TRANSFORM BIOMASS TO ENERGY AND NOVEL GOODS AND PROTECT SOILS IN EUROPE**

Peter SCHRÖDER, Helmholtz Zentrum München, Comparative Microbiome Analysis, GERMANY

Co-authors: E. Maestri, University of Parma, Italy; M. Mench, INRA, Bordeaux, France; R. Millan, CIEMAT, Madrid, Spain; W. Szulc, University of Warsaw, Poland; N. Witters, Hasselt University, Belgium; A. Saebo, NIBIO, As, Norway

1CV.8.23**QUANTIFYING THE RESIDUAL BIOGAS POTENTIAL FROM LIVESTOCK WASTE IN ENGLAND**

Mariano MARINARI, University of Bath, Chemical Engineering, UNITED KINGDOM

Co-authors: M. McManus, T. Arnot, University of Bath, United Kingdom

09:00 - 10:30

VISUAL PRESENTATIONS 1DV.1**Supply of residues and by-products from agriculture and forestry**

Room: Poster Area

CHAIRPERSONS:

Luigi PARI, CREA- Council for Agricultural Research and Economics, Centro di ricerca Ingegneria e Trasformazioni agroalimentari, ITALY

Invited

1DV.1.1**LOGISTICS OPTIONS AND COSTS OF HORSE MANURE FROM STABLE TO BOILER**

Jarno FÖHR, Lappeenranta University of Technology, Laboratory of Bioenergy, FINLAND

Co-authors: T. Ranta, Lappeenranta University of Technology, Mikkeli, Finland; H. Soininen, South-Eastern Finland University of Applied Sciences, Mikkeli, Finland

1DV.1.3**PULPWOOD TERMINALS AND THEIR POTENTIAL TO SUPPORT BIOMASS SUPPLY TO POWER PLANTS IN EASTERN FINLAND**

Olli-Jussi KORPINEN, Lappeenranta University of Technology, Laboratory of Bioenergy, FINLAND

Co-authors: M. Aalto, T. Ranta, Lappeenranta University of Technology, Mikkeli, Finland; H. Ovaskainen, P. Venäläinen, Metsäteho, Vantaa, Finland

1DV.1.5**MAIZE COB AND CEREAL CHAFF: FEEDSTOCKS FOR ENERGY PRODUCTION**

Alessandro SUARDI, CREA- Council for Agricultural Research and Economics, Centro di ricerca Ingegneria e Trasformazioni Agroalimentari, ITALY

Co-authors: L. Pari, A. Scarfone, S. Bergonzoli, V. Alfano, CREA, Monterotondo (RM), Italy; G. Toscano, UNIVPM, Ancona, Italy; E. H. Lopez, CIRCE, Zaragoza, Spain

1DV.1.6**PHYSIC NUT WOOD: AN INTERESTING FEEDSTOCK FOR ENERGY PRODUCTION**

Alessandro SUARDI, CREA- Council for Agricultural Research and Economics, Centro di ricerca Ingegneria e Trasformazioni Agroalimentari, ITALY

Co-authors: L. Pari, F. Gallucci, L. Longo, M. Carnevale, CREA, Monterotondo (RM), Italy; G. Toscano, UNIVPM, Ancona, Italy

1DV.1.8**COMBINED HARVESTING OF CHAFF AND STRAW FOR BIOETHANOL PRODUCTION: THE FIRST EXPERIENCE ON WHEAT IN SWEDEN**

Antonio SCARFONE, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA), Ingegneria e Trasformazioni Agroalimentari, ITALY

Co-authors: L. Pari, S. Bergonzoli, V. Alfano, A. Suardi, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA), Centro Ingegneria, Monterotondo, Italy; C. Gunnarsson, G. Lundin, Research Institutes of Sweden (RISE), Uppsala, Sweden

1DV.1.9**PINEAPPLE RESIDUES FROM END-PRODUCTIVE PLANTATIONS: HARVEST PERSPECTIVES AND BIOENERGY POTENTIAL IN COSTA RICA**

Antonio SCARFONE, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA), Ingegneria e Trasformazioni Agroalimentari, ITALY

Co-authors: L. Pari, S. Bergonzoli, V. Alfano, A. Suardi, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA), Centro Ingegneria, Monterotondo, Italy; A. Tonolo, Ministero delle Politiche Agricole, Alimentari e Forestali (MIPAAF), Rome, Italy; C. Hernández Chanto, Instituto Costarricense de Electricidad (ICE) de Costa Rica; J.A. Solórzano, Instituto Nacional de Innovación y Transferencia en Tecnología Agropecuaria (INTA), San José, Costa Rica

1DV.1.10**EXPLOITATION OF PRUNING RESIDUES ALONG WITH BIOLOGICAL CONTROL: A CASE STUDY FOR SWEET CHESTNUT (CASTANEA SATIVA, MILL.) ORCHARDS IN CENTRAL ITALY**

Alberto ASSIRELLI, CREA - Research center for engineering and agro-food processing, ITALY
Co-authors: M. Pagano, A. Acampora, M. Fedrizzi, C. Cedrola, G. Sperandio, R. Tomasone, E. Santangelo, D. Pochi, CREA Research center for engineering and agro-food processing, Roma, Italy; G. Caracciolo, CREA Research center for olive, citrus and tree fruits, Forli, Italy

1DV.1.12**DOUBLE-PASS HARVESTING SYSTEM ON GIANT REED IN SOUTH ITALY**

Alberto ASSIRELLI, CREA - Research center for engineering and agro-food processing, ITALY
Co-authors: G. Caracciolo, CREA Research center for olive, citrus and tree fruits, Forli, Italy; V. Civitaresse, CREA Research center for engineering and agro-food processing, Roma, Italy; M. Sannino, M. Crimaldi, S. Faugno, Department of Agriculture of the University of Naples Federico II, Napoli, Italy

