CONFERENCE PROGRAMME
MONDAY, 12 JUNE 2017

09:00
Conference Opening
Plenary Session
Keynotes on Applications of Science in Industry
Opening Addresses
Moderated Panel
Linneborn Award
EUBIA Award

10:00

10:30
E X H I B I T I O N

11:25
Lunch Break

12:30

13:00

13:30

14:00

14:30

15:00
Break

15:15

15:45

16:45
Break

17:00

17:30
Welcome Reception

09:00 12:30 13:30 15:00 15:15 16:45 17:00 18:30

1 Biomass Resources
T1.1 Biomass potentials and biomass mobilisation
T1.6 Integrated biomass production for energy purposes

2 Biomass Conversion Technologies for Heating, Cooling and Electricity
T2.2 Biomass and bioliquids combustion for small and medium scale applications
T2.3 Biomass combustion in large utilities

3 Biomass Conversion Technologies for fuels, chemicals and materials
T3.2 Pyrolysis and other biomass liquefaction technologies
T3.6 Biorefineries

4 Biomass Policies, Markets and Sustainability
T4.1 Market implementation, investments & financing
T4.2 Sustainability, certification and standards
T4.3 Environmental impacts of bioenergy
T4.4 Resource efficient bioeconomy and social opportunities
T4.5 Biomass strategies and policies
MONDAY CONFERENCE OPENING

09:00
PLENARY SESSION
Application of Science in Industry

10:00
OPENING ADDRESSES / POLITICAL OPENING

11:00
MODERATED OPENING PANEL

12:00
LINNEBORN PRIZE 2017
EUBIA AWARD 2017

12:30
PRESS CONFERENCE
**CONFERENCE PROGRAMME**

**MONDAY, 12 JUNE 2017**

**13:30 - 15:00**  
**ORAL SESSION 1AO.1**  
**Biomass Potentials and Biomass Mobilisation**  
**ROOM: K21**

**CHAIRPERSONS:**  
**Benoit GABRIELLE,** AgroParisTech - INRA, FRANCE  
**Qingsheng CAI,** Nanjing Agricultural University, P.R. CHINA

1AO.1.1  
**INTRESS - LAND AS A RESOURCE**  
Alexa LUTZENBERGER, ALRENE, GERMANY  
Co-author: F. Lichter, ALRENE, Eisenhüttenstadt, Germany

1AO.1.2  
**BIOGAS TRANSPORT GRIDS, CASE STUDY “PROVINCE OF WEST-FLANDERS”**  
Evert Jan HENGEVELD, Hanze University of Applied Sciences, Hanze Research Centre Energy, THE NETHERLANDS  
Co-authors: J. Bekkering, W.J.T. Gemert, van, Hanze Research Centre Energy, Hanze UAS, Groningen, The Netherlands; M. Dael, van, Centre for Environmental Sciences, Hasselt University and VITO, Hasselt and Mol, Belgium; A.A. Broekhuis, University of Groningen, The Netherlands

1AO.1.3  
**ANTICIPATING CLIMATE CHANGE EFFECT ON BIOMASS PRODUCTIVITY AND VEGETATION STRUCTURE OF MEDITERRANEAN FORESTS TO PROMOTE THE SUSTAINABILITY OF THE WOOD ENERGY SUPPLY CHAIN**  
Emmanuel GARBOLINO, Mines Paris-tech, CRC - Centre de Recherche sur les Risques et les Crises, FRANCE  
Co-authors: W. Daniel, AgroParisTech and MINES ParisTech/PSL Research University, Paris, France; V. Sanseverino-Godfrin, MINES ParisTech/PSL Research University, Sophia Antipolis, France

1AO.1.4  
**EVALUATION OF THE PRESENT STATE AND PERSPECTIVES FOR THE ENERGY AND ENERGY CARRIERS PRODUCTION FROM BIOMASS IN POLAND**  
Krystian BUTLEWSKI, Institute of Technology and Life Sciences, Biomass Processing Technologies Dpt., POLAND

1AO.1.5  
**DOMESTIC BIOMASS RESOURCES AND POTENTIAL BIOMASS DEMAND FOR CO-FIRING IN THE EU**  
Olivia CINTAS SANCHEZ, Chalmers University of Technology, Energy and Environment Dpt., SWEDEN  
Co-authors: G. Berndes, L. Cutz, O. Englund, F. Johnsson, Chalmers University of Technology, Göteborg, Sweden
MONDAY, 12 JUNE 2017

13:30 - 15:00
ORAL SESSION 2AO.2
Biomass Combustion and micro-CHP Technologies
ROOM: K2

CHAIRPERSONS:
Øyvind SKREIBERG, SINTEF Energy Research, NORWAY
Juan Esteban CARRASCO, CIEMAT, SPAIN

2AO.2.1
DEVELOPMENT OF A NEW MICRO CHP PELLET STOVE TECHNOLOGY
Ingwlad OBERNBERGER, BIOS Bioenergiesysteme, AUSTRIA
Co-authors: G. Weiss, BIOS Bioenergiesysteme, Graz, Austria; M. Koessl, RIIKA Innovative Ofentechnik GmbH, Micheldorf, Austria

2AO.2.2
MODIFIES AND EXPERIMENTAL TESTS AN A LIQUID FUEL MICRO GAS TURBINE FUELED WITH PYROLYSIS OILS AND ITS BLENDS
Marco BUFFI, CREAR/RE-CORD, DIEF - Industrial Energy Dept., University of Florence, ITALY
Co-authors: A. Cappelletti, F. Martelli, CREAR, University of Florence, Florence, Italy; A.M. Rizzo, D. Chiaramonti, CREAR/RE-CORD, University of Florence, Florence, Italy

2AO.2.3
RENEWABLE RESIDENTIAL HEATING WITH FAST PYROLYSIS BIO-OIL: RESIDUE2HEAT
Roy HERMANNS, OWI Oel-Waerme-Institut, GERMANY
Co-authors: T. Ruetten, OWI Oel-Waerme-MEKU Energie Systeme GmbH & Co. KG Institut GmbH, Aachen, Germany; B. van de Beld, Biomass Technology Group. me-Institut, Hengelo, The Netherlands; A. Oasmaa, VTT, Espoo, Finland; P. Massoli, Istituto Motori, Consiglio Nazionale delle Ricerche, Napoli, Italy; A. Frassoldati, PTM Politecnico di Milano, Milano, Italy; A. Toussaint, BTG BioLiquids, Hengelo, The Netherlands; H. Insam, University of Innsbruck, Institute of Microbiology, Innsbruck, Austria

2AO.2.4
MEASUREMENTS OF FULL-COMBUSTION-CYCLE EMISSIONS FROM PEAT AND WOOD IN A DOMESTIC STOVE
Cian QUINN, University College Dublin, Mechanical and Materials Engineering Dpt., IRELAND
Co-author: W.J. Smith, University College Dublin, Ireland

2AO.2.5
PERFORMANCE EVALUATION OF A MODERN WOOD STOVE WHEN USING CHARCOAL
Alexis SEVAULT, SINTEF Energy Research, Thermal Energy Dpt., NORWAY
Co-authors: R. Khalil, O. Skreiberg, F. Goile, L. Wang, M. Seljeskog, R. Kempegowda, SINTEF Energy Research, Trondheim, Norway; B.C. Enger, SINTEF Materials and Chemistry, Trondheim, Norway
CONFERENCE PROGRAMME
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13:30 - 15:00
ORAL SESSION 3AO.3
Pilot Plant Application for Biomass Liquefaction
ROOM: K1

CHAIRPERSONS:
Andreas APFELBACHER, Fraunhofer-Institut UMSICHT, GERMANY
Wolter PRINS, University of Ghent, BELGIUM

3AO.3.1 BIORECOVER: BIOMASS RESIDUE CONVERSION & VALORISATION FOR AN ECONOMIC REFINERY
Paul DE WILD, Energy Research Centre of the Netherlands, Biomass & Energy Efficiency Dpt., THE NETHERLANDS

3AO.3.2 DROP IN POTENTIAL OF UPGRADED FUELS PRODUCED AT PILOT SCALE VIA HYDROTHERMAL LIQUEFACTION OF DIFFERENT BIOMASS FEEDSTOCKS
Patrick BILLER, Aarhus University, DENMARK
Co-authors: J. Yu, R.B Madsen, J. Becker, B.B. Iversen, I. Johannsen, M. Glasius, Aarhus University, Denmark

