

VISUAL PRESENTATIONS

MONDAY, 12 JUNE 2017

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

Luc PELKMANS, VITO - Flemish Institute Technological Research, Separation & Conversion Processes Dpt., BELGIUM

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. Vijlele, 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. Pils, 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

Giuliano GRASSI, Secretary General, European Biomass Industry Association, BELGIUM

Co-authors: S. Ward, G. Hanley, UCD School, Dublin, Ireland; C. Burns, NNFFC, York, United Kingdom

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.1.28

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. Hynynen, 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
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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, Mikkeli, 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, Mikkeli Development Miksei Ltd, Mikkeli, 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
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4AV.1.51

OVERVIEW OF ADVANCED BIOFUELS TECHNOLOGIES: CURRENT STATUS AND CHALLENGES

Adrian O'CONNELL, European Commission, JRC, ITALY

Co-authors: S. Rocca, J. Giuntoli, European Commission, Joint Research Centre (JRC), Petten, The Netherlands; M. Padella, A. O'Connell, M. Kousoulidou, L. Marelli, European Commission, Joint Research Centre (JRC), 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

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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
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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 Petterson, SP Technical Research Institute of Sweden, Gothenburg, Sweden

4AV.1.59

SMART REGIONAL PLANNING: UNLOCKING INNOVATIVE RESOURCE USE AND ECONOMIC COMPETITIVENESS- A LOOK AT BIOMASS ENERGY INFRASTRUCTURE PROVISION AT LOCAL MUNICIPAL SCALE IN ETHEKWINI AND ILEMBE, SOUTH AFRICA

Liesel BEIRES, CSIR, Energy Centre, SOUTH AFRICA

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4AV.1.61

SECTORIAL INDICATORS FOR THE MONITORING OF THE EUROPEAN BIOECONOMY STRATEGY

Tévécia RONZON, European Commission, JRC, JRC.D.4 Economics of Agriculture, SPAIN

Co-authors: A. Mainar Causape, R. M'barek, E. Ferrari, European Commission Joint Research Center (JRC), Seville, SPAIN

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

4AV.1.68

INNOVATIVE BIOMASS CONVERSION IN AFRICA

Ivar VIRGIN, Stockholm Environment Institute, Resources and Development Dpt., SWEDEN

Co-authors: J. Ecuru, Icipe, Biolnnovate, Kenya, Kenya; A.J. Komakech, Makerere University, Kampala, Uganda; S. Leta, Addis Ababa University, Addis Ababa, Ethiopia

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

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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. Thrän, UFZ, Leipzig, Germany

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.2.9

LIFE CYCLE APPROACH FOR ENERGY AND ENVIRONMENTAL ANALYSIS OF BIOMASS AND COAL CO-FIRING IN DIFFERENT LARGE SCALE CO-GENERATION UNITS

Jaroslav 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

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4AV.2.20

EFFECT OF WOOD PRE-TREATMENT ON OPERATING CONDITIONS, GASEOUS AND PARTICULATE EMISSIONS OF A PELLET STOVE - FIRST ANALYTICAL CAMPAIGN

Paul GENEVRA, Université du Littoral Côte d'Opale, CCM Dpt., FRANCE

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4AV.2.22

ASSESSING POSSIBLE EMISSION REDUCTIONS IN THE ENERGY MIX: UNCONVENTIONAL GAS OR MISCANTHUS BIOMASS?

Iosif GYPARIS, University of Piraeus Research Center, GREECE

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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, Y. 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

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4AV.2.26

ASSESSMENT OF BIOGAS PRODUCTION PATHWAYS: APPLICATION TO PORTUGAL

Patrícia BAPTISTA, IST-ID, Mechanical Engineering, PORTUGAL

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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

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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

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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

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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.2.43

THE OCCUPATIONAL HEALTH EFFECTS OF TORREFIED BIOCOAL PELLETS

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

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

4AV.2.45

BIOMASS ACCIDENT INVESTIGATIONS - MISSED OPPORTUNITIES FOR LEARNING AND ACCIDENT PREVENTION

Frank H. HEDLUND, COWI, DENMARK

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

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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

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3AV.3.6

ENHANCING PYROLYSIS OILS' THERMAL STABILITY BY SUPERCRITICAL CARBON DIOXIDE AS A SOLVENT

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3AV.3.15

CHARACTERIZATION OF LIGHT AND HEAVY PHASE OF PYROLYSIS-OILS FROM DISTINCT BIOMASS FOR FURTHER UPGRADING REACTIONS

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3AV.3.17

EXPERIMENTAL ESTIMATION OF THE HEAT REQUIREMENTS OF BIOMASS PYROLYSIS UNDER SELF-GENERATED ATMOSPHERE

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3AV.3.19

PYROLYSIS AND IN-LINE REFORMING OF BIOMASS: EFFECT OF CATALYST DEACTIVATION ON HYDROGEN PRODUCTION

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3AV.3.20

EFFECT OF PROMOTER LA2O3 ON NI/AL2O3 CATALYSTS IN THE STEAM REFORMING OF VOLATILES DERIVED FROM BIOMASS PYROLYSIS

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3AV.3.21

THERMOCHEMICAL CONVERSION OF TEXTILE WASTE TO USEFUL COMMODITIES

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3AV.3.24

PYROLYSIS OF DIGESTED AND NON-DIGESTED MANURE. A COMPARATIVE STUDY

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3AV.3.26

PRODUCT DISTRIBUTION AND HEAT FOR PYROLYSIS OF DRY SEWAGE SLUDGE

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3AV.3.28

PY-GCXGC MS FOR STUDYING THERMAL AND CATALYTIC PYROLYSIS OF BIOMASS

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3AV.3.30

EVALUATION OF BIOCHAR BASED PRODUCTS AS HYDROTREATING CATALYSTS FOR THE PRODUCTION OF RENEWABLE FUEL

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3AV.3.32

VALUE ENHANCEMENT OF MICROALGAE UTILIZATION EMPLOYING MILD EXTRACTION AND HYDROTHERMAL TREATMENT FOR PROTEIN AND BIO-OIL PRODUCTION

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3AV.3.33

MICROWAVE PYROLYSIS OF LIGNOCELLULOSIC BIOMASS IN SOLVENTS TO PRODUCE FUELS, SUGARS AND HIGH VALUE CHEMICALS

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3AV.3.37

RELEASE AND TRANSFORMATION OF CHLORINE AND POTASSIUM DURING PYROLYSIS OF KCL-LOADED CELLULOSE

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3AV.3.38

TWO-STEP PYROLYSIS OF BIOMASS AS A METHOD TO ENHANCE FUEL QUALITY OF PYROLYTIC LIQUIDS

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3AV.3.39

CHARACTERISATION OF THE TWIN SCREW MIXING REACTOR USED FOR FAST PYROLYSIS OF BIOMASS

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3AV.3.42

ALTERNATIVE FUELS FROM BIOMASS AND POWER (PBTL) - A CASE STUDY ON PROCESS OPTIONS, TECHNICAL POTENTIALS, FUEL COSTS AND ECOLOGICAL PERFORMANCE

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3AV.3.45

BIOMASS PYROLYSIS: A SET OF COMPLEMENTARY ANALYTICAL METHODS AVAILABLE AT CNRS

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3AV.3.48

CHARACTERIZATION OF DE- AND REPOLYMERIZATION PRODUCTS FROM LIGNIN HYDROTHERMAL TREATMENT BY ANALYTICAL PYROLYSIS

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3AV.3.50

EFFECTS OF SUBSTITUENTS ON THE INITIAL PYROLYSIS MECHANISM OF β -O-4 TYPE LIGNIN DIMER MODEL COMPOUNDS

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3AV.3.52

REFORMING OF RAW PYROLYSIS OILS WITH A NEW CATALYST DERIVED FROM NICKEL FUNCTIONALIZATION OF A MINING RESIDUE

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3AV.3.58

17 YEARS OF INTERMEDIATE PYROLYSIS: A MAJOR STEP TOWARDS CHP APPLICABLE BIO-OILS

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3AV.3.59

FAST PYROLYSIS OF PINE WOOD AT PRE-INDUSTRIAL SCALE: YIELDS AND PRODUCTS CHEMICAL-PHYSICAL CHARACTERISATION

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3AV.3.62

UPGRADING OF FAST PYROLYSIS BIO-OIL IN SUPERCRITICAL ALCOHOLS

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3AV.3.63

ENERGY PRODUCTION FROM CHICKEN LITTER BY PYROLYSIS AND TORREFACTION

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3AV.3.65

UP-SCALING A PROTOTYPE TOP-LIT UP-DRAFT PYROLYSIS (TLUD-PYRO) REACTOR

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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