1DV.1.13**TECHNIQUES FOR WHOLE-PLANT REMOVAL IN PEACH ORCHARD FOR ENERGY PURPOSE**

Alberto ASSIRELLI, CREA - Research center for engineering and agro-food processing, ITALY
Co-authors: G. Caracciolo, CREA Research center for olive, citrus and tree fruits, Forli, Italy; V. Civitaresse, E. Santangelo, CREA Research center for engineering and agro-food processing, Roma, Italy; S. Faugno, Department of Agriculture of the University of Naples Federico II, Napoli, Italy; R. Spinelli, CNR-IVALSA Trees and timber institute, Firenze, Italy

1DV.1.14**ASSESSMENT OF BIOMASS RESOURCES FOR AN INTEGRATED BIOMASS LOGISTICS CENTER (IBLC) OPERATING IN THE OLIVE OIL SECTOR**

Emmanouil KARAMPINIS, Centre for Research and Technology Hellas, Chemical Process and Energy Resources Institute, GREECE
Co-authors: M.-A. Kougioumtzis, P. Grammelis, E. Kakaras, Centre for Research and Technology Hellas/ CPERI, Athens, Greece

1DV.1.15**ECONOMIC ASSESSMENT OF TWO CEREAL RESIDUES HARVEST AND TRANSPORT SYSTEMS IN RELATION TO THE DISTANCE BETWEEN THE FIELD AND THE STORAGE CENTRE**

Vincenzo ALFANO, CREA - Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, ITALY
Co-authors: L. Pari, A. Scarfone, S. Bergonzoli, A. Suardi, CREA - Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, Monterotondo (RM), Italy; E. Lopez, CIRCE - Research Centre for Energy Resources and Consumption, Saragozza, Spain

1DV.1.16**SUPPLY CHAINS OF GREEN RESIDUES FOR BIOENERGY EXPLOITATION**

Ioannis ELEFThERiADIS, Centre for Renewable Energy Sources and Saving, Biomass, GREECE
Co-authors: I. Papamichael, M. Christou, CRES, Pikermi, Greece; S. Chatzigavriel, ORIZON ATE, Serres, Greece; V. Bellis, ANKA, Karditsa, Greece; K. Panopoulos, CERTH, Marousi, Greece

1DV.1.17**MAIZE COB HARVESTING: FIRST ASSESSMENT OF AN INNOVATIVE SYSTEM**

Alessandro SUARDI, CREA - Council for Agricultural Research and Economics, Centro di ricerca Ingegneria e Trasformazioni Agroalimentari, ITALY
Co-authors: L. Pari, S. Bergonzoli, V. Alfano, A. Scarfone, CREA, Monterotondo (RM), Italy

09:00 - 10:30

VISUAL PRESENTATIONS 2DV.2**Properties and quality of solid biofuels**

Room: Poster Area

CHAIRPERSONS:

Pavlina NANOU, Energy Research Centre of the Netherlands, Biomass and Energy Efficiency Dpt., THE NETHERLANDS
Juan Esteban CARRASCO, CIEMAT, Renewable Energies Dpt., SPAIN

2DV.2.1**MULTIFACETED ANALYSIS AND INTEGRATED DESIGN FOR GLOBAL SUPPLY CHAIN OF EMPTY FRUIT BUNCH**

Yuka YOKOI, Tohoku University, Engineering, JAPAN
Co-authors: T. Furubayashi, T. Nakata, Tohoku University, Sendai, Japan; H. Kasai, Y. Ochi, IHI corporation, Tokyo, Japan

2DV.2.2**INFLUENTIAL PROPERTIES ON MECHANICAL DEGRADATION OF DENSIFIED TORREFIED BIOMASS IN LARGE SCALE TRANSPORTATION AND STORAGE**

Hamid GILVARI, TU Delft, TEL, M&TT, 3mE, THE NETHERLANDS
Co-authors: K. Karaca, W. De Jong, D. Schott, Delft University of Technology, Delft, The Netherlands

2DV.2.4**BIOMASA DE PODA DE FRUTALES COMO MATERIAL PRIMA PARA OBTENCIÓN DE PELLETS BIOFUEL**

Luis ROYANO, CICYTEX, SPAIN
Co-authors: A. Parralejo Alcobendas, M.J. Paris Gonzalez, J.G. Cortes, CICYTEX, Guadajira, Spain; J.F. Gonzalez Gonzalez, University of Extremadura, Badajoz, Spain

2DV.2.5**ENERGY REQUIREMENT FOR BIOMASS DENSIFICATION VIA MECHANICAL COMPRESSION AND AN INTEGRATED PELLETIZATION UNIT**

PRIYABRATA PRADHAN, Indian Institute of Technology Bombay, INDIA
Co-authors: A. Arora, S. Mahajani, Indian Institute of Technology Bombay, India

2DV.2.6**INVESTIGATION OF A MATHEMATICAL-PHYSICAL MODEL FOR BIOMASS DENSIFICATION DEPENDING ON GEOMETRY OF PRESSING CHAMBER**

Milos MATUS, Slovak University of Technology in Bratislava, Faculty of Mechanical Engineering, SLOVAK REPUBLIC
Co-authors: M. Matúš, M. Kováčová, P. Križan, L. Šooš, J. Beniak, Slovak University of Technology in Bratislava, Slovak Republic

2DV.2.7**DETERMINATION OF MECHANICAL PROPERTIES OF CORNCOB, HAY AND CANE PELLETS**

Stefan MIHINA, Slovak University of Agriculture in Nitra, SLOVAK REPUBLIC
Co-authors: V. Kažimírová, L. Kubik, Slovak University of Agriculture, Nitra, Slovak Republic