3AO.3.3 ONLINE BALANCING OF A PILOT SCALE FAST PYROLYSIS PLANT
Nicole WEIH, Karlsruhe Institute of Technology, Institute of Catalysis Research and Technology, GERMANY
Co-authors: A. Funke, C. Pfitzer, A. Niebel, N. Dahmen, Karlsruhe Institute of Technology, Germany

3AO.3.4 PYROLYSIS OF RESIDUAL BIOMASS IN A THERMO-CATALYTIC REFORMING PLANT AN EXPERIMENTAL INVESTIGATION OF SEWAGE SLUDGE
Johannes NEUMANN, Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY
Co-authors: A. Hornung, A. Apfelbacher, R. Daschner, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany

3AO.3.5 EXPERIENCES OF PILOT SCALE CYCLONE PYROLYSIS
Ann-Christine JOHANSSON, RISE Bioeconomy, SP ETC, SWEDEN
Co-authors: L. Sandström, H. Wiinikka, O. Öhrman, SP Energy Technology Center, Piteå, Sweden
13:30 - 15:00
VISUAL PRESENTATIONS 4AV.1
From Research to Implementation in International Context and from Regions to Global Views
ROOM: Poster Area

CHAIRPERSONS:
Birger KERCKOW, FNR - Agency for Renewable Resources, GERMANY
Calliope PANOUTSOU, Imperial College, UNITED KINGDOM

4AV.1.1
BUILDING UP LOCAL BIOENERGY VALUE CHAINS BASED ON FRUIT TREE RESIDUES FROM PRUNING AND UPROOTING OPERATIONS: THE BOOSTING ROLE OF REGIONAL STAKEHOLDER NETWORKS
Massimo MONTELEONE, University of Foggia, STAR Research Unit - Agriculture Dpt., ITALY

4AV.1.2
PYROLYSIS AND THE PRICE OF CARBON - THE VALUE OF BIOCHAR
Niclas ERICSSON, Swedish University of Agricultural Sciences, Energy and Technology Dpt., SWEDEN
Co-author: S. Ahlgren, Swedish University of Agricultural Sciences, Uppsala, Sweden

4AV.1.4
A GENERALISED MODEL FOR THE CALCULATION OF CAPITAL AND ELECTRICITY PRODUCTION COSTS WITH SPECIAL EMPHASIS ON CO-DIGESTION BIOGAS CHAINS IN SPAIN
Hans LANGEVELD, Biomass Research, THE NETHERLANDS
Co-authors: M.S. Breure, J.W.A. Langeveld, Biomass Research, Wageningen, The Netherlands; J. Pombo, Universidade da Coruña, Santiago de Compostela, Spain

4AV.1.6
THE LEAST DESIRABLE OPTION - CONSUMERS - ATTITUDES TOWARDS BIOMETHANE AS A RAW MATERIAL FOR GREEN PACKAGING SOLUTIONS
Carsten HERBES, Nuertingen-Geislingen University, ISR Dpt., GERMANY
Co-authors: C. Beuthner, I. Ramme, Nuertingen-Geislingen University, Nuertingen, Germany

4AV.1.7
PROSPECTS FOR RENEWABLE MARINE FUELS - THE POTENTIAL ROLE OF BIOFUELS
Julia HANSSON, IVL Swedish Environmental Research Institute, Climate & Sustainable Cities, SWEDEN
Co-authors: S. Brynolf, M. Grahn, Chalmers University of Technology, Göteborg, Sweden

4AV.1.8
TECHNO-ECONOMIC FEASIBILITY OF PENNISETUM X PURPUREUM (ELEPHANT GRASS) SUBSTITUTION FOR CHARCOAL IN HAITI USING MONTE CARLO SIMULATION IN NET PRESENT VALUE ANALYSIS
Erica BELMONT, University of Wyoming, Mechanical Engineering Dpt., USA
Co-authors: A. Balogun Mohammed, Department of Mechanical Engineering, University of Wyoming, Laramie, USA; S. Vijlee, Donald P. Shiley School of Engineering The University of Portland, USA
4AV.1.9
BIOPLASTICS: A GOOD GHG MITIGATION STRATEGY - THE CASE OF BRAZIL
Tjerk LAP, University of Groningen, Institute for Energy & Environmental Sciences, THE NETHERLANDS
Co-authors: A. Koberle, L. Nogueira, A. Szklo, R. Schaeffer, Federal University of Rio de Janeiro, Brazil; F. van der Hilst, Utrecht University, The Netherlands; R. Benders, A. Faaij, University of Groningen, The Netherlands

4AV.1.11
RESOURCE MANAGER-FOOD: REDUCING AVOIDABLE FOOD LOSSES IN GASTRONOMY
Dominik LEVERENZ, University of Stuttgart, Institute for Sanitary Engineering, Water Quality and Solid Waste Management, GERMANY
Co-authors: P. Pilsl, G. Hafner, University of Stuttgart, Germany

4AV.1.12
AGROCYCLE - A BLUEPRINT AND EU POLICY-FORMING PROTOCOL FOR THE RECYCLING AND VALORISATION OF AGRI-FOOD WASTE
Andrea SALIMBENI, European Biomass Industry Association, Projects Development Dpt., BELGIUM
Co-authors: S. Ward, G. Hanley, UCD School, Dublin, Ireland; C. Burns, NNFCC, York, United Kingdom; G. Grassi, EUBIA, Brussels, Belgium

4AV.1.13
A FOSSIL FUEL INDEPENDENT SWEDISH TRANSPORT SECTOR 2030 - THE ROLE OF INDUSTRY AND DISTRICT HEATING SYSTEMS AS HOSTS FOR BIOFUEL PRODUCTION
Elisabeth WETTERLUND, Luleå University of Technology, Energy Engineering, Div. of Energy Science, Engineering Sciences and Mathematics Dpt., SWEDEN
Co-author: K. Pettersson, SP Technical Research Institute of Sweden, Göteborg, Sweden

4AV.1.15
ASSESSING THE SOCIAL, ECONOMIC AND ENVIRONMENTAL EFFECTS OF “INTEGRATED MANURE MANAGEMENT” AS LOW-CARBON TRANSITION PATHWAY IN THE LIVESTOCK SECTOR IN THE NETHERLANDS
Eise SPIJKER, Stichting Joint Implementation Network, Research Dpt., THE NETHERLANDS
Co-author: A. Anger-Kraavi, Cambridge Econometrics, Cambridge, United Kingdom

4AV.1.16
SOCIO-ECONOMIC ASSESSMENT INCLUDING FEEDSTOCK SUPPLY AND MARKETABILITY CONCEPT OF HTC/HTL-PRODUCTS
Kay SUWELACK, Fraunhofer INT, GERMANY
Co-authors: A. Kruse, Conversion Technology and Life Cycle Assessment of Renewable Resources, Institute of Agriculture, Stuttgart, Germany; N. Dahmen, Institute for Catalysis Research and Technology, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

4AV.1.20
FOSTERING SUSTAINABLE FEEDSTOCK PRODUCTION FOR ADVANCED BIOFUELS ON UNDERUTILISED LAND IN EUROPE
Rita MERGNER, WIP, GERMANY
Co-authors: M. Colangeli, L. Traverso, M. Morese, Food and Agriculture Organization of the United Nations, Rome, ITALY
4AV.1.21
ASSESSING A BIOECONOMY NETWORK FROM AN INTEGRATED LIFE CYCLE PERSPECTIVE
Alberto BEZAMA, Helmholtz Centre for Environmental Research, Bioenergy Dpt., GERMANY
Co-authors: M. Budzinski, J. Hildebrandt, A. Siebert, D. Thrän, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

4AV.1.22
MONITORING MATERIAL FLOWS IN A BIOECONOMY REGION
Alberto BEZAMA, Helmholtz Centre for Environmental Research, Bioenergy Dpt., GERMANY
Co-authors: J. Hildebrandt, D. Thrän, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

4AV.1.24
AN APPRAISAL OF THE USE OF DOMESTICALLY GROWN FEEDSTOCK COMPARED WITH IMPORTED FEEDSTOCK OF BIOFUEL POWERED LOCOMOTIVES: A CASE STUDY OF INDIAN RAILWAYS
Charlotte STEAD, University of Leeds, UNITED KINGDOM
Co-authors: Z. Wadud, H. Li, C. Nash, University of Leeds, United Kingdom