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3AV.3.68

A SOLAR DRIVEN THERMOCHEMICAL PROCESS FOR THE PRODUCTION OF BIOFUEL

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3AV.3.69

CHARACTERIZATION OF BIOCHAR PRODUCED FROM VARIOUS BIOMASS BY SLOW PYROLYSIS

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3AV.3.70

COMPARATIVE ANALYSIS OF FAST PYROLYSIS PRODUCTS OF BEECH WOOD, FLAX SHIVES AND WOODY PSEUDO- COMPONENTS

Chetna MOHABEER, INSA Rouen, FRANCE

Co-authors: L. Abdelouahed, S. Marcotte, B. Taouk, INSA, Rouen, FRANCE

08:30 - 10:00

VISUAL PRESENTATIONS 2BV.1

Innovative Methods and Tools for Small and Large Scale Combustion Technologies Modelling. Solid Biofuels Characterisation and Production Systems Assessment

ROOM: Poster Area

CHAIRPERSONS:

Lasse ROSENDAHL, Aalborg University, DENMARK

Juan Esteban CARRASCO, CIEMAT, SPAIN

Marco BARATIERI, Free University of Bolzano, ITALY

2BV.1.2

INFLUENCE OF THE GRANULOMETRY AND WATER CONTENT ON THE ENERGY CONSUMPTION OF MILLING SORGHUM AND BAMBOO

Bruno GODIN, Walloon Agricultural Research Center, Biomass, Bioproducts and Energy Unit, BELGIUM

Co-authors: A. Arimont, M. Temmerman, J. Delcarte, Walloon Agricultural Research Center - CRA-W, Gembloux, Belgium

2BV.1.3

INFLUENCE OF THE TYPE OF MILL ON THE ENERGY CONSUMPTION OF MILLING BIOMASS

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2BV.1.4

INFLUENCE OF REACTION PARAMETERS OF HYDROTHERMAL CARBONIZATION ON THE ALKALI AND FOULING INDEX OF HYDROTHERMALLY CARBONIZED BIOMASS

Lynn HANSEN, TU Munich, Mechanical Engineering Dpt., GERMANY

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2BV.1.5

BRIQUETTING LIKE AN ALTERNATIVE TO BENEFIT THE SUGAR CANE HARVEST RESIDUES (RAC) IN THE COGENERATION PROCESS ON THE COLOMBIAN SUGAR CANE INDUSTRY

Julian LUCUARA, Cenicana, COLOMBIA

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2BV.1.7

INFLUENCE OF ROAD SALTING ON CHLORINE CONTENT OF ROAD SIDE WOODY BIOMASS

Harald THORWARTH, Rottenburg University of Applied Sciences, Firing Technology Dpt., GERMANY

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2BV.1.10

INFLUENCE OF OUTDOORS STORAGE OF SHRUB BIOMASS ON EMISSIONS AND SLAGGING DURING ITS COMBUSTION

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2BV.1.13

THE IMPACT OF BLENDING METHOD AND THE ASHING TEMPERATURE ON THE MELTING CHARACTERISTICS OF ASHES OF BIOMASS BLENDS

Siim LINK, Tallinn University of Technology, Energy Technology Dpt., ESTONIA

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2BV.1.15

NUMERICAL SIMULATION OF DEVOLATILIZATION OF WOOD LOGS AND PRESSURE GENERATION IN THE WOOD LOG CENTER

Inge HABERLE, Norwegian University of Science and Technology, Energy and Process Engineering Dpt., NORWAY

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2BV.1.16

TRANSIENT CFD SIMULATIONS OF WOOD LOG COMBUSTION IN A WOOD STOVE

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2BV.1.18

GRATEADVANCE - ADVANCED ADJUSTABLE GRATE SOLUTIONS FOR FUTURE FUEL FLEXIBLE BIOMASS COMBUSTION TECHNOLOGIES

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2BV.1.19

BIOMASS MATERIAL FOR RESEARCH WORK - REPRESENTATIVITY, SAMPLING, AND SAMPLE HANDLING

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2BV.1.20

METHANE EMISSIONS FROM SMALL SCALE APPLIANCES BURNING WOOD AND PELLETS

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2BV.1.21

OPTIMIZATION OF THE COMBUSTION OF VEGETABLE OILS IN A SEMI INDUSTRIAL BOILER

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2BV.1.22

MAIN GOAL OF THIS RESEARCH - TO PROMOTE A MORE EFFICIENT USE OF WHEAT STRAW FOR CLEANER ENERGY PRODUCTION BY CO-FIRING STRAW PELLETS WITH SOLID AND GASEOUS FUELS (WOOD PELLETS, PROPANE) AND ASSESSING

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2BV.1.23

THE ROLE OF AEROSOLS FROM BIOMASS COMBUSTION

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2BV.1.27

RESEARCH FACILITY ASSESSMENT FOR BIOMASS COMBUSTION IN MOVING GRATE FURNACE

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2BV.1.28

UTILIZATION OF NATURALLY OCCURRING MATERIALS IN THE BIO-BASED CHEMICAL LOOPING COMBUSTION

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2BV.1.29

COUPLED VENTILATION AND FLUE GAS HEAT EXCHANGER SYSTEM FOR USE IN LOW ENERGY DWELLINGS: AN INVESTIGATION USING DYNAMIC ENERGY SIMULATIONS.

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2BV.1.30

DEVELOPMENT OF AN INNOVATIVE LOW-COST/LOW-EMISSION PELLET-BASED STOVE TECHNOLOGY

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2BV.1.32

CO₂ CAPTURE FROM COMBUSTION OF BIOMASS VOLATILES WITH A CHEMICAL-LOOPING COMBUSTION PROCESS

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2BV.1.34

EVALUATION OF THE BIO-OIL COMBUSTION PRODUCED FROM COCONUT ENDOCARP VIA NUMERICAL STUDIES

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2BV.1.36

EFFECTIVE SYSTEM INTEGRATION OF DECENTRALISED BIOMASS COGENERATION PLANTS

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2BV.1.37

EVALUATION OF ACOUSTIC INTENSIFICATION IN AN HYBRID WATER/FIRE TUBE BOILER'S FURNACE BURNING EUCALYPTUS CHIPS

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2BV.1.38

BEREAL-METHOD FOR PELLET STOVES: FIELD TEST AND ROUND ROBIN

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2BV.1.39

BEREAL: A PRACTICAL TEST METHOD FOR FIREWOOD ROOMHEATERS - REAL-LIFE RELEVANCE AND REPRODUCIBILITY

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2BV.1.40

THE USE OF OPEN SORPTION TECHNOLOGY FOR HEAT RECOVERY IN BIOMASS COMBUSTION APPLICATIONS

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2BV.1.41

SLAGGING PREVENTION AND PLANT OPTIMIZATION BY MEANS OF NUMERICAL SIMULATION

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2BV.1.43

EXPERIMENTAL EVALUATION OF INTERACTIONS BETWEEN K, CA AND P AND MN/SI-BASED OXYGEN CARRIERS

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2BV.1.44

NUMERICAL ANALYSIS FOR THE LOW-EMISSION DUAL FUEL COMBUSTION IN A BOILER TYPE OP-230

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2BV.1.45

PERFORMANCE EVALUATION OF A WASTE TO ENERGY POWER PLANT: AN EXERGETIC APPROACH

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2BV.1.48

INVESTIGATION OF CONGLOMERATES IN THE FUEL BED AND DEPOSITS ON HEAT EX-CHANGER TUBES IN A FLUIDIZED BED PILOT PLANT

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2BV.1.49

EFFECTS OF FUEL PROPERTIES ON COMBUSTION AND EMISSIONS OF A DIRECT INJECTION DIESEL ENGINE FUELED WITH N-BUTANOL-DIESEL BLENDS