2DV.2.8**INFLUENCE OF PROCESSING PARAMETERS ON WOOD BIOMASS DISINTEGRATION AND PELLETS PRODUCTION**

Juraj BENIAK, Slovak University of Technology, Faculty of Mechanical Engineering, SLOVAK REPUBLIC
Co-authors: L. Šooš, P. Križan, M. Matúš, Slovak University of Technology in Bratislava, Slovak Republic

2DV.2.9**MODULAR CONSUMPTION OF BRIQUETTE PRESS**

Lubomir SOOS, Slovak University of Technology, Faculty of Mechanical Engineering, SLOVAK REPUBLIC
Co-authors: J. Beniak, P. Križan, M. Matus, FME STU in Slovak Republic, Bratislava; P. Kovac, FME TU, Novi Sad, Serbia

2DV.2.10**CHARACTERIZATION OF DIFFERENT LEAVE FRACTIONS FOR THE ENERGETIC UTILIZATION**

Esther STAHL, Fraunhofer-Institut UMSICHT, Process technology Dpt., GERMANY
Co-author: P. Danz, Fraunhofer UMSICHT, Oberhausen, Germany

2DV.2.11**FULL EVALUATION OF SIDA (SIDA HERMAPHRODITA) BIOMASS AS A SOLID FUEL**

Nicolai David JABLONOWSKI, Forschungszentrum Jülich, IBG-2, GERMANY
Co-authors: T. Kollmann, Project Management Jülich, PTJ-ESN: Energiesystem: Nutzung, Germany, Jülich, Germany; M. Meiller, Fraunhofer-Institut für Umwelt-, Sicherheits- und Energietechnik UMSICHT, Institutsteil Sulzbach-Ros, Sulzbach-Rosenberg, Germany; M. Dohrn, M. Müller, Forschungszentrum Jülich, IEK-2: Microstructure and Properties of Materials, Germ, Jülich, Germany; M. Nabel, S. D. Schrey, U. Schurr, Forschungszentrum Jülich, Institute of Bio- and Geosciences, IBG-2: Plant Sciences, Jülich, Germany; P. Zapp, A. Schonhoff, Forschungszentrum Jülich, Jülich, Germany

2DV.2.12**EFFECT OF SCREENING ON STORAGE BEHAVIOUR OF WOOD CHIPS**

Daniel KUPTZ, Technology and Support Centre of Renewable Raw Materials, Solid Biofuels Dpt., GERMANY
Co-authors: T. Mendel, H. Hartmann, Technology and Support Centre, Straubing, Germany

2DV.2.13**EFFECTS OF FUEL ADDITIVES ON AGRICULTURAL WASTES PELLETS QUALITY**

Liang WANG, SINTEF Energy Research, Thermal Energy Dpt., NORWAY
Co-authors: G. Skjevrak, J. Einar Hustad, Norwegian University of Science and Technology, Trondheim, Norway; T. Filbakk, The Royal Norwegian Society for Development, Skjetten, Norway; Ø. Skreiberg, SINTEF Energy Research, Trondheim, Norway; H. Kofoed Nielsen, University of Agder, Grimstad, Norway

2DV.2.15**QUALITY ASSESSMENT OF MEDITERRANEAN BIOFUELS**

Ruth BARRO, CIEMAT, Biomass Unit - Dpt. of Energy, SPAIN
Co-authors: M. Fernández, R. Cortés, R. Bados, J. Carrasco, CIEMAT, Soria, Spain; T. Brunner, W. Kanzian, N. Hajos, I. Obernberger, BIOS, Graz, Austria; E. Karampinis, P. Grammelis, N. Nikolopoulos, CERTH, Athens, Greece; T. Almeida, C. Mendes, E. Cancela, N. Alves, CBE, Miranda do Corvo, Portugal

2DV.2.16**PRODUCTION AND ASSESSMENT OF PULVERIZED TORREFIED BIOMASS FOR USE IN A WOOD DUST BURNER**

Raphael HAYMOZ, University of Applied Sciences and Arts Northwestern Switzerland, Institute of Bioenergy and Resource Efficiency, SWITZERLAND
Co-authors: M. McCormick, J.-B. Michel, HEIG-VD, Yverdon-les-Bains, Switzerland; D. Winkler, S. Solin, FHNW, Windisch, Switzerland

2DV.2.17**DENSIFICATION OF OLIVE PIT IN PELLET FORM**

Jose Antonio BECERRA VILLANUEVA, University of Seville, Energy department, SPAIN
Co-authors: R. Chacartegui Ramirez, H. Cifuentes Bulté, A. Gomez Martín, University of Seville, Sevilla, Spain; A. Castillo Palma, Oleomorón S.L., Sevilla, Spain

2DV.2.21**PREPARATION AND COMPACTION OF WHEAT CHAFF IN ORDER TO SUPPLY OPTIMIZED SOLID BIOFUELS**

Christoph GLASNER, Fraunhofer UMSICHT, Biomass and Residues Utilization, GERMANY
Co-author: B. Weiß, Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Oberhausen, Germany

2DV.2.24**CONTINUOUS VACUUM TECHNOLOGY FOR DRYING WOODCHIPS**

Vaclav MAREK, University of West Bohemia, Mechanical Engineering Dpt., CZECH REPUBLIC

10:45 - 12:15

VISUAL PRESENTATIONS 1DV.3**Biomass quality determination and upgrading**

Room: Poster Area

CHAIRPERSONS:

Vance OWENS, South Dakota State University, North Central Sun Grant Center, USA

Marco COLANGELI, GBEP - FAO, Climate and Environment Dpt., ITALY

1DV.3.1**FAST QUALITY DETERMINATION OF THE MOST COMMON SOLID BIOFUELS EMPLOYED IN ITALIAN BIOMASS POWER PLANTS BY MEANS OF NIRS**

Luigi PARI, CREA- Council for Agricultural Research and Economics, Centro di ricerca Ingegneria e Trasformazioni agroalimentari, ITALY
Co-authors: G. Toscano, A. Pizzi, C. Mengarelli, M. Mancini, UNIVPM, Ancona, ITALY