4AV.1.27
IMPROVE ECONOMIC COMPETITIVENESS OF PALM OIL BASED BIODIESEL IN INDONESIA THROUGH BIOREFINERY PATHWAY
Fumi HARAHAP, KTH Royal Institute of Technology, Energy Technology Dpt., SWEDEN
Co-authors: S. Silveira, D. Khatiwada, Division of Energy and Climate Studies, KTH Royal Institute of Technology, Stockholm, Sweden

4AV.1.28
IMPACT OF ALTERNATIVE FOREST BIOMASS DEMAND AND SUPPLY SCENARIOS ON THE REGIONAL ECONOMY IN FINLAND
Kalle KARTTUNEN, Lappeenranta University of Technology, School of Energy, FINLAND
Co-authors: A. Ahtikoski, Natural Resources Institute Finland, Oulu, Finland; H. Salminen, Natural Resources Institute Finland, Rovaniemi, Finland; J. Hyynynen, Natural Resources Institute Finland, Vantaa, Finland; S. Kujala, H. Törmä, University of Helsinki, Seinäjoki, Finland; J. Kinnunen, Statistics and Research Åland, Mariehamn, Finland; T. Ranta, Lappeenranta University of Technology, Mikkeli, Finland

4AV.1.29
INTEGRATING MISCANTHUS INTO ARABLE SYSTEM TO SECURE SUSTAINABLE FEEDSTOCK SUPPLY FOR LIGNOCELLULOSIC SUCCINIC ACID PRODUCTION
Yuanzhi NI, Imperial College London, Center for Environmental Policy, UNITED KINGDOM
Co-authors: O. Mwabonje, K. Yeung, J. Woods, Imperial College, London, United Kingdom; G.M. Richter, A. Qi, Rothamsted Research, Harpenden, United Kingdom; M.K. Patel, University of Geneva, Switzerland

4AV.1.32
POSSIBILITIES OF CREATING FOSSIL FREE REGION - CASE SOUTH SAVO
Antti KARHUNEN, Lappeenranta University of Technology, LUT Energy, FINLAND
Co-authors: M. Laihanen, T. Ranta, Lappeenranta University of Technology, Finland

4AV.1.36
COMPARATIVE ANALYSES OF CURRENT BIOBASED ECONOMY POLICIES AND STRATEGIC INDIA-EU PARTNERSHIP
Neeta SHARMA, ENEA Research Centre, Biotechnology and Agro-industry Division, ITALY
Co-authors: D. Claps, ENEA Research Centre., Matera, Italy; P. Joshi, UCOST, DST, Govt. of India, Uttrakhand, India
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4AV.1.38
REGIONAL ADDED VALUE OF REFINING FOREST BIOMASS FOR ENERGY PURPOSES IN FINLAND
Jarno FÖHR, Lappeenranta University of Technology, Laboratory of Bioenergy, FINLAND
Co-authors: K. Karttunen, R. KC, T. Ranta, Lappeenranta University of Technology, Mikkel, Finland

4AV.1.42
EUBCE STUDENT AWARDEE PRESENTATION
HOW ARE THE EU MEMBER STATES CONTRIBUTING TO THE 27% TARGET FOR EU’S RENEWABLE ENERGY CONSUMPTION; THE ROLE OF WOODY BIOMASS.
Svetlana PROSKURINA, Lappeenranta University of Technology, Laboratory of Sustainable Energy Systems, FINLAND
Co-authors: R. Sikkema, European Commission - Joint Research Centre, Directorate Sustainable Resources, Bio-economy, Ispra, Italy; J. Heinimö, Mikkel Development Miksei Ltd, Mikkel, Finland; E. Vakkilainen, Lappeenranta University of Technology, Lappeenranta, Finland

4AV.1.43
BIOMASS HEAT SCENARIOS IN GERMANY
Katalin Nora SZARKA, DBFZ-German Biomass Research Centre, Bioenergy Systems Dpt., GERMANY

4AV.1.48
DEVELOPMENT OF FOREST CHIPS USE AND PRICE IN THE NORDIC COUNTRIES: A COMPARATIVE ANALYSIS
Tapio RANTA, Lappeenranta University of Technology, School of Energy Systems, FINLAND
Co-authors: O. Olsson, Stockholm Environment Institute, Sweden; W. Stelte, Danish Technological Institute, Taastrup, Denmark; E. Tromborg, Norwegian University of Life Sciences, Oslo, Norway

4AV.1.50
BIOMASS SUPPLY FOR ENERGY USE IN THE EUROPEAN UNION
Manjola BANJA, European Commission, JRC, Renewable and Energy Efficiency, ITALY
Co-authors: N. Scarlat, J.F Dallemand, DIR.C, C.2, European Commission, Joint Research Centre, Ispra, Italy; R. Sikkema, DIR.D, D.1, European Commission, Joint Research Centre, Ispra, Italy

4AV.1.52
ESTABLISHING REGIONAL BIOENERGY CONCEPTS IN SOUTHEAST EUROPE TO SPEED-UP THE MARKET UPTAKE OF SUSTAINABLE BIOENERGY
Jens ADLER, GIZ- German Development Cooperation, Landesbüro Sachsen, GERMANY

4AV.1.54
WELL TO WHEEL ENERGY ANALYSIS OF BIOMASS PELLETS MADE FROM AGRO WASTE TO GENERATE ‘VILLAGE LEVEL ENTREPRENEURSHIP’ IN INDIA
Miheer VAIDYA, Shree Ganesh Press-N-Coat, Non Conventional Energy Dpt., INDIA
Co-authors: R. Vaidya, Shree Ganesh Pres-n-Coat Pvt. Ltd, Aurangabad, India; S. Vaidya, MIT College of Engineering, Aurangabad, India
4AV.1.55
VALUE REFLECTIVE DESIGN SPACE, AN APPROACH FOR INCORPORATING SUSTAINABILITY IN EARLY STAGES OF BIOREFINERY DESIGN
Mar PALMEROS PARADA, Delft University of Technology, Biotechnology Dpt., THE NETHERLANDS
Co-authors: L. Asveld, P. Ossewijer, J.A. Posada Duque, TU Delft, Delft, The Netherlands

4AV.1.56
ENVIRONMENTAL EDUCATION RELATED TO MUNICIPAL SOLID WASTE AT ABC REGION (BRAZIL)
H. V. MARCELO, Universidade Federal da Integração Latino-Americana, BRAZIL
Co-authors: J.T.C.L. Toneli, G. Martins, G.C. Antonio, UFABC, Santo André, Brazil

4AV.1.57
IP STRATEGIES IN THE GLOBAL BIO-BASED MARKETPLACE
Deborah STERLING, Sterne, Kessler, Goldstein & Fox, USA
Co-author: J. Frueauf, Sterne, Kessler, Goldstein & Fox, Washington D.C., USA

4AV.1.58
CO-GASIFICATION OF BLACK LIQUOR AND PYROLYSIS LIQUIDS FOR BIOFUEL PRODUCTION - EVALUATION OF ECONOMIC VIABILITY FROM A NATIONAL SYSTEMS PERSPECTIVE
Jonas ZETTERHOLM, Luleå University of Technology, Energy Science/Energy Engineering Dpt., SWEDEN
Co-authors: E. Wetterlund, J. Lundgren, Luleå University of Technology, Sweden; K Pettersson, SP Technical Research Institute of Sweden, Gothenburg, Sweden

4AV.1.63
NEW AND EMERGING TRENDS IN FLOCCULANTS FROM CELLULOSIC BIOMASS IN A COLOMBIAN DISTRICT.
Oscar MEDINA, Universidad Pedagógica Y Tecnológica de Colombia, Chemistry Dpt., COLOMBIA
Co-authors: L.M. Moreno, Universidad Pedagógica Y Tecnológica de Colombia, Tunja, Colombia

4AV.1.65
JATROPHA CURCAS PRODUCTION COST ANALYSIS AND SUSTAINABILITY IN EGYPT
Eleni KOUKOUNA, Agricultural University of Athens, Crop Science Dpt., GREECE
Co-authors: G. Kosmadakis, E.S. Ragkousi, M.A. Stoupas, N. Robolakis, E.G. Papazoglou, Agricultural University of Athens, Greece