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2BV.1.50

PYROLYSIS OIL COMBUSTION IN A HORIZONTAL BOX FURNACE WITH AN EXTERNALLY MIXED NOZZLE

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2BV.1.51

ENERGETIC POTENTIAL OF TROPICAL BIOMASSES

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2BV.1.52

CO-COMBUSTION OF COAL AND BIOMASS: COMBUSTION CHARACTERISTICS, FOULING AND BED AGGLOMERATION TENDENCY

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2BV.1.53

NOVEL ELECTRICAL CHARGING CONDENSING HEAT EXCHANGER FOR PARTICLE EMISSION REDUCTION AND EFFICIENT HEAT RECOVERY IN SMALL BOILERS

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2BV.1.56

THE COMBUSTION CHARACTERISTICS AND DIFFERENCES IN NITROGEN CONTENT OF UK GROWN BIRCH AND SITKA SPRUCE

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2BV.1.57

CFD EVALUATION OF ASH SLAGGING TENDENCY DEPENDING ON BURNER LEVELS

Kieseop KANG, Sungkyunkwan University, SKKU School of Mechanical Engineering, REPUBLIC OF KOREA

Co-authors: P. Jongkeun, R. Changkook, Sungkyunkwan University, Suwon-Si, Gyeonggi-Do, REPUBLIC OF KOREA

13:30 - 15:00

VISUAL PRESENTATIONS 5BV.2

Integration of Bioenergy with other Renewable and Conventional Energy Sources

ROOM: Poster Area

CHAIRPERSONS:

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

Ursel HORNING, Karlsruhe Institute of Technology, GERMANY

Jeffrey SKEER, IRENA-International Renewable Energy Agency, GERMANY

5BV.2.1

BIOBATTERY: INTEGRATION OF THERMO-CATALYTIC REFORMING, PRESSURE SWING ADSORPTION AND HYDROTREATMENT FOR THE PRODUCTION OF 100% GREEN FUELS, BIOCHAR, HEAT AND POWER

Miloud OUADI, Fraunhofer-Institut UMSICHT, GERMANY

Co-authors: S. Binder, A. Hornung, Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany

5BV.2.2

ENERGETIC ANALYSIS OF INNOVATIVE HYBRID BIOMASS/SOLAR ORGANIC RANKINE CYCLES (ORCS) FOR MICRO-SCALE CHP APPLICATIONS

Angelo ALGIERI, University of Calabria, Mechanical, Energy and Management Engineering Dpt., ITALY

Co-authors: P. Morrone, F. Rovense, University of Calabria, Arcavacata di Rende, Italy

5BV.2.3

BIOENERGY INTEGRATION IN ETHANOL PLANTS: AN ALTERNATIVE END USE FOR BIOGAS TO ENABLE 2G ETHANOL PRODUCTION

Alessandro SANCHES-PEREIRA, University of Sao Paulo, Institute of Energy and Environment, BRAZIL

Co-authors: C. L. Joppert, M.M. Santos, H.K.M. Costa, S.T. Coelho, Institute of Energy and Environment of the University of São Paulo, São Paulo, Brazil

5BV.2.5

RELIABLE BIO-BASED REFINERY INTERMEDIATES - BIOMATES

Tim SCHULZKE, Fraunhofer-Institut UMSICHT, Biorefinery and Biofuels Dpt., GERMANY

Co-authors: V. Heil, Fraunhofer UMSICHT, Oberhausen, Germany; S. Bezergianni, CERTH/CPERI, Thessaloniki, Greece; N. Rettenmaier, ifeu - Institut für Energie- und Umweltforschung Heidelberg GmbH, Heidelberg, Germany; U. Pfisterer, BP Europa SE, Hamburg, Germany; M. Martin, Ranidosro, Prague, Czech Republic; M. Mulder, Hydrogen Efficiency Technologies (HyET) BV, Arnhem, The Netherlands; R. Diaz-Chavez, Imperial College of Science, Technology and Medicine, London, United Kingdom; D. Kubicka, University of Chemistry and Technology Prague, Czech Republic

5BV.2.6

THE COMBINATION OF BIOMASS WITH SOLAR THERMAL ENERGY AND OTHER RENEWABLES FOR SMALL HEATING GRIDS

Dominik RUTZ, WIP, Biomass Unit, GERMANY

Co-authors: R. Mergner, R. Janssen, WIP, Munich, Germany; M. Hofmeister, L. Laurberg Jensen, PlanEnergi, Århus, Denmark; C. Doczekal, R. Zweiler, Güssing Energy Technologies GmbH, Güssing, Austria; T. Puksec, N. Duic, University of Zagreb (UNIZAG FSB), Zagreb, Croatia; R. Sunko, B. Sunko, Skupina fabrika d.o.o., Ljutomer, Slovenia Republic; N. Markovska, M. Karanfilovska, International Centre for Sustainable Development of Energy, Water and Environment Systems, Skopje, Macedonia; N. Rajkovic, I. Batas Bjelic, School of Electrical Engineering and Computer Science, Belgrade, Serbia; A. Kazagic, A. Ademovic-Tahirovic, Elektroprivreda, Sarajevo, Bosnia and Herzegovina; S. Jerotic, Municipality of Sabac, Serbia; E. Fejzovic, Municipality of Visoko, Bosnia and Herzegovina; T. Zrinski, Municipality of Ljutomer, Slovenia Republic

5BV.2.9

ELECTRICITY PRODUCTION VIA BIOGAS PLANTS IN ELECTRICITY GRIDS WITH A HIGH SHARE OF INSTALLED VOLATILE POWER PRODUCERS

Katharina BÄR, Technische Hochschule Ingolstadt, Institute of New Energy Systems, GERMANY

Co-authors: M. Sonnleitner, W. Zörner, Technische Hochschule Ingolstadt, Germany

5BV.2.12

UNCERTAINTY IN CLIMATE BENEFITS OF BIOENERGY WITH CARBON CAPTURE AND STORAGE

Steeff HANSEN, Radboud University, Environmental Science Dpt., THE NETHERLANDS

Co-authors: Z.J.N. Steinmann, M.A.J. Huijbregts, Radboud University, Nijmegen, The Netherlands

15:15 - 16:45

VISUAL PRESENTATIONS 3BV.3

Biomass to Biobased Products and Bioenergy

ROOM: Poster Area

CHAIRPERSONS:

Maria GEORGIADOU, European Commission, DG Research, BELGIUM

Gerfried JUNGMEIER, Joanneum Research Forschungsgesellschaft, AUSTRIA

3BV.3.1

TECHNO-ECONOMIC ANALYSIS OF A HTL-BASED ALGAE BIOREFINERY

Kay SUWELACK, Fraunhofer INT, GERMANY

Co-authors: D. López Barreiro, F. Ronsse, W. Prins, Department of Biosystems Engineering, Ghent University, Ghent, Belgium; U. Hornung, Institute for Catalysis Research and Technology, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany; A. Kruse, Life Cycle Assessment of Renewable Resources (440f), Institute of Agricultural Engineering, University of Hohenheim, Stuttgart, Germany

3BV.3.5

BIOETHANOL AND XYLOOLIGOSACCHARIDES PRODUCTION FROM AGRICULTURAL RESIDUE

Paloma MANZANARES, CIEMAT, Biofuels Unit, Renewable Energy Division, SPAIN

Co-authors: C. Álvarez, A. González, M. Ballesteros, M.J. Negro, P. Manzanares, I. Ballesteros, J.M. Oliva, F. Saéz, CIEMAT, Madrid, SPAIN

3BV.3.6

BIOGAS BIOREFINERY: TECHNO-ECONOMIC ANALYSIS OF SEVERAL PATHS

Andrey KUTSAY, Czech Technical University in Prague, Process Engineering Dpt., CZECH REPUBLIC

Co-authors: Lukas Kratky, Tomas Jirout, Czech Technical University in Prague, Prague, Czech Republic

3BV.3.7

SUSTAINABILITY ANALYSIS OF CO-PRODUCING HIGH VALUE-ADDED BIOPRODUCTS AND BIOFUELS IN INTEGRATED BIOREFINERIES USING LIGNOCELLULOSIC RESIDUES. THE CASE OF OLIVE TREE PRUNING

Arturo SANCHEZ, Centro de Investigacion y de Estudios Avanzados del IPN, Bioenergy Futures Laboratory, MEXICO

Co-author: G. Rendon-Acosta, Laboratorio de Futuros en Bioenergía, Centro de Investigación y de Estudios Avanzados (CINVESTAV), Zapopan, Mexico