1DV.3.3**PARAMETRIC OPTIMIZATION OF THE PRE-TREATMENT OF SOUTH AFRICAN CORNCOB IN MOLTEN ZNCL₂ TETRA HYDRATE SALT**

Michael DARAMOLA, University of the Witwatersrand, School of Chemical and Metallurgical Engineering, SOUTH AFRICA
Co-authors: A.A. Awosusi, University of the Witwatersrand, Johannesburg, South Africa; R. Adeleke, Agricultural Research Council, Pretoria, South Africa; A.O. Ayeni, Covenant University, Lagos, Nigeria

1DV.3.5**ENSILING OF THE PULP FRACTION AFTER BIOREFINING OF GRASS INTO PULP AND PROTEIN JUICE**

Henning JORGENSEN, University of Copenhagen, DENMARK
Co-authors: S.U. Larsen, Danish Technological Institute, Aarhus, Denmark; M. Ambye-Jensen, Aarhus University, Denmark

1DV.3.6**DUCKWEED-CONCEPT FOR PROTEIN INCLUDING REMOVAL OF NUTRIENTS IN AQUATIC ENVIRONMENTS**

Bodil Engberg PALLESEN, Danish Technological Institute, AgroTech Dpt., DENMARK

1DV.3.11**NEW TREATMENT OF RESIDUALS FROM COFFEE IN COSTA RICA. - ORGANIC WASTE- AND RESOURCE MANAGEMENT IN THE CONTEXT OF NAMA CAFÉ DE COSTA RICA.**

Gerold HAFNER, University of Stuttgart, ISWA - Institute for Sanitary Engineering, Water Quality and Solid Waste Management Dpt., GERMANY
Co-authors: M. Reiser, M. Ruiz, University of Stuttgart, Germany

1DV.3.16**A NOVEL LESS CONSUMING-TIME METHODOLOGY FOR THE CHARACTERIZATION OF LIGNOCELLULOSIC MATERIALS IN BIOREFINERY PROCESSES: TGA/DTG AND PREDICTIVE KINETIC MODELS METHOD**

Raul PIÑERO HERNANZ, CARTIF Foundation, Chemical Process and Biofuels, SPAIN

1DV.3.18**NON-LINEAR MODELING OF HYDRATION LIGNOCELLULOSIC BIOMASS USING MODIFIED LANGMUIR ISOTHERMS**

Ramón PUENTE, Centro de Investigación y de Estudios Avanzados del IPN, Bioenergy Futures Laboratory, MEXICO
Co-authors: A. Sánchez, P. Hernández-Sánchez, Centro de Investigación y de Estudios Avanzados del IPN, ZAPOPAN, Mexico

1DV.3.19**BIOMASS QUALITY OF DIFFERENT SPECIES AFTER STORAGE**

Alberto ASSIRELLI, CREA - Research center for engineering and agro-food processing, ITALY
Co-authors: V. Civitarese, CREA Research center for engineering and agro-food processing, Roma, Italy; G. Caracciolo, CREA Research center for olive, citrus and tree fruits, Forli, Italy; M. Crimaldi, M. Sannino, S. Faugno, Department of Agriculture of the University of Naples Federico II, Napoli, Italy

1DV.3.21**PREDICTION MODEL FOR THE SEED AND OIL YIELD OF PONGAMIA (MILLETIA PINNATA)**

Floris DALEMANS, KU Leuven, Earth and Environmental Sciences, BELGIUM
Co-author: B. Muys, KU Leuven, Belgium

1DV.3.22**SUSTAINABLE USE OF FORESTRY RESIDUES FOR BIOENERGY GENERATION: A CASE STUDY FROM AUSTRALIA.**

Fabiano XIMENES, New South Wales Department of Primary Industries, Forest Science Centre, AUSTRALIA
Co-authors: R Coburn, M Mclean, J Samuel, N Cameron, B Law, C Threlfall, K Wright, NSW DPI, Sydney, Australia

1DV.3.23**BIOMASS RESIDUES AS 21ST CENTURY BIOENERGY FEEDSTOCK - A COMPARISON OF EIGHT INTEGRATED ASSESSMENT MODELS**

Steeff HANSSEN, Radboud University, Environmental Science Dpt., THE NETHERLANDS
 Co-authors: V. Daiglou, D.P. van Vuuren, PBL Netherlands Environmental Assessment Agency, The Hague, The Netherlands;
 M.A.J. Huijbregts, Z.J.N. Steinmann, Radboud University, Nijmegen, The Netherlands

10:45 - 12:15

VISUAL PRESENTATIONS 3DV.4**Pretreatment, enzymatic hydrolysis and fermentation for bio-alcohols production**

Room: Poster Area

CHAIRPERSONS:

Jan LINDSTEDT, Lindab Sweden, SWEDEN

Ines DEL CAMPO, CENER, Biomass Energy Dpt., SPAIN

3DV.4.3**XYLAN DEPOLIMERIZATION RATE IN A PRETREATMENT CONTINUOUS TUBULAR REACTOR**

Arturo SANCHEZ, Centro de Investigación y de Estudios Avanzados del IPN, Bioenergy Futures Laboratory, MEXICO
 Co-author: F. Rodríguez, Centro de Investigación y de Estudios Avanzados del IPN., Zapopan, Mexico

3DV.4.5**EFFECT OF INTEGRATED 1ST AND 2ND GENERATION BIOETHANOL PRODUCTION ON DDGS PRODUCTION**

Michael PERSSON, Lund University, Chemical Engineering, SWEDEN
 Co-authors: B. Erdei, M. Galbe, K. Kovacs, O. Wallberg, Lund University, Sweden