4AV.1.66
A ROADMAP FOR POPLAR AND WILLOW TO PROVIDE ENVIRONMENTAL SERVICES AND PRODUCE RENEWABLE FUELS IN THE UNITED STATES
Leslie BOBY, Southern Regional Extension Forestry, College of Agriculture and Environmental Sciences, USA
Co-authors: P. Townsend, N. Haider, Washington State University, Seattle, WA, USA; T. Miller, City of Springfield, Springfield, OR, USA; J. Heavey, T. Volk, Syracuse University, Syracuse, NY, USA

4AV.1.67
MARKET AND CARBON SEQUESTRATION IMPACTS OF WOOD-BASED BIOFUEL PRODUCTION
Ariel LISTO ARGUL, University of Maine, School of Economics Dpt., USA
Co-authors: A.A. Listo, A.J. Daigneault, University of Maine, Orono, USA
CONFERENCE PROGRAMME

MONDAY, 12 JUNE 2017

13:30 - 17:00
PARALLEL EVENT
Bioenergy - from Research to Market Deployment in a European Context

15:00 - 15:15
BREAK

15:15 - 16:45
ORAL SESSION 1AO.4
Integrated Biomass Production for Energy Purposes
ROOM: K21

CHAIRPERSONS:
Göran BERNDES, Chalmers University of Technology, SWEDEN
Floor VAN DER HILST, Utrecht University, THE NETHERLANDS

1AO.4.1
A NUTRIENT REUSE APPROACH FOR IMPROVED BIOMASS YIELDS, WATER QUALITY AND ECONOMIC
Cristina NEGRI, Argonne National Laboratory, Energy Systems Dpt., USA
Co-authors: C. Zumpf, P. Campbell, J. Cacho, Argonne National Laboratory, USA; H. Ssegane, The Climate Corporation, St. Louis, USA; T. Volk, J. Heavey, State University of New York, New York, USA

1AO.4.2
LOCALLY PRODUCED BIOENERGY CAN REPLACE 5-13% OF DANISH ENERGY CONSUMPTION IN 2020 WITHOUT INTRODUCTION OF ILUC
Søren LARSEN, Danish Energy Association, DENMARK
Co-authors: N. Bentsen, C. Felby, University of Copenhagen, Frederiksberg C, Denmark; T. Dalgaard, U. Jorgensen, J. Olesen, Aarhus University, Tjele, Denmark

1AO.4.3
OPPORTUNITIES FOR A SUSTAINABLE AND DIVERSE PRODUCTION OF RENEWABLE RESOURCES CROPS
Michael GRIEB, Technology and Support Centre (TFZ), Renewable Resources Crops and Material Cycles, GERMANY

1AO.4.4
BIOMASS RESIDUES AS ELECTRICITY GENERATION SOURCE IN LOW HDI REGIONS OF BRAZIL
Alessandro SANCHES-PEREIRA, University of São Paulo, Institute of Energy and Environment, BRAZIL
Co-author: S. Teixeira Coelho, University of São Paulo, Brazil

1AO.4.5
GRASS BIOMASS AS BIOFUEL FEEDSTOCK-ENVIRONMENTAL AND ECONOMIC SUSTAINABILITY
Lovisa BJÖRNSSON, Lund University, Environmental and Energy Systems Studies Dpt., SWEDEN
Co-authors: M. Lantz, Lund University, Sweden; T. Prade, Swedish University of Agricultural Sciences, Alnarp, Sweden
15:15 - 16:45
ORAL SESSION 2AO.5
New Modelling Approaches and Emission Reduction
ROOM: K2

CHAIRPERSONS:
Timothée NOCQUET, Leroux & Lotz Technologies, FRANCE
Christoffer BOMAN, Umeå University, SWEDEN

2AO.5.1
DEVELOPMENT AND VALIDATION OF A COMBINED 1D-FUEL-BED- AND 3D-CFD-MODEL FOR THE SIMULATION OF MOVING GRATE BOILERS
Co-authors: S. Roth, Lucerne University of Applied Sciences, Horw, Switzerland; T. Nussbaumer, Lucerne University of Applied Sciences, Horw and Verenum, Zurich, Switzerland

2AO.5.2
NEW CFD BASED MODEL FOR THE DESIGN AND OPTIMISATION OF POROUS BURNERS FOR BIOMASS COMBUSTION PLANTS
Gerold THEK, Bios Bioenergiesysteme, R&D Dpt., AUSTRIA
Co-authors: G. Knauss, F. Biedermann, I. Obernberger, BIOS Bioenergiesysteme, Graz, Austria

2AO.5.3
A THEORETICAL AND EXPERIMENTAL STUDY OF THE FORMATION OF AROMATIC HYDROCARBONS (BTX/PAH) AS SOOT PRECURSORS FROM BIOMASS PYROLYSIS PRODUCTS
Ali SHIEHNEJAD-HESAR, Bioenergy 2020+, AUSTRIA
Co-authors: H. Bahramian, A. Shiehnejadhesar, R. Mehrabian, P. Sommersacher, Bioenergy2020+, Graz, Austria; A. Anca-Couce, C. Hochenauer, R. Scharler, Institute of Thermal Engineering, Graz University of Technology, Austria

2AO.5.4
REDUCTION OF PARTICLE EMISSIONS FROM WOOD COMBUSTION EXHAUST GASES WITH HIGH PARTICLE NUMBER AND MASS CONCENTRATIONS
Andrei BOLOGA, Karlsruhe Institute of Technology, Institute for Technical Chemistry, GERMANY
Co-authors: M. Ecker, HDG Bavaria, Massing, Germany; H.-P. Rheinheimer, CCA Carola Clean Air, Eggenstein-Leopoldshafen, Germany; H.-R. Paur, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

2AO.5.5
EXPERIMENTAL STUDY ON THE BIOMASS-BIOMASS CO-COMBUSTION FOR REDUCING NOX IN A FLUIDIZED-BED COMBUSTOR: A COMPARISON BETWEEN THE CO-FIRING TECHNIQUES
Vladimir KUPRIANOV, Thammasat University, Sirindhorn International Institute of Technology, THAILAND
Co-author: P. Ninduangdee, Phetchaburi Rajabhat University, Thailand
MONDAY, 12 JUNE 2017

15:15 - 16:45
ORAL SESSION 3AO.6
Direct Liquefaction of Biomass in Hot Compressed Water and Hydrogenation of Products
ROOM: K1

CHAIRPERSONS:
Frederik RONSSE, Ghent University, BELGIUM
Johannes NEUMANN, Fraunhofer-Institut UMSICHT, GERMANY

3AO.6.1
SLURRY HYDROCRACKING FOR UPGRADEI NG OF LIGNOCELLULOSIC BIOMASS TO TRANSPORTATION FUELS IN EXISTING REFINERIES
Olov ÖHRMAN, SP Energy Technology Center, SWEDEN
Co-authors: F. Weiland, H. Hedman, M. Gullberg, SP Energy Technology Center, Piteå, Sweden; C. Hulteberg, SunCarbon, Tygelsjö, Sweden

3AO.6.2
HYDROTHERMAL LIQUEFACTION OF RAW AND COMPONENTS-EXTRACTED MICROALGAE WITH ASSIST OF PULSED ELECTRIC FIELD PRETREATMENT
Bingfeng GUO, Karlsruhe Institute of Technology, Institute for Catalysis Research and Technology, GERMANY
Co-authors: A. Silve, C. Gusbeth, W. Frey, U. Hornung, N. Dahmen, Karlsruhe Institute of Technology, Germany

3AO.6.3
H2CAP - HYDROGEN ASSISTED CATALYTIC BIOMASS PYROLYSIS FOR GREEN FUELS
Martin HØJ, Technical University of Denmark, Chemical and Biochemical Engineering Dpt., DENMARK
Co-authors: M. Zingler Stummann, P. Arendt Jensen, A. Degn Jensen, DTU Chemical Engineering, Kgs. Lyngby, Denmark; J. Gabrielsen, Haldor Topsøe, Kgs. Lyngby, Denmark

3AO.6.4
HYDRODENOXYGENATION OF PRE-TREATED BLACK LIQUOR ON A BIMETALLIC CATALYST: EVALUATION OF CATALYST PERFORMANCE
Christin ANACKER, Leibniz Institute for Catalysis at the University of Rostock, GERMANY
Co-authors: C. Anacke, U. Armbruster, A. Martin, Leibniz Institute for Catalysis at the University of Rostock, Rostock, Germany