3BV.3.8

WELL-TO-TANK DATA FOR ADVANCED TAILOR-MADE BIOFUEL ALTERNATIVES

Stefan HEYNE, CIT Industriell Energi, SWEDEN

Co-authors: R. Hackl, IVL Swedish Environmental Research Institute, Stockholm, Sweden; K. Pettersson, SP Technical Research Institute of Sweden, Göteborg, Sweden; S. Harvey, M. Grahn, Chalmers University of Technology, Göteborg, Sweden

3BV.3.9

SIMULATION TOOL FOR A QUICK EVALUATION OF MOLECULES AS GASOLINE ALTERNATIVES - A CASE STUDY WITH BIO-OIL DERIVED COMPOUNDS IN BIOREFINERIES

Dominic GSCHWEND, Paul Scherrer Institute, ENE Dpt., SWITZERLAND

Co-authors: P. Soltic, EMPA, Dübendorf, Switzerland; S. Müller, F. Vogel, PSI, Villigen, Switzerland

3BV.3.10

THERMAL CONVERSION OF LIGNIN-RICH RESIDUES FROM LIGNOCELLULOSE BIOREFINING: FROM THERMOGRAVIMETRY TO UPDRAFT GASIFICATION

Francesco ZIMBARDI, ENEA Research Centre, Energy Technologies Department, ITALY
Co-authors: N. Cerone, M. Prestipino, M. Carnevale, A. Villone, ENEA, Rotondella, ITALY

3BV.3.11

LIGNOCELLULOSE-BASED INTEGRATED BIOREFINERY TECHNOLOGY IN TAIWAN TOWARDS BIO-ECONOMIC DEVELOPMENT

Chiung-Fang HUANG, Institute of Nuclear Energy Research, Division of Chemistry, TAIWAN

Co-authors: T. Y. Ma, W. H. Chen, G. L. Guo, W. S. Huang, Institute of Nuclear Energy Research, Taoyuan, Taiwan

3BV.3.12

INNOVATIVE CHAR-BASED CATALYSTS FOR THE CONVERSION OF BIOMASS-DERIVED SYNGAS TO LIQUID HYDROCARBONS

Vittoria BENEDETTI, Free University of Bolzano, Faculty of Science and Technology, ITALY

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

3BV.3.13

USE OF EXPERIMENTAL CATALYSTS FOR PRODUCTION OF BIO-METHANE FROM BIOMASS: TESTS OF METHANATION WITH REAL SYNGAS AND PERFORMANCE EVALUATIONS

Donatella BARISANO, ENEA Research Centre, Energy Technologies Dpt., ITALY

Co-authors: A. Lotierzo, A. Villone, R. Agostini, F. Nanna, ENEA, Rotondella, Italy; F. Basile, E. Lombardi, University of Bologna, Italy

3BV.3.14

INFLUENCE OF SULFUR COMPONENTS ON THE CATALYTIC MIXED ALCOHOL SYNTHESIS BASED ON WOOD GAS DERIVED FROM BIOMASS STEAM GASIFICATION

Matthias BINDER, Bioenergy 2020+, AUSTRIA

Co-authors: R. Rauch, Bioenergy 2020+, Güssing, Austria; H Hofbauer, TU Wien, Vienna, Austria

3BV.3.15

THE PREPARATION METHOD COMPARISON OF NICKEL BASED CARBON FIBERS-ALUMINA COMPOSITE SUPPORT FOR THE CATALYTIC REFORMING OF BIOGAS

Min SONG, Southeast University, School of Energy and Environment, P.R. CHINA

Co-authors: L. Yu, C. Wu, Y. Wei, B. Jin, Southeast University, Nanjing, P.R. China

3BV.3.16

ORGANOSOLV TREATED BARLEY STRAW FOR INDUSTRIAL LIQUID WASTE CLEANING

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

Co-authors: I. Salapa, D. Politi, G. Giakoumakis, University of Piraeus, Greece

3BV.3.18

**EFFICIENT FRACTIONATION OF CORN STOVER BY ORGANOSOLV
PRETREATMENT AND ENZYMATIC HYDROLYSIS OF THE OBTAINED
CELLULOSIC RESIDUE**

Francesco ZIMBARDI, ENEA Research Centre, Energy Technologies Department, ITALY
Co-authors: E. Viola, V. Gallo, V. Valeri, ENEA, Rotondella, Italy

3BV.3.19

**HYDROGEN FREE CATALYTIC CONVERSION OF LIGNIN COUPLED WITH
BIOMASS FRACTIONATION**

Maxim GALKIN, Stockholm University, Organic Chemistry Dpt., SWEDEN
Co-authors: A. T. Smit, W. J. J. Huijgen, Energy Research Centre of the Netherlands, Petten, The Netherlands; E. Subbotina, J. S. M. Samec, Stockholm University, Stockholm, Sweden; K. A. Artemenko, J. Bergquist, Uppsala University, Uppsala, Sweden

3BV.3.20

LIGNOCELLULOSIC BIOREFINERIES BASED ON MIXED CULTURES

Idania VALDEZ-VAZQUEZ, Universidad Nacional Autónoma de México, Instituto de Ingeniería, MEXICO
Co-author: A. Sanchez, CINVESTAV, Guadalajara, Mexico

3BV.3.22

**VALORIZATION OF EXTRACTED OLIVE OIL POMACE RESIDUE THROUGH
CONVERSION INTO BIOETHANOL AND BIOPRODUCTS**

Paloma MANZANARES, CIEMAT, Biofuels Unit, Renewable Energy Division, SPAIN
Co-authors: I. Ballesteros, JM Oliva, A. Gonzalez, M.J. Negro, M. Ballesteros, CIEMAT, Madrid, Spain

3BV.3.23

**PROPERTIES AND POSSIBLE APPLICATIONS FOR LIGNIN STREAMS
OBTAINED FROM RICE STRAW PROCESSING**

Solange MUSSATTO, Technical University of Denmark, Novo Nordisk Foundation Center for Biosustainability, DENMARK
Co-authors: R.C.A. Castro, I.S. Ferreira, I.C. Roberto, Department of Biotechnology, Engineering College of Lorena, University of São Paulo, Lorena / SP, Brazil

3BV.3.26

**VALORISATION OF BLACK LIQUOR CARBOHYDRATES BY MEANS OF
HALOALKALINE MICROORGANISMS**

Viktoria LEITNER, Kompetenzzentrum Holz, WCB Dpt., AUSTRIA
Co-authors: S. Lehner, F. Gattermayr, Kompetenzzentrum Holz, Linz, Austria

3BV.3.27

**BIOFUEL PRECURSORS FROM BEER BAGASSE UNDER MICROWAVE
RADIATION.**

Andrés MORENO, University of Castilla-La Mancha, Organic Chemistry Dpt., SPAIN
Co-authors: A. Lorente, C. Lucas-Torres, M.P. Sanchez-Verdu, B. Cabañas, UCLM, Ciudad Real, Spain

3BV.3.28

**BIOCOMPATIBILITY PROFILING FOR CORNCOB BENEFICIATION TO
BIOCOMMODITIES IN MOLTEN ZINC CHLORIDE SALT PRE-TREATMENT MEDIUM**

Michael DARAMOLA, University of the Witwatersrand, School of Chemical and Metallurgical Engineering, SOUTH AFRICA
Co-authors: A. A. Awosusi, A. O. Ayeni, University of the Witwatersrand, Johannesburg, South Africa; R. Adeleke, Agricultural Research Council – Institute for Soil, Climate, Pretoria, South Africa

3BV.3.29

MICROWAVE CATALYTIC CONVERSION OF CELLULOSE INTO BIOFUEL PRECURSORS AND ITS APPLICATION TO LIGNOCELLULOSIC WASTES.