3DV.4.8**GIANT REED AND MILK THISTLE SUGAR YIELD AFTER ALKALINE PRE-TREATMENT AND ENZYMATIC HYDROLYSIS IN COMPARISON WITH STANDARD WHEAT STRAW**

Enrico CEOTTO, CREA- Council for Agricultural Research and Economics, Research Centre for Agriculture and Environment, ITALY
 Co-authors: S. Cianchetta, S. Galletti, CREA-AA, Council for Agricultural Research and Economics, Research Centre for Agriculture and Environment, Bologna, Italy

3DV.4.9**STUDY OF THE INFLUENCE OF TEMPERATURE AND ALKALINE CONCENTRATION IN A THERMO-MECHANICAL PRETREATMENT TO ENHANCE THE ENZYMATIC HYDROLYSIS OF CORN COB AND HUSK FOR BIOETHANOL PRODUCTION**

Monica FONG, INPT, FRANCE
 Co-authors: M. Rigal, L. Rigal, G. Vilarem, V. Vandenbossche, Laboratoire de Chimie Agro-industrielle, Toulouse, France

3DV.4.11**EVALUATION OF PHYSIOLOGICAL RESPONSE TO FURAN DERIVATIVES STRESS BY KLUYVEROMYCES MARXIANUS SLP1 IN ETHANOL PRODUCTION**

Lorena AMAYA-DELGADO, CIATEJ AC, Industrial Biotechnology, MEXICO
 Co-authors: G. Flores-Cosío, D. Sandoval-Nuñez, M. Arellano-Plaza, A. Gschaedler, CIATEJ, Zapopan, Mexico

3DV.4.12**BREWER'S SPENT GRAIN AS A POTENTIAL RAW MATERIAL FOR BUTANOL PRODUCTION. INFLUENCE OF AUTOHYDROLYSIS PH IN MONOSACCHARIDES RELEASE**

Maria Teresa GARCIA-CUBERO, University of Valladolid, Chemical Engineering & Environmental Technology, SPAIN
 Co-authors: P.E. Plaza, M. Coca, G. González-Benito, S. Lucas, M.T. García-Cubero, University of Valladolid, Spain

3DV.4.13**CONSORTIUM OF SIMPLIFIED KINETIC MODELS: AN ALTERNATE APPROACH FOR DESCRIBING THE BEHAVIOUR OF SUGARCANE BAGASSE ENZYMATIC HYDROLYSIS**

Vitor FURLONG, Federal University of São Carlos, Department of Chemical Engineering, BRAZIL
 Co-authors: R. L. C. Giordano, R. C. Giordano, M. P. A. Ribeiro, Federal University of São Carlos, São Carlos, Brazil; L. Jacob, Federal University of Itajub, Minas Gerais, Brazil; F. Lima, West Virginia University, Morgantown, Usa

3DV.4.14**DEVELOPMENT OF A SIMULTANEOUS SACCHARIFICATION AND FERMENTATION (SSF) PROCESS USING ALKALINE PRETREATED WHEAT STRAW**

Miet VAN DE VELDE, KU Leuven, BELGIUM
 Co-authors: T. Vackier, M. Lemarcq, A. Van Zele, I. Van de Voorde, A. Verplaetse, Faculty of Engineering Technology, Department of Microbial and Molecular Systems (M2S), Laboratory o, Ghent, Belgium; J. M. Thevelein, Laboratory of Molecular Cell Biology, Institute of Botany and Microbiology, KU Leuven, Belgium

3DV.4.15**STEAM EXPLOSION PRETREATMENT FOR THE EFFICIENT CONVERSION OF ANIMAL BEDDING INTO ETHANOL**

Miguel SANCHIS-SEBASTIÁ, Lund University, Chemical Engineering, SWEDEN
 Co-authors: B. Erdei, M. Galbe, O. Wallberg, Lund University, Sweden

3DV.4.17**FED-BATCH STRATEGY OF ENZYMATIC SACCHARIFICATION OF LIGNOCELLULOSIC BIOMASS MAXIMIZING SUGAR CONCENTRATIONS AT HIGH SOLID LOADINGS**

Arturo SANCHEZ, Centro de Investigación y de Estudios Avanzados del IPN, Bioenergy Futures Laboratory, MEXICO
 Co-authors: J. Gonzalez Rios, A. Valle Perez, A. Sanchez Carmona, CINVESTAV-GDL, Zapopan, Jal, Mexico; L. Amaya Delgado, CIATEJ, Zapopan, Jal, Mexico

3DV.4.21**HYDROTHERMAL PRETREATMENT OF LIGNOCELLULOSIC BIOMASS AND ITS MODEL COMPOUNDS: COMPARATIVE STUDY**

Novi SYAFTIKA, Hiroshima University, JAPAN
 Co-author: Y. Matsumura, Hiroshima University, Japan

3DV.4.22**CYNARA CARDUNCULUS A NOVEL SUBSTRATE FOR SOLID-STATE PRODUCTION OF ASPERGILLUS TUBINGENSIS CELLULASES AND SUGAR HYDROLYSATES**

Silvia CROGNALÉ, University Of Tuscia, DIBAF, ITALY
 Co-authors: A. D'Annibale, L. Pesciaroli, M. Petruccioli, D. Calonzi, DIBAF, University of Tuscia, Viterbo, Italy; F. Liuzzi, I. De Bari, ENEA, Matera, Italy

3DV.4.23**HYDROLYSATE FROM ORGANOSOLV PRETREATED BEECH WOOD AS A SUBSTRATE FOR BIOBUTANOL EXTRACTIVE FERMENTATION**

Gemma EIBES, University of Santiago de Compostela, Department of Chemical Engineering, SPAIN
 Co-authors: H. González-Peñas, University of Santiago de Compostela, Santiago de Compostela, Spain; T.A. Lú-Chau, N. Botana, M.T. Moreira, J.M. Lema, Universidade de Santiago de Compostela, Santiago de Compostela, Spain