3AO.6.5
ALTERNATIVES TO ZEOLITES FOR CATALYTIC FAST PYROLYSIS OF BIOMASS: MOLYBDENUM CARBIDE AND PT/TIO2
Joshua SCHAILDE, National Renewable Energy Laboratory, National Bioenergy Center, USA
Co-authors: C. Mukarakate, M. Xu, M. Griffin, C. Nash, E. White, K. lisa, M. Nimlos, D. Ruddy, National Renewable Energy Laboratory, Golden, USA
15:15 - 16:45

VISUAL PRESENTATIONS 4AV.2

Sustainability Assessment of Biomass Systems and Environmental Impacts of Bioenergy

ROOM: Poster Area

CHAIRPERSONS:
Rocio DIAZ-CHAVEZ, Imperial College London, UNITED KINGDOM
Patricia THORNLEY, SUPERGEN Bioenergy Hub, UNITED KINGDOM

4AV.2.1
SUSTAINABLE RAW MATERIAL SUPPLY FOR BIOMETHANE - CROSS-SECTORAL SUSTAINABILITY CRITERIA & INDICATORS DISCUSSION
Diego PIEDRA-GARCIA, FNR - Agency for Renewable Resources, European and International Cooperation Dpt., GERMANY
Co-authors: A. Kovacs, EBA - European Biogas Association, Brussels, Belgium; S. Majer, DBFZ - German Biomass Research Centre, Leipzig, Germany; S. Proietti, ISINNOVA - Institute of Studies for the Integration of Systems, Rome, Italy

4AV.2.8
LIFE CYCLE ASSESSMENT OF ENVIRONMENTAL IMPACT FOR CORNSTALK BRIQUETTE FUEL USED IN GASIFICATION AND COMBUSTION SYSTEM
Zhiwei WANG, Henan Academy of Sciences, Energy Research Institute Co., P.R. CHINA

4AV.2.2
CERTIFICATION OF BIOMETHANE AS TRANSPORT FUEL - IMPLEMENTATION OF GHG EMISSION SAVINGS FORM THE USE OF MANURE FOR BIOGAS PRODUCTION
Katja OEHMICHEN, DBFZ-German Biomass Research Centre, Bioenergy Systems Dpt., GERMANY
Co-authors: S. Majer, DBFZ-German Biomass Research Centre, Leipzig, Germany; D. Thrán, UFZ, Leipzig, Germany

4AV.2.9
LIFE CYCLE APPROACH FOR ENERGY AND ENVIRONMENTAL ANALYSIS OF BIOMASS AND COAL CO-FIRING IN DIFFERENT LARGE SCALE CO-GENERATION UNITS
Jaroslaw ZUWALA, Institute for Chemical Processing of Coal, POLAND

4AV.2.13
REAL SCALE BIOMASS BURNING OF MISCANThUS GROWN ON CONTAMINATED SITE
Dorothee DEWAele, Université du Littoral Côte d’Opale, CCM Dpt., FRANCE
Co-authors: F. Cazier, P. Genevray, CCM - ULCO, Dunkerque, France; E. Therssen, PC2A - USTL, Villeneuve d’Ascq, France; J. Blarel, Chambre d’agriculture, Lille, France; F. Douay, ISA, Lille, France

4AV.2.14
DEVELOPMENT OF SOIL AMENDMENTS PRODUCED FROM MUNICIPAL ORGANIC WASTE DIGESTATE DURING A TWO-YEAR FIELD STUDY
Christine KNOOP, Brandenburg University of Technology, Geopedology and Landscape Development, GERMANY
Co-authors: N. Dietrich, M. Heinrich, T. Raab, Brandenburg University of Technology, Cottbus, Germany; C. Dornack, Technische Universität, Dresden, Germany
4AV.2.16
COMPARISON OF SWEET SORGHUM, GIANT REED AND POPLAR AS SOIL NITRATE SCAVENGERS WITH CATTLE MANURE APPLICATION
Enrico CEOTTO, CREA- Council for Agricultural Research and Economics, ITALY
Co-authors: F. Castelli, CREA, Bovolone, Italy; R. Marchetti, CREA, Modena, Italy

4AV.2.17
FOREST BIOMASS IN CANADA: FROM FEEDSTOCK AVAILABILITY TO CLIMATE CHANGE MITIGATION POTENTIAL
Jérôme LAGANIÈRE, Natural Resources Canada, Canadian Forest Service, CANADA
Co-authors: D. Paré, P. Bernier, N. Mansuy, J. Barrette, Natural Resources Canada, Québec City, Canada; E. Thiffault, Université Laval, Québec City, Canada

4AV.2.18
ENVIRONMENTAL AND ECONOMIC PERFORMANCES OF CEREAL STRAW END-PRACTICES
Luigi PARI, CREA- Council for Agricultural Research and Economics, Unità di Ricerca per l’Ingegneria Agraria - CREA-ING, ITALY
Co-authors: N. Palmieri, M.B. Forleo, University of Molise, Campobasso, Italy; G. Giannoccaro, University of Bari, Italy; A. Suardi, Consiglio per la Ricerca in Agricoltura e l’Analisi dell’Economia Agraria, Roma, Italy

4AV.2.19
EFFECT OF BIOCHAR ON WATER RETENTION IN SOIL, A COMPARISON BETWEEN TWO FORMS: POWDER AND PELLET
Pietro BARTOCCI, University of Perugia, Biomass Research Centre, ITALY
Co-authors: F.P. Vaccari, S. Baronti, IBIMET, Firenze, Italy; M. Valagussa, MAC, Como, Italy; A. Pozzi, ICHAR, Firenze, Italy; F. Liberti, G. Bidini, F. Fantozzi, University of Perugia, Italy

4AV.2.20
EFFECT OF WOOD PRE-TREATMENT ON OPERATING CONDITIONS, GASEOUS AND PARTICULATE EMISSIONS OF A PELLET STOVE - FIRST ANALYTICAL CAMPAIGN
Paul GENEVRAY, Université du Littoral Côte d’Opale, CCM Dpt., FRANCE
Co-authors: G. Schmidt, G. Leyssens, G. Trouvé, V. Tschember, C. Schönnebenck, GRE Laboratory, Mulhouse, France; F. Cazier, D. Dewaele, C. Vandenbilcke, CCM Laboratory, Dunkerque, France; S. Labbé, Lorflam, Caudan, France; F. Balay, Lorflam/ CCM laboratory, Caudan, France; Y. Denance, E. Faivre, Inovalp, Susville, France; C. Le-Dreff, CSTB Laboratory, Nantes, France; N. Adam, Agrivalor, Hirsingue, France

4AV.2.22
ASSESSING POSSIBLE EMISSION REDUCTIONS IN THE ENERGY MIX: UNCONVENTIONAL GAS OR MISCANTHUS BIOMASS?
Iosif GYPARIS, University of Piraeus Research Center, GREECE
Co-author: D. Sidiras, University of Piraeus Research Center, Piraeus, Greece

4AV.2.23
ENVIRONMENTAL PRELIMINARY RESULTS USING LCA METHODOLOGY OF A BIOREFINERY FED WITH OLIVE PRUNING IN ANDALUSIA
Carmen LAGO, CIEMAT, Energy Dpt., SPAIN
Co-authors: I. Herrera, V. Lechón, P. Manzanares, A.I. Susmozas, CIEMAT, Madrid, Spain; E. Ruiz, Universidad de Jaén, Spain
4AV.2.24
FRAMEWORK FOR BIOENERGY IMPLEMENTATION IN MUNICIPAL BUILDINGS
Clara VALENTE, Ostfold Research, NORWAY
Co-authors: E. Soldal, F. Moltu Johnsen, H. Lerche Raadal, O.J. Hanssen, Ostfold Research, Kråkerøy, Norway; F. Verdú, Geodata, Oslo, Norway

4AV.2.26
ASSESSMENT OF BIOGAS PRODUCTION PATHWAYS: APPLICATION TO PORTUGAL
Patrícia BAPTISTA, IST-ID, Mechanical Engineering, PORTUGAL
Co-authors: M. Lopes, A. Moreira, IN+, Universidade de Lisboa, Lisbon, Portugal; E. Duarte, ISA, Universidade de Lisboa, Lisbon, Portugal