Andrés MORENO, University of Castilla-La Mancha, Organic Chemistry Dpt., SPAIN
Co-authors: C. Lucas-Torres, A. Lorente, M.P. Sánchez-Verdú, B. Cabañas, UCLM, Ciudad Real, Spain

3BV.3.30

OLIVE MILL LEAVES AS A RAW MATERIAL IN A BIOREFINERY APPROACH. COMPARISON OF SUGAR RECOVERIES AFTER DELIGNIFICATION BY ALKALINE-PEROXIDE AND ORGANOSOLV PRETREATMENTS

Encarnacion RUIZ RAMOS, Universidad de Jaen, Chemical, Environmental and Materials Engineering Dpt., SPAIN
Co-authors: I. Romero, J.C. López-Linares, J. Mondaray, M.J. Díaz-Villanueva, C. Cara, M. Moya, E. Castro, Universidad de Jaén, Spain

3BV.3.32

CONTRIBUTING TO A JATROPHA-BASED BIOREFINERY: SEED CAKE VALORISATION FOR BIOH₂

Rita FRAGOSO, Instituto Superior de Agronomia, Universidade de Lisboa, DCEB Dpt., PORTUGAL
Co-authors: S. Lopes, ISA-UL, Lisboa, Poland; E. Duarte, ISA-UL, Lisboa, Portugal; P. A.S.S. Marques, LNEG, Lisboa, Portugal

3BV.3.33

HYDROTREATING OF BIO-OIL FROM THERMO-CATALYTIC REFORMING - A NOVEL BIOREFINING ROUTE TO RENEWABLE CHEMICALS AND FUEL

Andreas HORNUNG, Aston University, UNITED KINGDOM
Co-author: N. Schmitt, Fraunhofer Institute for Environmental, Safety, and Energy Technology, Sulzbach-Rosenberg, Germany

3BV.3.35

SAPROPEL AND LIME AS A BINDER FOR DEVELOPMENT OF COMPOSITE MATERIALS

Vaira OBUKA, University of Latvia, Environmental Science Dpt., LATVIA
Co-authors: M. Sinka, Riga Technical University, Latvia; V. Nikolajeva, L. Lazdina, M. Klavins, University of Latvia, Riga, Latvia; S. Kostjukova, LLC Baltic Clay Minerals, Riga, Latvia

3BV.3.36

PRODUCTION OF 1,3-PRODPANEDIOL FROM GLYCEROL USING A NOVEL ISOLATE LACTOBACILLUS REUTERI CH53

Baekrock OH, Korea Research Institute of Bioscience and Biotechnology, KOREA
Co-authors: S.-Y. Heo, J.-H. Ju, J.-W. Seo, C.H. Kim, Korea Research Institute of Bioscience and Biotechnology, Jeongup, Korea

3BV.3.38

A NEW VALUE CHAIN FOR RUBBER AND INULIN PRODUCTION IN THE EUROPEAN BIOECONOMY

Maria HINGSAMER, Joanneum Research Forschungsgesellschaft, AUSTRIA
Co-authors: M. Beermann, G. Jungmeier, JOANNEUM RESEARCH Forschungsgesellschaft, Graz, Austria; I. van der Meer, F. Kappens, Wageningen UR – Food & Biobased Research, Wageningen, The Netherlands; P. van Dijk, Keygene NV, Wageningen, The Netherlands; H. Muylle, VLAAMS GEWEST, Melle, Belgium; J. Kirschner, BOTANICKY USTAV AV CR, V.V.I., Pruhonice, Czech Republic; N. Gevers, APOLLO TYRES GLOBAL R&D BV, Enschede, The Netherlands

3BV.3.40

SEQUENTIAL UTILIZATION OF SUGARS IN MICROALGAL HYDROLYSATE FOR ETHANOL AND DAGA PRODUCTION

Juyi PARK, Korea Advanced Institute of Science and Technology, Advanced Biomass R&D Center, KOREA

Co-author: Y.K. Chang, Advanced Biomass R&D Center, Daejeon, Korea

3BV.3.41

UTILIZATION OF LIPID-EXTRACTED CHLORELLA VULGARIS HYDROLYSATE BY USING SOLID AND LIQUID ACIDS

Gyeongho SEON, Korea Advanced Institute of Science and Technology, Chemical Bio Engineering Dpt., KOREA

Co-authors: J. Park, H. Joo, Y.K. Chang, KAIST, Daejeon, Korea

3BV.3.42

HYDROLYSIS OF MICROALGAE BY USING LAYERED TRANSITION METAL OXIDE

Soonjae KWON, Korea Advanced Institute of Science and Technology, KOREA

Co-authors: J. Park, Y.K. Chang, Korea Advanced Institute of Science and Technology, Daejeon, Korea

3BV.3.43

IDENTIFICATION OF A NOVEL CELLULOSE-BINDING DOMAIN WITHIN THE ENDO- β -1,4-XYLANASE KRICT PX-3 FROM PAENIBACILLUS TERRAE HPL-003

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

Co-authors: D.R. Kim, H.K. Lim, K.I. Lee, KRICT, Taejeon, Korea

3BV.3.44

BIOREFINERY: A CRITICAL TECHNICAL REVIEW

Lukas KRATKY, Czech Technical University in Prague, Department of Process Engineering, CZECH REPUBLIC

Co-authors: T. Jirout, A. Kutsay, Czech Technical University in Prague, Faculty of Mechanical Engineering, Department of Process Engineering, Prague, Czech Republic

17:00 - 18:30

VISUAL PRESENTATIONS 3BV.4

Advances on Biomass Conversion and Application in Different Sectors

ROOM: Poster Area

CHAIRPERSONS:

Wouter HUIJGEN, Energy Research Centre of the Netherlands, THE NETHERLANDS

Solange MUSSATTO, Technical University of Denmark, DENMARK

Arturo SANCHEZ, Centro de Investigacion y de Estudios Avanzados del IPN, Zapopan, Mexico

3BV.4.1

COMPARING APPROACHES FOR LIGNIN VALORISATION BY FORMIC ACID ASSISTED SOLVOLYSIS - WHAT IS THE BEST OPTION ?

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

Co-authors: M. Oregui Bengoechea, C. Lohre, M. Kleinert, University of Bergen, Norway

3BV.4.9

EUBCE STUDENT AWARDEE PRESENTATION

**PRODUCTION OF VALUE-ADDED CHEMICALS THROUGH GLYCEROL
AQUEOUS PHASE REFORMING USING NI BASED CATALYSTS: INFLUENCE OF
OPERATING CONDITIONS**

Clara JARAUTA-CÓRDOBA, Universidad de Zaragoza, Chemical Engineering and Environmental Technologies Dpt., SPAIN

Co-authors: L. García, J. Ruíz, M. Oliva, J. Arauzo, Universidad de Zaragoza, Spain

3BV.4.11

**METAL-ORGANIC FRAMEWORKS (MOFS)-DERIVED CATALYSTS FOR AN
EFFECTIVE HMF-TO-FDCA AND HMF-TO-DMF CONVERSIONS**

Jyun-yi YEH, National Taiwan University, Chemical Engineering Dpt., TAIWAN

Co-author: K.C.W. Wu, National Taiwan University, Taipei, Taiwan

3BV.4.12

**ETHYLENE GLYCOL PRODUCTION FROM GLUCOSE OVER W-RU CATALYSTS:
MAXIMIZING YIELD BY KINETIC MODELING AND SIMULATION**

Mingyuan ZHENG, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, P.R. CHINA

Co-authors: G. Zhao, R. Sun, Z. Tai, J. Pang, A. Wang, X. Wang, T. Zhang, Dalian Institute of Chemical Physics, CAS, Dalian, P.R. China

3BV.4.15

**CATALYTIC CONVERSION OF ETHYLENE FROM BIOMASS GASIFICATION
PRODUCER GAS INTO VALUABLE AROMATIC COMPOUNDS**

Berend VREUGDENHIL, Energy Research Centre of the Netherlands, Bio Energy & Efficiency Dpt., THE NETHERLANDS

Co-authors: Y.-T. Kuo, Industrial Technology Research Institute of Taiwan, Chutung, Hsinchu, Taiwan; G. Aranda Almansa, Energy Research Centre of the Netherlands, Petten, The Netherlands; M. Lok, Catalok, Den Haag, The Netherlands

3BV.4.17

**REUSABLE HETEROGENEOUS AMBERLYST-16 CATALYST FOR ACETIC ACID
ESTERIFICATION**

Jorge Mario MARCHETTI, Norwegian University of Life Science, Mathematical Science and Technology Dpt., NORWAY

Co-authors: M. R. Avhad, M. V. Osborg, Norwegian University of Life Sciences, ÅS, Norway

3BV.4.18

**HETEROGENEOUSLY CATALYSED ACETYLATION OF GLYCEROL TOWARDS
TRIACETIN IN BATCH AND CONTINUOUS MODE**

Udo ARMBRUSTER, Leibniz Institute for Catalysis at University of Rostock, GERMANY