3DV.4.24**LACCASE PRETREATMENT FOR AGROFOOD WASTES VALORISATION**

Simona GIACOBBE, Biopox, Waste2Fuels project N. 654623, ITALY
 Co-authors: C. Pezzella, G. Sannia, A. Piscitelli, V. Lettera, Università federico II di Napoli, biopox, Naples, Italy

3DV.4.25**METHODOLOGY OF AGITATOR DESIGN FOR LARGE-VOLUME BIOREACTORS**

Tomas JIROUT, Czech Technical University in Prague, Process Engineering Dpt., CZECH REPUBLIC

3DV.4.26**CELLULOSIC ETHANOL PRODUCTION FROM TUNISIAN LIF OF DATE PALM 'PHOENIX DACTYLIFERA L'**

Sebastián SÁNCHEZ VILLASCLARAS, University of Jaén, Chemical Engineering, Environmental and Materials Dpt., SPAIN
Co-authors: Y. Antit, I. Olivares, S. Sánchez, University of Jaén, Spain; K. Zaafouri, M. Handi, Institut National des Sciences Appliquées et de Technologie, Tunisia

13:30 - 15:00

VISUAL PRESENTATIONS 1DV.5**Energy grasses and biomass crops: production, characteristics and best practices**

Room: Poster Area

CHAIRPERSONS:

Ana Luisa FERNANDO, Universidade Nova de Lisboa, Ciências e Tecnologia Biomassa Dpt., PORTUGAL
Wolter ELBERSEN, Wageningen Research, Food and Biobased Products Dpt., THE NETHERLANDS

1DV.5.1**YIELD REDUCTION FROM WEED COMPETITION IN A MATURE CROP OF GIANT REED**

Judith CANO-RUIZ, IMIDRA, SPAIN

Co-authors: J. Ruiz-Cano, P.V. Mauri, IMIDRA, Madrid, Spain; M.D. Curt, P.L. Aguado, UPM, Madrid, Spain

1DV.5.2**SCREENING FOR HIGH WATER USE EFFICIENCY FROM 14 CULTIVARS OF SWITCHGRASS (PANICUM VIRGATUM L.) UNDER CADMIUM STRESS**

Qingsheng CAI, Nanjing Agricultural University, College of Life Sciences, P.R. CHINA

Co-authors: Z.Y. Hu, B.Y. Hu, X.H. Wen, L.Q. Lou, Nanjing Agricultural University, Nanjing, P.R. China; Z.G. Fang, Kashghar University, Kashghar, P.R. China

1DV.5.4**PERFORMANCE OF SIDA HERMAPHRODITA AND SILPHIUM PERFOLIATUM IN EUROPE: PRELIMINARY RESULTS**

Gianni FACCIOTTO, CREA- Council for Agricultural Research & Economics, Foreste e Legno, ITALY

Co-authors: M. Bury, H. Czyz, T. Kitczak, West Pomeranian University of Technology, Szczecin, Poland; F. Chiocchini, P. Paris, CNR IBAF, Porano, Italy; L. Cumplido Marin, A. Graves, Cranfield University, United Kingdom; R. Martens, 3N Centre of Experts, Werlte, Germany; C. Morhart, M. Nahm, Albert Ludwigs University, Freiburg, Germany

1DV.5.5**EUBCE STUDENT AWARDEE PRESENTATION****STUDY OF THE BEHAVIOUR OF THE IMPLANTATION OF ULMUS PUMILA IN FIELD FROM PHENOTYPICALLY SELECTED MATERIAL**M^a CRUZ AMORÓS SERRANO, IMIDRA, SPAIN

Co-authors: I. Bautista, J. Ruiz-Fernández, P.V. Mauri, IMIDRA, MADRID, Spain

1DV.5.6**EFFECT OF DIFFERENT FORMS OF PROPAGATION IN ARUNDO DONAX L. AFTER TWO YEARS OF FIELD IMPLANTATION**

Judith CANO-RUIZ, IMIDRA, SPAIN

Co-authors: M.C. Amoros, J. Ruiz-Fernandez, P.V. Mauri, IMIDRA, Alcalá de Henares, Spain

1DV.5.7**THE ENVIRONMENTAL IMPACT OF PERENNIAL AGRICULTURE AND FORESTRY ON BIOENERGY IN FINLAND**

Narasinha SHURPALI, University of Eastern Finland, Biogeochemistry Research Group, FINLAND

1DV.5.9**WIN-WIN FOR FARMERS AND SOILS: SIDA HERMAPHRODITA CULTIVATION ON MARGINAL SOIL**

Silvia SCHREY, Forschungszentrum Jülich, IBG-2: Plant Sciences, Jülich, GERMANY

Co-authors: M. Nabel, ND Jablonowski, Forschungszentrum Jülich, IBG-2: Plant Sciences, Jülich, Germany

1DV.5.10**SUNN HEMP, A PROMISING LEGUMINOUS ENERGY CROP AS INTER-CROPPING SYSTEM: PRELIMINARY RESULTS FOR SPAIN**

Carlos Sixto CIRIA RAMOS, CIEMAT, Biomasa Dpt., SPAIN

Co-authors: C. M. Sastre, C. S. Ciria, P. Ciria, J. Carrasco, CIEMAT, Madrid, Spain; L. Royano, A. Parralejo, J. González, CICYTEX, Guadajira, Spain

1DV.5.11**EVALUATION OF SUNN HEMP PRODUCTIVITY AFTER WHEAT UNDER NO TILLAGE CONDITIONS**

Andrea PARENTI, UNIBO, ITALY

Co-authors: W. Zegada-Lizarazu, A. Monti, Unibo, Bologna, Italy

1DV.5.12**IMPROVING BIOMASS AND ETHANOL YIELD BY INTEGRATING WINTER CEREALS WITH CORN STOVER**

Kurt THELEN, Michigan State University, Plant, Soil & Microbial Sciences Dpt., USA