4AV.2.27
FERTILIZERS AND SOIL IMPROVING PRODUCTS MADE OF BIOWASTE DIGESTATES: RESULTS FROM POT EXPERIMENTS WITH AVENA SATIVA L. AND BRASSICA NAPUS L.
Christina-Luise ROSS, Institut für Agrar- und Stadtökologische Projekte, Biogenic Resources Dpt., GERMANY
Co-authors: K. Sensel-Gunke, V. Wilken, Institute of Agricultural and Urban Ecological Projects, Berlin, Germany; U. Herbst, Humboldt University Berlin, Berlin, Germany

4AV.2.28
BIO-CLC, A NOVEL APPROACH FOR ATTAINING NEGATIVE EMISSIONS OF CO2 AT REDUCED COST
Anders LYNGFELT, Chalmers University of Technology, Energy and Environment Dept., SWEDEN
Co-author: M. Nieminen, VTT, Espoo, Finland

4AV.2.29
MONITORING OF FUGITIVE METHANE EMISSIONS FROM BIOGAS PLANTS
Torsten REINELT, DBFZ-German Biomass Research Centre, Biochemical Conversion Dpt., GERMANY
Co-author: J. Liebetrau, DBFZ-German Biomass Research Centre, Leipzig, Germany

4AV.2.30
ENVIRONMENTAL ASSESSMENT OF BLACK LIQUOR CO-GASIFICATION WITH BY-PRODUCT BIOMASS RESOURCES
Johanna OLOFSSON, Lund University, Environmental and Energy Systems Studies Dpt., SWEDEN
Co-authors: L. Carvalho, J. Lundgren, E. Furusjö, E. Wetterlund, Luleå University of Technology, Sweden; P. Börjesson, Lund University, Sweden

4AV.2.33
WASTE GENERATED FROM BIOMASS COMBUSTION: WOOD ASH REUSE AS AN ADDITIVE IN COMPOSTING
Carla ASQUER, Sardegna Ricerche, Biomass and Biofuel Laboratory, ITALY
Co-authors: G. Cappai, G. De Gioannis, A. Muntoni, M. Piredda, D. Spiga, University of Cagliari, Department of Civil and Environmental Engineering and Architecture, Italy

4AV.2.34
POTENTIAL CARBON DIOXIDE SEQUESTRATION USING BIOMASS COMBUSTION ASH
Carla ASQUER, Sardegna Ricerche, Biomass and Biofuel Laboratory, ITALY
Co-authors: G. Ca, G. De Gioannis, A. Muntoni, A. Nieddu, M. Piredda, University of Cagliari, Department of Civil and Environmental Engineering and Architecture, Cagliari, Italy
CONFERENCE PROGRAMME

MONDAY, 12 JUNE 2017

4AV.2.37
NITROGEN ASSESSMENT IN SMALL SCALE BIOMASS HEATING SYSTEMS
Monika ENIGL, Bioenergy 2020+, AUSTRIA
Co-authors: C. Strasser, C. Schmidl, Bioenergy 2020+, Wieselburg, Austria; E. Hochbichler, University of Natural Resources and Life Sciences, Vienna, Austria

4AV.2.39
CLIMATE PERFORMANCE OF LIGNO-CELLULOSE-BASED BIOFUELS
Nathalie BECKER, Lund University, Technology and Society Dpt., SWEDEN
Co-authors: P. Börjesson, L. Björnsson, Lund University, Sweden

4AV.2.40
AN ADVANCED LCA-MODEL TARGETED TO BIOENERGY SYSTEMS AND TECHNOLOGIES: RECENT DEVELOPMENTS OF THE EASETECH LCA-MODEL
Concetta LODATO, Technical University of Denmark, Environmental Engineering Dpt., DENMARK
Co-authors: D. Tonini, A. Damgaard, T. F. Astrup, Department of Environmental Engineering, Technical University of Denmark, Lyngby, Denmark

4AV.2.45
BIOMASS ACCIDENT INVESTIGATIONS - MISSED OPPORTUNITIES FOR LEARNING AND ACCIDENT PREVENTION
Frank H. HEDLUND, COWI, DENMARK

16:45 - 17:00 BREAK

17:00 - 18:30
ORAL SESSION 1AO.7
Biomass Supply Logistics
ROOM: K21

CHAIRPERSONS:
Tapio RANTA, Lappeenranta University of Technology, FINLAND
Wolter ELBERSEN, Wageningen Research, THE NETHERLANDS

1AO.7.1
LOGISTICAL CASE STUDY FOR THE ARAGON REGION USING THE LOCAGISTICS TOOL
Bert ANNEVELINK, Wageningen Food & Biobased Research, Biorefinery & Sustainable Value Chains Dpt., THE NETHERLANDS
Co-authors: E. Annvealink, Wageningen Food & Biobased Research, Wageningen, The Netherlands; D. Garcia Galindo, S. Espatolero, CIRCE Foundation, Zaragoza, Spain; I. Staritsky, Wageningen Environmental Research (Alterra), Wageningen, The Netherlands

1AO.7.2
SIMULATION-BASED ASSESSMENT OF THE PROPERTIES AND PERFORMANCE OF A BIOMASS TERMINAL
Olli-Jussi KORPINEN, Lappeenranta University of Technology, Laboratory of Bioenergy, FINLAND
Co-authors: M. Aalto, T. Ranta, Lappeenranta University of Technology, Mikkelin, Finland; M. Virkkunen, J. Raitila, VTT Technical Research Centre of Finland, Jyväskylä, Finland
1AO.7.3
THE ENERGETIC RECOVER OF BIOMASS FROM RIVER MAINTENANCE: THE REBAF PROJECT
Simone PEDRAZZI, University of Modena and Reggio Emilia, Department of Engineering “Enzo Ferrari” - Bio-Energy Efficiency Laboratory (BEELAB), ITALY
Co-authors: G. Allesina, N. Morselli, M. Puglia, L. Barbieri, I. Lancellotti, P. Tartarini, University of Modena and Reggio Emilia, Modena, Italy; E. Ceotto, CREA-CIN, Bologna, Italy; L. Giorgini, University of Bologna, Italy; A. Malcevschi, University of Parma, Italy; C. Pederzini, Campogalliano Municipality, Modena, Italy

1AO.7.4
ANALYSIS OF A TRANSFORMATION PROCESS OF VINEYARD PRUNING INTO CHIPS BY A MICRO PLANT
Carlo BISAGLIA, CREA-ING, ITALY
Co-author: E. Romano, CREA-ING, Treviglio, Italy

1AO.7.5
IDENTIFICATION OF ENERGY HUBS FOR THE EXPLOITATION OF RESIDUAL BIOMASS IN AN AREA OF WESTERN SICILY
Salvatore LA BELLA, University of Palermo, Agricultural and Forest Sciences Dpt., ITALY
Co-authors: S. Orlando, C. Greco, T. Tuttolomondo, C. Leto, I. Cammalleri, University of Palermo, Italy

17:00 - 18:30
ORAL SESSION 2AO.8
Novel Technologies and Surface Chemistry in Large Utilities
ROOM: K2

CHAIRPERSONS:
Lasse ROSENDAHL, Aalborg University, DENMARK
Vladimir KUPRIANOV, Thammasat University, THAILAND

2AO.8.1
LOW-TEMPERATURE CORROSION IN BIOMASS-FIRED COMBUSTION PLANTS - ONLINE MEASUREMENT OF CORROSION RATES, ACID DEW POINTS AND DELIQUESCENCE CORROSION
Thomas BRUNNER, Bios Bioenergiesysteme, AUSTRIA
Co-authors: E. Reisenhofer, I. Obernberger, W. Kanzian, M. Forstinger, BIOS Bioenergiesysteme, Graz, Austria

2AO.8.2
INVESTIGATIONS ON THE FORMATION AND CLASSIFICATION OF SLAGS FROM COMBUSTION CHAMBERS OF BMHP PLANTS
Jürgen REICHELT, IBR, GERMANY
Co-authors: G. Pfrang-Stotz, Karlsruhe Institute of Technology - ITC, Germany; B. Bergfeldt, Karlsruhe Institute of Technology -ITC, Germany