Co-authors: S. Kale, A. Martin, LIKAT, Rostock, Germany

3BV.4.21

**PREPARATION AND CHARACTERIZATION OF SOLID SUPERBASIC-
SUPERACIDIC CATALYSTS FOR BIODIESEL SYNTHESIS USING CATALYZED
TRANSESTERIFICATION**

Chao-Lung CHIANG, Yuan Ze University, Chemical Engineering and Material Science Dpt., TAIWAN

Co-authors: K.S. Lin, C.W. Shu, H.Y. Chan, Yuan Ze University, Taoyuan, Taiwan; J.C.S. Wu, K.C.W. Wu, National Taiwan University, Taipei, Taiwan; Y.T. Huang, Chung Yuan Christian University, Taoyuan, Taiwan

3BV.4.22

SYNTHESIS AND CHARACTERIZATION OF MESOPOROUS POLYMER-BASED SOLID ACID CATALYSTS FOR BIODIESEL PRODUCTION VIA TRANSESTERIFICATION OF PALMITIC OIL

Kuen-Song LIN, Yuan Ze University, Department of Chemical Engineering & Materials, TAIWAN

Co-authors: C.L. Chiang, H.Y. Chan, Yuan Ze University, Taoyuan, Taiwan; J.C.S. Wu, K.C.W. Wu, National Taiwan University, Taipei, Taiwan; Y.T. Huang, Chung Yuan Christian University, Taoyuan, Taiwan

3BV.4.23

ACTIVITY AND SELECTIVITY OF NOBLE AND TRANSITION METAL CATALYSTS FOR HDO OF LIGNIN MONOMER MODEL COMPOUND EUGENOL: A MICROKINETIC APPROACH

Ana BJELIC, National Institute of Chemistry, Chemical Engineering Dpt., SLOVENIA REPUBLIC

Co-authors: M. Grilc, B. Likozar, National Institute of Chemistry, Ljubljana, Slovenia Republic

3BV.4.24

DIRECT CONVERSION OF CELLULOSE TO HIGH-YIELD METHYL LACTATE OVER GA-DOPED ZN/H-NANOZEOLITE Y CATALYSTS IN SUPERCRITICAL METHANOL

Jaehoon KIM, Sungkyunkwan University, School of Mechanical Engineering & SKKU Advanced Institute of Nano Technology, KOREA

Co-author: D. Verma, Sungkyunkwan University, SuwonSuwon, Korea

3BV.4.26

IMPROVED FEASIBILITY OF THE BIOMASS SUPPLY CHAIN THROUGH SOLAR ENHANCED DRYING

Janne KÄRKI, VTT Technical Research Centre of Finland, FINLAND

Co-authors: E. Tsupari, J. Raitila, VTT Technical Research Centre of Finland, Jyväskylä, Finland

3BV.4.27

HYDROGEN PRODUCTION VIA STEAM REFORMING OF SIMULATED BIO-OIL: INFLUENCE OF INTERACTION BETWEEN MODEL COMPOUNDS

Junyu TAO, Tianjin University, School of Environmental Science and Engineering, P.R. CHINA

Co-authors: B. Yan, School of Environmental Science and Engineering, Tianjin University; Key Laboratory of Biomass-based, Tianjin, P.R. China; G. Chen, School of Science, Tibet University; School of Environmental Science and Engineering, Tianjin Unvers, Tianjin/Tibet, P.R. China

3BV.4.30

NANOBIOCATALYTIC SYSTEMS AS EFFICIENT TOOL TO RELEASE BIOACTIVE COMPOUNDS FROM OLIVE OIL BY-PRODUCTS

Ioannis ZARKADAS, Aristotle University of Thessaloniki, Chemical Engineering Dpt., GREECE

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3BV.4.31

EFFECT OF COMPOSTED BIOMASS MOISTURE ON PELLETTED FERTILIZERS FROM SWINE MANURE SOLID FRACTION

Massimo BRAMBILLA, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, Unità di Ricerca per l'ingegneria agraria, ITALY

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3BV.4.33**NOVEL SYNTHESIS OF 1,6-HEXANEDIOL UNDER MILD CONDITIONS AND TWO STEPS UTILIZING METAL ORGANIC FRAMEWORK DERIVED BIFUNCTIONAL CARBON SUPPORTED NOBLE METAL WITH LIQUID HYDROGEN SOURCE**

Jyun-yi YEH, National Taiwan University, Chemical Engineering Dpt., TAIWAN

3BV.4.36**PRODUCTION OF REACTIVE BOTTOM ASHES FROM COMBUSTION OF SUGARCANE LEAVES BRIQUETTES IN A FIXED BED REACTOR FOR USE AS A CEMENTITIOUS MATERIAL**

Estela ASSUREIRA, Pontificia Universidad Católica del Perú, Engineering Dpt., PERU
Co-author: M. Assureira, Pontificia Universidad Católica del Perú, Lima, Peru

3BV.4.37**EMISSIONS AND PERFORMANCE OF A DIESEL ENGINE FUELLED WITH BLENDS OF DIESEL AND BIODIESEL ADDITIVATED WITH BIO-OIL**

Alberto GONZALO CALLEJO, Universidad de Zaragoza, Aragón Institute for Engineering Research (I3A), SPAIN

Co-authors: C. Dueso, A. Bautista, N. Gil-Lalaguna, J.L. Sánchez, Universidad de Zaragoza, Aragón Institute for Engineering Research (I3A), Zaragoza, Spain; J. Arroyo, F. Moreno, M. Muñoz, C. Monné, Universidad de Zaragoza / Department of Mechanical Engineering, Zaragoza, Spain

3BV.4.38**PRODUCTION OF A BIO-PLASTIC FROM WET LIGNOCELLULOSIC RESIDUAL FEEDSTOCKS WITH HYDROTHERMAL CARBONIZATION AS KEY-STEP**

Michael RENZ, Universitat Politècnica de Valencia, Institute of Chemical Technology, SPAIN

Co-authors: A. Corma, Institute of Chemical Technology, Universitat Politècnica de València – Consejo Superior, Valencia, Spain; M. Hitzl, Ingelia S.L., Valencia, Spain

3BV.4.39**PURPOSEFUL FUNCTIONALIZATION OF WASTE HARDWOOD LIGNOCELLULOSES FOR MAKING RECYCLED POLYMER-BASED COMPOSITES**

Anrijs VEROVKINS, Latvian State Institute of Wood Chemistry, Lignin Laboratory, LATVIA

Co-authors: G. Shulga, B. Neiberte, J. Jaunslavietis, S. Vitolina, J. Brovkina, S. Livcha, Latvian State Institute of Wood Chemistry, Riga, Latvia; S. Uzulis, JSC "Latvijas Finieris", Riga, Latvia

3BV.4.40**CAN BIOBASED CHEMICALS BE PRODUCED VIA THE PATHWAY OF ANAEROBIC DIGESTION? A FIRST OVERVIEW.**

Eric BILLIG, Umweltforschungszentrum UFZ, Bioenergie Dpt., GERMANY

3BV.4.41**SYNTHESIS, PHYSICO-CHEMICAL PROPERTIES OF DBU/CH₃OH/CO₂ AND ITS UTILIZATION IN DISSOLVING BIOMASS**

Houfang LU, Sichuan University, Chemical Engineering Dpt., P.R. CHINA

Co-authors: Y. Liu, B. Liang, Sichuan University, Chengdu, P.R. China

3BV.4.42**SORPTION ENHANCED CHEMICAL LOOPING REFORMING PROCESS OF BIOGAS FOR CLEANER HYDROGEN PRODUCTION**

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

Co-authors: S. Kasemanand, P. Tippawan, Chulalongkorn University, Bangkok, Thailand

3BV.4.43

ACTIVATED CARBON PRODUCTION FROM WOOD BASED PANELS WASTE AND ITS APPLICATION AS AN ADDITIVE OF UREA FORMALDEHYDE RESIN

Saeed KAZEMI NAJAFI, Tarbiat Modares University, Wood & Paper Science & Technology Dpt., IRAN