Co-author: M. Jean, Michigan State University, Extension, Escanaba, Usa

1DV.5.13**LONG TERM EFFECT OF TREATED SEWAGE SLUDGE ON ENERGY CROP PRODUCTION**M^a CRUZ AMORÓS SERRANO, IMIDRA, SPAIN

Co-authors: I. Bautista, A. Plaza, P.V. Mauri, M.C. Amoros, M.C. Lobo, IMIDRA, Alcalá de Henares, Spain

1DV.5.16**PANACEA - A THEMATIC NETWORK TO DESIGN THE PENETRATION PATH OF NON-FOOD CROPS INTO EUROPEAN AGRICULTURE**

Efthymia ALEXOPOULOU, Center for Renewable Energy Sources, Biomass Dpt., GREECE

1DV.5.17**BIOMASS YIELD AND MORPHOLOGICAL FEATURES OF 26 GENOTYPES PERENNIAL INDUSTRIAL CROPS**

Mariusz STOLARSKI, University of Warmia and Mazury in Olsztyn, 739-30-33-097, POLAND

Co-author: M. Krzyzaniak, University of Warmia and Mazury in Olsztyn, Poland

1DV.5.18**SEEDS AND OIL YIELD OF CRAMBE ABYSSINICA GENOTYPES CULTIVATED IN POLAND**

Michał KRZYŻANIĄK, University of Warmia and Mazury in Olsztyn, POLAND

Co-authors: M. J. Stolarski, J. Tworkowski, J. Kwiatkowski, University of Warmia and Mazury in Olsztyn, Poland

1DV.5.19**SCREENING TRIALS ON TWO NEW IMPORTANT NON-FOOD OIL CROPS (CAMELINA AND CRAMBE) FOR THE EUROPEAN BIOBASED INDUSTRY**

Efthymia ALEXOPOULOU, Center for Renewable Energy Sources, Biomass Dpt., GREECE

Co-authors: M. Christou, K. Tsiotas, I. Papamichael, CRES, PIKERMI, Greece

1DV.5.20**MISCANTHUS AS A MODEL CROP FOR THE BIOECONOMY - CAN NOVEL GENOTYPES FOR GREEN HARVEST OPEN UP NEW MARKETS?**

Andreas KIESEL, University of Hohenheim, Biobased Products and Energy Crops, GERMANY

Co-authors: A. Mangold, M. Wagner, I. Lewandowski, Universität Hohenheim, Stuttgart, Germany

1DV.5.21**PERENNIAL GRASSES AS SOURCES FOR BIOENERGY AND BIO-PRODUCTS**

Efthymia ALEXOPOULOU, Center for Renewable Energy Sources, Biomass Dpt., GREECE

Co-authors: A. Monti, W. Zegada, UNIBO, BOLOGNA, Italy; D. Scordia, S.L. Cosentino, UNICT, CATANIA, Italy; M. Christou, CRES, PIKERMI, Greece; J. Carrasco, CIEMAT, MADRID, Spain

1DV.5.22**HEMP SEED MECHANICAL HARVESTING EFFICIENCY ANALYSIS**

Alberto ASSIRELLI, CREA - Research center for engineering and agro-food processing, ITALY

Co-authors: S. Faugno, M. Sannino, M. Crimaldi, Department of Agriculture, University of Naples Federico II, Napoli, Italy; G. Caracciolo, CREA Research center for olive, citrus and tree fruit, Forlì, Italy

1DV.5.24**CAN MARGINAL LANDS HELP TO SECURE THE BIOMASS DEMAND OF THE EUROPEAN BIOECONOMY? PERFORMANCE OF MISCANTHUS ON CONTAMINATED ARABLE LAND**

Jacek KRZYŻAK, Institute for Ecology of Industrial Areas, POLAND
 Co-authors: M. Pogrzeba, S. Rusinowski, Institute for Ecology of Industrial Areas, Katowice, Poland; J. Clifton-Brown, J. McCalmont, Institute of Biological, Rural & Environmental Sciences, Aberystwyth University, United Kingdom; A. Kiesel, A. Mangold, Biobased Products and Energy Crops (340b), Institute of Crop Science, University of Hohenheim, Stuttgart, Germany; M. Mos, Terravesta, Cedar Farm, United Kingdom

1DV.5.25**FUNCTION OF LACCASES AND RELATED TRANSCRIPTION FACTORS IN LIGNIN BIOSYNTHESIS IN MISCANTHUS**

Feng HE, Centre for Organismal Studies, Heidelberg University, GERMANY
 Co-authors: P. Golfier, S. Wolf, T. Rausch, Centre for Organismal Studies Heidelberg, Heidelberg, Germany; W. Zhang, Centre for Organismal Studies Heidelberg, Heidelberg, P.R. China

1DV.5.27**GASIFICATION BIOCHAR USED AS SOIL CONDITIONER POSITIVELY AFFECTS PHYSICAL PROPERTIES KNOWN TO CONTROL CROP YIELD AND NITROGEN LEACHING ON COARSE SANDY SOIL**

Line VINTHER HANSEN, University of Copenhagen, DENMARK
 Co-authors: C.T. Petersen, L.V. Hansen, University of Copenhagen, Copenhagen, Denmark; E.M. Hansen, Roskilde University, Roskilde, Denmark

1DV.5.29**THE EFFECT OF DIGESTION FERTILIZATION ON THE METHANE POTENTIAL OF SELECTED PLANTS CULTIVATED FOR ENERGY PURPOSES**

Agata WITOROZEC, IUNG-PIB, Department of Systems and Economics of Crop Production, POLAND
 Co-author: M. Matyka, IUNG-PIB, Pulawy, Poland