2AO.8.3
ASSESSMENT OF ASH AGGLOMERATION AND FOULING IN COMBUSTION BY THEORETICAL AND EXPERIMENTAL BIOMASS FUELS CHARACTERIZATION
Lucio DE FUSCO, Université Catholique de Louvain, iMMC Dpt., BELGIUM
CONFERENCE PROGRAMME

MONDAY, 12 JUNE 2017

2AO.8.4
CHEMICAL-LOOPING COMBUSTION OF BIOMASS IN A 100 KW PILOT
Carl LINDERHOLM, Chalmers University of Technology Göteborg, Energy and Environment Dpt., SWEDEN
Co-authors: A. Lyngfelt, M. Rydén, M. Schmitz, Chalmers University of Technology, Göteborg, Sweden

2AO.8.5
BIOMASS CO-FIRING STUDIES IN PILOT SCALE COMBUSTION SYSTEMS: EFFECTS OF BIOMASS CO-FIRING METHODS TO IN-FURNACE NOX REDUCTION
Won YANG, Korea Institute of Industrial Technology, Thermochemical Energy System R&D Group, REPUBLIC OF KOREA

17:00 - 18:30
ORAL SESSION 3AO.9
Biorefinery Products
ROOM: K1

CHAIRPERSONS:
René VAN REE, Wageningen University, THE NETHERLANDS
Maria GEORGIADOU, European Commission, DG Research, BELGIUM

3AO.9.1
ALKANE PRODUCTION FROM BIOMASS: A CHEMOCATALYTIC LIQUID PHASE CELLULOSE-TO-NAPHTHA PROCESS
Aron DENEYER, KU Leuven, Center for Surface Chemistry and Catalysis, BELGIUM
Co-authors: M. Dusselier, B. Sels, KU Leuven, Heverlee, Belgium

3AO.9.2
MAKING THE BRIDGE BETWEEN BIOMASS AND HYDROCARBON IN A STANDARD REFINERY
Marcelo PEREIRA, Universidade Federal do Rio de Janeiro, Chemistry Dpt., BRAZIL
Co-authors: J. Pinto, L. Soter, Universidade Federal do Rio de Janeiro, Brazil

3AO.9.3
CARBOHYDRATES AND FURANS FROM SEAWEEDS FOR FUELS AND CHEMICALS
Wouter HUIJGEN, Energy Research Centre of the Netherlands, Biomass & Energy Efficiency Dpt., THE NETHERLANDS
Co-authors: G. van Hees, A.T. Smit, J.W. van Hal, Energy Research Centre of the Netherlands, Petten, The Netherlands

3AO.9.4
FISCHER-TROPSCH SYNTHESIS: EFFECTS OF FEEDSTOCK LOAD CHANGES REGARDING PRODUCT QUALITY AND CATALYST ATTENTION
Hannes GRUBER, TU Wien, Institute of Chemical, Environmental & Biological Engineering, AUSTRIA
CONFERENCE PROGRAMME
MONDAY, 12 JUNE 2017

3AO.9.5
PRODUCTION OF FUEL ETHANOL AND HIGHER ALCOHOLS FROM BIOMASS RESIDUE
Matthias Binder, Bioenergy 2020+, AUSTRIA
Co-authors: M. Summers, C. Liao, M. Hoffman, M. Hart, West Biofuels, Woodland, CA, USA; R. Seiser, U. Neimann, R. Cattolica, UC San Diego, La Jolla, CA, USA; R. Rauch, Bioenergy 2020+, Guessing, Austria

17:00 - 18:30
VISUAL PRESENTATIONS 3AV.3
Fundamental Investigation of Liquefaction Processes
ROOM: Poster Area

CHAIRPERSONS:
Wim Van Swaaij, University of Twente, THE NETHERLANDS
Jean-Michel Lavoie, Université de Sherbrooke, CANADA
Andreas Apfelbacher, Fraunhofer-Institut UMSICHT, GERMANY

3AV.3.1
PRODUCING SINGLE PHASE FAST PYROLYSIS CONDENSATES FROM STRAW BY STAGED CONDENSATION
Stefan Conrad, Fraunhofer-Institut UMSICHT, Biorefinery and Biofuels Dpt., GERMANY
Co-authors: T. Schulzke, C. Blajin, Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT, Oberhausen, Germany

3AV.3.2
A COMBINED PROCESS OF ACID EXTRACTION AND PYROLYSIS OF MANURE TO RECOVER PHOSPHORUS AND OBTAIN SOLID ADSORBENTS
Gloria GEA, University of Zaragoza, Chemical Engineering Dpt., SPAIN
Co-authors: M. Atienza-Martínez, N. Ruiz-Gómez, M. García, J. Ábrego, Aragón Institute for Engineering Research (I3A), Universidad de Zaragoza, Zaragoza, SPAIN; I. Fonts, Centro Universitario de la Defensa, Zaragoza, SPAIN

3AV.3.6
ENHANCING PYROLYSIS OILS’ THERMAL STABILITY BY SUPercRITICAL CARbon DIOXIDE AS A SOLVENT
Clarissa Baehr, Karlsruhe Institute of Technology, Institute of Catalysis Research and Technology, GERMANY

3AV.3.15
CHARACTERIZATION OF LIGHT AND HEAVY PHASE OF PYROLYSIS-OILS FROM DISTINCT BIOMASS FOR FURTHER UPGRADING REACTIONS
Caroline Carriel Schmitt, Karlsruhe Institute of Technology, IKFT Dpt., GERMANY
Co-authors: C. Boscaglia, K. Raffelt, N. Dahmen, Karlsruhe Institute of Technology IKFT, KARLSRUHE, Germany; M. Rapp, Karlsruhe Institute of Technology IMT, KARLSTUHE, Germany

3AV.3.19
PYROLYSIS AND IN-LINE REFORMING OF BIOMASS: EFFECT OF CATALYST DEACTIVATION ON HYDROGEN PRODUCTION
Laura Santamaria, University of the Basque Country, Chemical Engineering Dpt., SPAIN
Co-authors: A. Arregi, G. Lopez, M. Amutio, M. Artetxe, J. Alvarez, I. Barbarias, M. Olazar, University of the Basque Country (EHU/UPV), Bilbao, Spain
3AV.3.20
EFFECT OF PROMOTER LA2O3 ON NI/AL2O3 CATALYSTS IN THE STEAM REFORMING OF VOLATILES DERIVED FROM BIOMASS PYROLYSIS
Laura SANTAMARIA, University of the Basque Country, Chemical Engineering Dpt., SPAIN
Co-authors: G. Lopez, M. Amutio, M. Artetxe, J. Alvarez, I. Barbarias, A. Arregi, M. Olazar, University of the Basque Country (EHU-UPV), Bilbao, Spain

3AV.3.21
THERMOCHEMICAL CONVERSION OF TEXTILE WASTE TO USEFUL COMMODITIES
Roozbeh KALATEH, Heriot-Watt University, School of Engineering and Physical Sciences, UNITED KINGDOM
Co-author: A. Sanna, Heriot-Watt University, Edinburgh, United Kingdom

3AV.3.24
PYROLYSIS OF DIGESTED AND NON-DIGESTED MANURE. A COMPARATIVE STUDY
Gloria GEA, University of Zaragoza, Chemical Engineering Dpt., SPAIN
Co-authors: N. Ruiz-Gómez, F. Molinés, D. Aznar, J. Ábrego, M.B. Murillo, Thermochemical Processes Group (GPT), Aragón Institute for Engineering Research (I3A), Universidad de Zaragoza, Spain

3AV.3.26
PRODUCT DISTRIBUTION AND HEAT FOR PYROLYSIS OF DRY SEWAGE SLUDGE
Maria ATIENZA-MARTÍNEZ, Universidad de Zaragoza, Aragón Institute for Engineering Research, SPAIN
Co-authors: A. Morales, J. Ábrego, G. Gea, Aragón Institute for Engineering Research (I3A), Universidad de Zaragoza, Zaragoza, Spain; I. Fonts, Centro Universitario de la Defensa, Zaragoza, Spain

3AV.3.28
PY-GCXGC MS FOR STUDYING THERMAL AND CATALYTIC PYROLYSIS OF BIOMASS
Linda SANDSTRÖM, RISE Bioeconomy, SP ETC, SWEDEN
Co-author: A.-C. Johansson, SP Energy Technology Center AB, Piteå, Sweden