Co-authors: R. Zamani, H. Younesi, Tarbiat Modares University, Tehran, Iran

3BV.4.47

PRODUCTION OF BACTERIAL CELLULOSE USING OPUNTIA AND CITRUS WASTE AS FEEDSTOCKS

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

Co-authors: V. De Vitis, S. Farris, University of Milan, Italy; R.K. Mangayil, M.T. Karp, Tampere University of Technology, Finland; B. Pecorino, R. Selvaggi, G. Chinnici, F. Valenti, University of Catania, Italy

3BV.4.48

PROPERTIES OF BIOCHAR PRODUCED BY SLOW PYROLYSIS OF STABILIZED SEWAGE SLUDGE

Jaroslav MOSKO, Czech Academy of Sciences, Institute of Chemical Process Fundamentals, SLOVAK REPUBLIC

Co-authors: M. Pohorely, B. Zach, M. Syc, S. Václavková, K. Svoboda, Institute of Chemical Process Fundamentals of the CAS, v. v. i., Prague, Czech Republic; S. Skoblia, Z. Beno, Department of Gaseous and Solid Fuels and Air Protection, UCT Prague, Prague, Czech Republic

3BV.4.49

PERSPECTIVES OF HIGH-VALUED CHEMICAL PRODUCTION FROM MARINE FUNGAL-LIKE PROTISTS

Guangyi WANG, Tianjin University, Environmental Science & Ecology Dpt., P.R. CHINA

Co-author: Q. Wang, Tianjin University, Tianjin, P.R. China

3BV.4.50

DEGRADATION OF LIGNIN IN IONIC LIQUID WITH MESOPOROUS SOLID ACIDS AS CATALYSTS

Man JIANG, Southwest Jiaotong University, School of Materials Science and Engineering, P.R. CHINA

Co-author: G. Gou, South West Jiaotong University, Chengdu, P.R. China

3BV.4.51

CRYSTAL-PLANE EFFECT OF CERIA ON THE ACTIVITY OF CU/CEO₂ FOR OXIDATIVE STEAM REFORMING OF METHANOL

Sivinee PETCHAKAN, The Petroleum and Petrochemical College, Petrochemical technology, THAILAND

Co-authors: A. Luengnaruemitchai, S. Wongkasemjit, The Petroleum and Petrochemical College, Bangkok, Thailand

3BV.4.53

PREPARATION OF LIGNIN BLEND BEADS FOR THE REMOVAL OF HEXAVALENT CHROMIUM IONS

Ki Hoon LEE, Seoul National University, Research Institute of Agriculture and Life Sciences, KOREA

Co-authors: H.W. Kwak, M. Shin, H.C. Woo, H. Yun, Seoul National University, Korea

3BV.4.54

**ESTABLISHING A VALUE CHAIN FOR PRODUCTION OF A PLATFORM
CHEMICAL AND CURRENT OUT OF PAPER TOWELS**

Tina KLESSING, Karlsruhe Institute of Technology, Institute for Applied
Biosciences, GERMANY

Co-author: J. Gescher, Karlsruhe Institute of Technology - Institute for Applied Biosciences,
Karlsruhe, Germany

3BV.4.57

**INTEGRATED BIOCONVERSION OF ALGAL CARBOHYDRATES AND PROTEINS
TO LIQUID FUELS AND INTERMEDIATE VALUE PRODUCTS**

Mary TRAN-GYAMFI, Sandia National Lab, USA

Co-authors: W. Wu, F. Liu, J.D. Jaryenneh, E. Monroe, B.C. Wu, R.W. Davis, Biomass Science and
Conversion Technologies, Livermore, USA

08:30 - 10:00

VISUAL PRESENTATIONS 3CV.1

Oil-based Biofuels. Biogas Upgrading Systems. Feedstock and Processes for Bioalcohol Production

ROOM: Poster Area

CHAIRPERSONS:

Evert Jan HENGVELD, Hanze University of Applied Sciences, THE NETHERLANDS

Jan LINDSTEDT, Lindab Sweden, SWEDEN

Dimitrios SIDIRAS, University of Piraeus, GREECE

3CV.1.5

BLENDS OF PYROLYSIS OIL AND CRUDE GLYCERIN

Lucas COSTA, UNICAMP, Energy Dpt., BRAZIL

Co-author: C.G. SÁNCHEZ, UNICAMP, CAMPINAS, Brazil

3CV.1.7

SUBCRITICAL THERMAL LIQUEFACTION OF PROCESS REJECTS OF A WASTEPAPER-BASED PAPER MILL USING WASTE SOYBEAN OIL AND ETHANOL AS SOLVENTS FOR BIO-FUEL PRODUCTION

Je-Lueng SHIE, National I-Lan University, Environmental Engineering Dpt., TAIWAN

3CV.1.10

COPPER FERRITE SPINEL OXIDE CATALYSTS FOR METHANOLYSIS OF PALM OIL

Kajornsak FAUNGNAWAKIJ, National Science and Technology Development Agency, National Nanotechnology Center, THAILAND

Co-authors: C. Luadthong, P. Khemthong, National Nanotechnology Center, Pathuntani, Thailand

3CV.1.14

AN ALTERNATIVE PROCESS FOR CO₂ SEPARATION BY IL BASED CHEMICAL ABSORPTION

Markus ROSCHITZ, DVGW Research Centre, GERMANY

Co-authors: F. Ortloff, F. Graf, DVGW Research Center at EBI, Karlsruhe, Germany; T. Kolb, KIT, Engler-Bunte-Institute, Karlsruhe, Germany

3CV.1.16

BIOGAS UPGRADING BY CHEMICAL ABSORPTION WITH AMINO ACID SALT SOLUTIONS

Marc Oliver SCHMID, University Stuttgart, Institute of Combustion an Power Plant Technology, Fuels and Flue Gas Cleaning Dpt., GERMANY

Co-authors: B. Klein, G. Scheffknecht, Institute of Combustion and Power Plant Technology, University of Stuttgart, Germany

3CV.1.18

MODEL-BASED TECHNO-ECONOMIC ASSESSMENT OF PARTIALLY UPGRADED BIOGAS AND THE DECENTRALIZED UTILIZATION FOR MOBILITY IN AGRICULTURE

Abdessamad SAIDI, Technische Hochschule Ingolstadt, Institute of New Energy Systems, GERMANY

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3CV.1.19

IMPROVEMENTS IN THE USE OF GREEN SULPHUR BACTERIA FOR HYDROGEN SULPHIDE REMOVAL

Luigia LONA, ENEA, DTE Dpt., ITALY

Co-authors: V. Pignatelli, F. Girardi, A. Aliboni, N. Corsaro, C. Felici, E. De Luca, ENEA, Roma, Italy; E. Petrucci, Università La Sapienza, Roma, Italy

3CV.1.21

BIOMETHANE UTILISATION OPTIONS: FINANCIAL AND ENVIRONMENTAL ANALYSIS

Alexander LAMOND, University of Nottingham, Faculty of Engineering, UNITED KINGDOM

Co-authors: J. Mckechnie, G.S. Walker, University of Nottingham, United Kingdom

3CV.1.22

BIOGAS BLENDING INTO THE GAS DISTRIBUTION GRID: THE CASE STUDY OF A SMALL MUNICIPALITY.

Marco CAVANA, Politecnico di Torino, Energy Dpt., ITALY

Co-authors: A. Lanzini, P. Leone, Politecnico di Torino, Italy

3CV.1.25

BREWER'S SPENT GRAIN VALORIZATION USING PHOSPHORIC ACID PRETREATMENT FOR SECOND GENERATION BIOETHANOL PRODUCTION

Inmaculada ROMERO, University of Jaen, Chemical, Enviromental and Material Engineering Dpt., SPAIN

Co-authors: E. Ruiz, C. Cara, V. Lorite, J.A. Rojas, J.C. López-Linares, E. Castro, University of Jaén, Spain; S. Mussatto, Technical University of Denmark, Lyngby, Denmark

3CV.1.30

EFFECT OF THE HYDROLYSIS PRE-TREATMENT OF CACHAZA FOR BIOETHANOL PRODUCTION

Maria GÓMEZ, Universidad de La Sabana, Chemical Engineering Dpt., COLOMBIA

Co-authors: M. Cobo, N. Sanchez, R. Ruiz, A. Plazas, J. Vasquez, Universidad de La Sabana, Bogota, COLOMBIA