1DV.5.30**MECHANISED HARVESTING OF SHORT-ROTATION COPPICE**

Stefan VANBEVEREN, University of Antwerp, Department of Biology, BELGIUM
 Co-authors: R. Spinelli, N. Magagnotti, National Council for Research (CNR), Florence, Italy; M. Eisenbies, State University of New York, New York, USA; J. Schweier, University of Freiburg, Germany; B. Mola-Yudego, University of Eastern Finland, Joensuu, Finland; M. Acuna, University of the Sunshine Coast, Queensland, Australia; I. Dimitriou, Swedish University of Agricultural Sciences, Uppsala, Sweden; R. Ceulemans, University of Antwerp, Wilrijk, Belgium

13:30 - 15:00

VISUAL PRESENTATIONS 3DV.6**Assessments of production processes of thermally treated solid biomass**

Room: Poster Area

CHAIRPERSONS:

Jaap KIEL, ECN Energy Research Centre of the Netherlands, THE NETHERLANDS
Aidan SMITH, University of Aarhus, Energy Research Institute, DENMARK

3DV.6.2**MASS AND ENERGY BALANCES OF COMMERCIAL BLACK PELLET FACILITIES: AN IBTC STUDY**

Pavlina NANOU, Energy Research Centre of the Netherlands, Biomass and Energy Efficiency Dpt., THE NETHERLANDS
 Co-authors: MC Carbo, ECN, Petten, The Netherlands; A Nordin, Umea University, Sweden; J Gil Barrio, I Goni Zubillaga, CENER, Sarriguren, Spain

3DV.6.3**LOW-GRADE BIOMASS UPGRADING BY WASHING AND TORREFACTION: LAB AND PILOT-SCALE RESULTS**

Pedro ABELHA, Energy research Centre of the Netherlands, THE NETHERLANDS
 Co-authors: C. M. Vilela, P. Nanou, M.Carbo, A. Janssen, ECN, Petten, The Netherlands

3DV.6.4**ASSESSING THE FEASIBILITY OF HYDROTHERMAL CARBONISATION (HTC) FOR THE TREATMENT OF WASTE BIOMASS**

Sarah FARTHING, University of Nottingham, UNITED KINGDOM
 Co-authors: R Smith, C Snape, J McKechnie, University of Nottingham, United Kingdom

3DV.6.5**THE EFFECT OF HYDROTHERMAL CARBONISATION ON THE CHAR REACTIVITY OF BIOMASS**

Robert STIRLING, University of Nottingham, Chemical and Environmental Engineering, UNITED KINGDOM
 Co-authors: C. Snape, W. Meredith, University of Nottingham, United Kingdom

3DV.6.6**ADVANCED BIOENERGY CARRIERS TO SUPPORT A MORE FLEXIBLE APPLICATION OF BIOMASS**

Eric BILLIG, Umweltforschungszentrum UFZ, Bioenergie Dpt., GERMANY
 Co-authors: J. Witt, M. Klemm, J. Khalsa, DBFZ, Leipzig, Germany

3DV.6.7**ENABLING THE BIOCARBON VALUE CHAINS FOR ENERGY AND METALLURGICAL INDUSTRIES**

Øyvind SKREIBERG, SINTEF Energy Research, Thermal Energy Dpt., NORWAY
 Co-authors: L. Wang, R. Khalil, SINTEF Energy Research, Trondheim, Norway; S. Gjølsjø, Norwegian Institute of Bioeconomy Research, Ås, Norway; S. Turn, Hawaii Natural Energy Institute, Honolulu, Usa

3DV.6.8**CHARACTERIZATION OF BIOCARBON PRODUCED UNDER DIFFERENT CARBONIZATION CONDITIONS**

Liang WANG, SINTEF Energy Research, Thermal Energy Dpt., NORWAY
 Co-authors: Ø Skreiberg, SINTEF Energy Research, Trondheim, Norway; S Van Wesenbeeck, M Legarra Arizaleta, M Antal, Hawaii Natural Energy Institute, Honolulu, Usa; M Grønli, Norwegian University of Science and Technology, Honolulu, Norway

3DV.6.10**A SOLAR DRIVEN THERMOCHEMICAL PROCESS FOR THE PRODUCTION OF BIOFUEL**

Toby GREEN, University of Leeds, School of Process and Chemical Engineering, UNITED KINGDOM
 Co-authors: A Ross, R Crooke, University of Leeds, Leeds, United Kingdom

3DV.6.13**CONSTANT-VOLUME CARBONIZATION OF BIOMASS**

Maider LEGARRA ARIZALETA, Hawaii Natural Energy Institute, USA
 Co-authors: S.Turn, T. Morgan, M. Antal, Hawaii Natural Energy Institute, University of Hawaii, Honolulu, Usa; O. Skreiberg, L. Wang, SINTEF Energy Research, Trondheim, Norway; M. Gronli, Department of Energy and Process Engineering, Norwegian University of Science and Technology, Trondheim, Norway

3DV.6.14**CONTINUOUS TORREFACTION OF VIRGINIA MALLOW UNDER CARBON DIOXIDE ATMOSPHERE IN A SCREW CONVEYOR REACTOR**

Stanislaw SZWAJA, Czestochowa University of Technology, POLAND
 Co-authors: A Poskart, M Chwist, D Musial, M Zajemska, K Grab-Rogalinski, M Pyrc, Czestochowa University of Technology, Czestochowa, Poland; A Magdziarz, University of Science and Technology, Cracow, Poland

3DV.6.15**PLANT ORIGIN BIOMASS TORREFACTION PROCESS. INVESTIGATION OF EXOTHERMIC PROCESS DURING TORREFACTION**

George SYTCHEV, Joint Institute for High Temperatures RAS, Laboratory of Distributed Energy Generation, RUSSIAN FEDERATION
 Co-author: Victor Zaichenko, JIHT RAS, Moscow, Russian Federation