3AV.3.30
EVALUATION OF BIOCHAR BASED PRODUCTS AS HYDROTREATING CATALYSTS FOR THE PRODUCTION OF RENEWABLE FUEL
Roelf VENTER, North West University, Chemical and Minerals Engineering Dpt., SOUTH AFRICA
Co-authors: S. Marx, C. Schabort, J.G. Booysen, North-West University, Potchefstroom, South Africa

3AV.3.32
VALUE ENHANCEMENT OF MICROALGAE UTILIZATION EMPLOYING MILD EXTRACTION AND HYDROTHERMAL TREATMENT FOR PROTEIN AND BIO-OIL PRODUCTION
Chinnathan AREEPRAERT, Kasetsart University, Mechanical Engineering Dpt., THAILAND
Co-authors: A. Kuhavichanan, J. Kaharn, Kasetsart University, Bangkok, Thailand; P. Kusolkumbot, A. Suemanotham, S. Sirisattha, Thailand Institute of Scientific and Technological Research, Pathum Thani, Thailand

3AV.3.33
MICROWAVE PYROLYSIS OF LIGNOCELLULOSIC BIOMASS IN SOLVENTS TO PRODUCE FUELS, SUGARS AND HIGH VALUE CHEMICALS
Benjamin SHEPHERD, University of Nottingham, Chemical & Environmental Engineering, UNITED KINGDOM
Co-authors: J. Robinson, E.T. Kostas, University of Nottingham, University of Nottingham, United Kingdom
3AV.3.37
RELEASE AND TRANSFORMATION OF CHLORINE AND POTASSIUM DURING PYROLYSIS OF KCL-LOADED CELLULOSE
Haibo ZHAO, Tsinghua University, Thermal Engineering Dpt., P.R. CHINA
Co-authors: Q. Song, Q. Yao, Tsinghua University, Beijing, P.R. China

3AV.3.38
TWO-STEP PYROLYSIS OF BIOMASS AS A METHOD TO ENHANCE FUEL QUALITY OF PYROLYTIC LIQUIDS
Henry PERSSON, KTH Royal Institute of Technology, Material Science and Engineering Dpt., SWEDEN
Co-authors: P. Evangelopoulos, W. Yang, KTH Royal Institute of Technology, Stockholm, Sweden

3AV.3.39
CHARACTERISATION OF THE TWIN SCREW MIXING REACTOR USED FOR FAST PYROLYSIS OF BIOMASS
Robert GRANDL, Karlsruhe Institute of Technology, IKFT Dpt., GERMANY
Co-authors: A. Funke, N. Dahmen, J. Sauer, Karlsruhe Institute of Technology - IKFT Dpt., Eggenstein-Leopoldshafen, Germany

3AV.3.42
ALTERNATIVE FUELS FROM BIOMASS AND POWER (PBTL) - A CASE STUDY ON PROCESS OPTIONS, TECHNICAL POTENTIALS, FUEL COSTS AND ECOLOGICAL PERFORMANCE
Friedemann Georg ALBRECHT, DLR - Institut für Technische Thermodynamik, GERMANY
Co-author: R.-U. Dietrich, German Aerospace Center (DLR), Stuttgart, Germany

3AV.3.45
BIOMASS PYROLYSIS: A SET OF COMPLEMENTARY ANALYTICAL METHODS AVAILABLE AT CNRS
Francis BILLAUD, CNRS-LRGP, Process Engineering (Biomass) Dpt., FRANCE
Co-authors: Y. Le Brech, A. Dufour, CNRS, Nancy, France

3AV.3.48
CHARACTERIZATION OF DE- AND REPOLYMERIZATION PRODUCTS FROM LIGNIN HYDROTHERMAL TREATMENT BY ANALYTICAL PYROLYSIS
Mads JENSEN, Aarhus University, Dpt. of Chemistry, DENMARK
Co-authors: R.B. Madsen, J.B. Becker, B.B. Iversen, M. Glasius, Department of Chemistry, Aarhus University, Denmark

3AV.3.50
EFFECTS OF SUBSTITUENTS ON THE INITIAL PYROLYSIS MECHANISM OF ß-O-4 TYPE LIGNIN DIMER MODEL COMPOUNDS
Xiaoyan JIANG, North China Electric Power University, P.R. CHINA
Co-authors: Q. Lu, B. Hu, J. Liu, C.Q. Dong, North China Electric Power University, Beijing, P.R. China

3AV.3.52
REFORMING OF RAW PYROLYSIS OILS WITH A NEW CATALYST DERIVED FROM NICKEL FUNCTIONALIZATION OF A MINING RESIDUE
Nicolas ABATZOGLOU, Université de Sherbrooke, Chemical Engineering and Biotechnological Engineering Dpt., CANADA
Co-authors: J. Blanchard, A. Bali, M. Chamoumi, Université de Sherbrooke, Canada
CONFERENCE PROGRAMME
MONDAY, 12 JUNE 2017

3AV.3.58
17 YEARS OF INTERMEDIATE PYROLYSIS: A MAJOR STEP TOWARDS CHP APPLICABLE BIO-OILS
Johannes NEUMANN, Fraunhofer-Institut UMSICHT, Renewable Energy Dpt., GERMANY
Co-authors: A. Apfelbacher, N. Jäger, R. Daschner, S. Binder, A. Hornung, Fraunhofer-Institut UMSICHT, Sulzbach-Rosenberg, Germany

3AV.3.59
FAST PYROLYSIS OF PINE WOOD AT PRE-INDUSTRIAL SCALE: YIELDS AND PRODUCTS CHEMICAL-PHYSICAL CHARACTERISATION
Carla ASQUER, Sardegna Ricerche, Biomass and Biofuel Laboratory, ITALY
Co-authors: A. Pistis, C. Tugulu, E.A. Scano, Sardegna Ricerche, Cagliari, Italy; F. Floris, University of Cagliari, Cagliari, Italy

3AV.3.62
UPGRADING OF FAST PYROLYSIS BIO-OIL IN SUPERCRITICAL ALCOHOLS
Heuntae JO, Sungkyunkwan University, Mechanical Engineering Dpt., REPUBLIC OF KOREA
Co-authors: H. Prajitno, SungKyunKwan University, Jakarta, Indonesia; J. Kim, SungKyunKwan university, Suwon, Republic of Korea

3AV.3.63
ENERGY PRODUCTION FROM CHICKEN LITTER BY PYROLYSIS AND TORREFACTION
Olga LARINA, Joint Institute for High Temperatures of the Russian Academy of Sciences, RUSSIAN FEDERATION
Co-author: V. Zaichenko, Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS), Moscow, Russian Federation

3AV.3.65
UP-SCALING A PROTOTYPE TOP-LIT UP-DRAFT PYROLYSIS (TLUD-PYRO) REACTOR
Sajid LATIF, University of Hohenheim, Agricultural Engineering in the Tropics and Subtropics Dpt., GERMANY
Co-authors: K. Intani, C. Fink, J. Müller, Universität Hohenheim, Stuttgart, Germany

3AV.3.66
THERMOGRAVIMETRIC ANALYSIS OF BIOMASS PYROLYSIS USING A PEAK TEMPERATURE METHOD
Teresa MARTÍ-ROSSELLÓ, University of Strathclyde, Chemical and Process Engineering Dpt., UNITED KINGDOM
Co-authors: J. Li, L. Lue, University of Strathclyde, Glasgow, United Kingdom

3AV.3.68
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 Crook, University of Leeds, United Kingdom

19:30 - WELCOME RECEPTION
The City of Stockholm (Stockholms Stad) welcomes the EUBCE delegates and exhibitors from around the world to the Stockholm City Hall for a Reception on Monday the 12th of June 2017 at 7.00 pm.*

The Stockholm City Hall is one of Sweden's most famous buildings, and one of the capital's most visited tourist attractions. It is famous for its grand ceremonial halls and unique pieces of art and is the venue of the Nobel Prize banquet held on 10th of December each year. It also houses offices for 200 people including the Municipal Council. The exclusive atmosphere and historical setting of the Blue Hall makes it a popular venue for international award ceremonies and concerts. Ceremonies for the awarding of Doctorates and other academic degrees are also a regular feature of the Blue Hall and are much appreciated events.

* A shuttle bus will leave from Stockholmässen at 18:30