3CV.1.32

USING PADDLE DRYER APPARATUS TO PERFORM ENZYMATIC HYDROLYSIS ON STEAM PRETREATED WHEAT STRAW AT HIGH SOLIDS LOADING

Francesco ZIMBARDI, ENEA Research Centre, Energy Technologies Department, ITALY

Co-authors: V. Viola, G. Arcieri, N. Cerone, M. Carnevale, V. Valerio, ENEA, Rotondella, ITALY

3CV.1.34

ALKALINE PEROXIDE OXIDATION PRETREATMENT OF CORN COB AND RICE HUSKS FOR BIOCONVERSION INTO BIO-COMMODITIES: ENZYMATIC CONVERTIBILITY OF PRETREATED CORN COB TO REDUCING SUGAR

Augustine O. AYENI, University of the Witwatersrand, Chemical Engineering Dpt., SOUTH AFRICA

Co-authors: A. Awosusi, M. Daramola, University of Witwatersrand, Johannesburg, South Africa

3CV.1.36

BOTTLENECKS IN LIGNOCELLULOSIC ETHANOL PRODUCTION: XYLOSE FERMENTATION AND CELL PROPAGATION

Marlous VAN DIJK, Chalmers University of Technology, Industrial Biotechnology Dpt., SWEDEN

Co-author: L. Olsson, Chalmers University of Technology, Göteborg, Sweden

3CV.1.37

STUDY ON THE REQUIREMENT OF NITROGEN SOURCES BY SCHEFFERSOMYCES STIPITIS NRRL Y-7124 TO PRODUCE ETHANOL FROM XYLOSE BASED-MEDIA

Solange MUSSATTO, Technical University of Denmark, Novo Nordisk Foundation Center for Biosustainability, DENMARK

Co-authors: L.M. Carneiro, Department of Chemical Engineering, Engineering College of Lorena, University of São Paulo, Lorena / SP, Brazil; I.C. Roberto, Department of Biotechnology, Engineering College of Lorena, University of São Paulo, Lorena / SP, Brazil

3CV.1.39

EVALUATION OF A PILOT-SCALE CONTINUOUS TUBULAR REACTOR FOR PRETREATMENT OF AGAVE BAGASSE.

Arturo SANCHEZ, Centro de Investigacion y de Estudios Avanzados del IPN, Bioenergy Futures Laboratory, MEXICO

Co-authors: L. Amaya-Delgado, J. Nova, D. Sandoval, CIATEJ, Zapopan, Mexico; A. Sánchez, F. Rodríguez, CINVESTAV-Gdl, Zapopan, Mexico

3CV.1.42

BUTANOL PRODUCTION FROM VOLATILE FEEDSTOCKS. DEVELOPMENT OF AN OPTIMIZED BIOPROCESS

Florian GATTERMAYR, Kompetenzzentrum Holz, WCB Dpt., AUSTRIA

Co-authors: V. Leitner, Kompetenzzentrum Holz GmbH, Linz, Austria; C. Herwig, Technical University Vienna, Wien, Austria

3CV.1.51

LIGNOCELLULOSE - DEGRADATION BY THERMOPHILIC BACTERIA ISOLATED FROM HOT SPRING IN SOUTHERN THAILAND

Apinya SINGKHALA, Thaksin University, Biology Dpt., THAILAND

Co-authors: C. Niyasom, S. O - Thong, Thaksin University, Phatthalung, Thailand; N. Kare- Birkeland, University of Bergen, Bergen, Norway

3CV.1.52

SIMULATION OF FLOW AND DESIGN OF AGITATED LARGE-VOLUME BIOREACTORS

Tomas JIROUT, Czech Technical University in Prague, Process Engineering Dpt., CZECH REPUBLIC

Co-author: O. Potociar, Czech Technical University in Prague, Faculty of Mechanical Engineering, Department of Process Engineering, Prague, Czech Republic

3CV.1.54

NATURALLY DERIVED HETEROGENEOUS CATALYST FOR ETHYL ESTERS SYNTHESIS

Jorge Mario MARCHETTI, Norwegian University of Life Sciences, Mathematical Science and Technology Dpt., NORWAY

Co-authors: M.R. Avhad, Norwegian University of Life Sciences, Ås, Norway; M. Sánchez, A. Bouaid, M. Martínez, J. Aracil, Complutense University, Madrid, Spain

3CV.1.55

MOLECULAR INSIGHT INTO ARYL O-DEMETHYLATION BY A NOVEL DEMETHYLASE OFFERS A NEW TOOL FOR LIGNIN VALORIZATION

Amanda KOHLER, Joint BioEnergy Institute, USA

Co-authors: M.J.L. Mills, K.L. Sale, Joint BioEnergy Institute, Sandia National Laboratories, Emeryville, USA; P.D. Adams, B.A. Simmons, Joint BioEnergy Institute, Lawrence Berkeley National Laboratory, UC Berkeley, Emeryville, USA

VISUAL PRESENTATIONS

WEDNESDAY, 14 JUNE 2017

3CV.1.56

UNDERSTANDING FACTORS CONTROLLING DEPOLYMERIZATION AND POLYMERIZATION IN CATALYTIC BREAKING OF SS-ETHER LINKED MODEL LIGNIN COMPOUNDS BY VERSATILE PEROXIDASE

Kenneth SALE, Sandia National Laboratory, Biomass Science and Conversion Technologies Department, USA

Co-authors: J. Zeng, M.J.L. Mills, M.S. Kent, Joint BioEnergy Institute, Sandia National Laboratories, Emeryville, USA; B.A. Simmons, Joint BioEnergy Institute, Lawrence Berkeley National Laboratory, Emeryville, USA

3CV.1.57

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

3CV.1.58

PULP AND PAPER EFFLUENTS FOR BIOMETHANE PRODUCTION: AN UNDERESTIMATED POTENTIAL FOR GREEN ECONOMY DEVELOPMENT.

Francesco OMETTO, Scandinavian Biogas Fuels, SWEDEN

13:30 - 15:00

VISUAL PRESENTATIONS 3CV.2

Thermally Treated Solid Biofuels

ROOM: Poster Area

CHAIRPERSONS:

Jaap KIEL, Energy Research Centre of the Netherlands, THE NETHERLANDS

Kay SCHAUBACH, DBFZ-German Biomass Research Centre, GERMANY

Capucine DUPONT, CEA, Grenoble, France

3CV.2.2

VALORISATION OF EARLY HARVESTED MISCANTHUS FOR UNITISATION IN COMBUSTION VIA HYDROTHERMAL CARBONISATION

Aidan SMITH, University of Leeds, Energy Research Institute, UNITED KINGDOM

Co-authors: I. Shield, Rothamstead Research, Harpenden, United Kingdom; A.B. Ross, University of Leeds, United Kingdom

3CV.2.3

A LAYERED PARTICLE APPROACH TO MODEL THE CONVERSION OF THERMALLY THICK PARTICLES

Kathrin WEBER, Norwegian University of Science and Technology, Energy and Process Engineering Dpt., NORWAY

Co-authors: T. Li, T. Løvås, Norwegian University of Science and Technology, Trondheim, Norway; C. Perlman, LOGE AB, Lund, Sweden; F. Mauss, Brandenburg University of Technology, Cottbus, Germany

3CV.2.4

COMPARISON OF TWO PROCESSES TO DECREASE CO₂ REACTIVITY OF BIOCHAR FOR METALLURGICAL INDUSTRY

Gerrit SURUP, University of Agder, Engineering Sciences Dpt., NORWAY

Co-authors: H.K. Nielsen, T. Vehus, University of Agder, Grimstad, Norway; P.A. Eidem, Eramet Norway AS, Trondheim, Norway

3CV.2.5

EXPERIMENTAL INVESTIGATION OF THERMAL CONDUCTIVITY OF RAW AND TORREFIED BIOMASS FUELS

Rory MONAGHAN, National University of Ireland Galway, Mechanical Engineering Dpt., IRELAND

Co-authors: C.P. O'Hagan, S. Layden, J. Goggins, NUI Galway, Galway, Ireland; P. Layden, R. Johnson, Arigna Fuels, Roscommon, Ireland

3CV.2.6

BIOMASS PYROLYSIS WITH BIO-OIL RECYCLE TO INCREASE ENERGY RECOVERY IN BIOCHAR

Aekjuthon PHOUNGLAMCHEIK, Luleå University of Technology, Engineering Sciences and Mathematics Dpt., SWEDEN

Co-authors: K. Umeki, T. Wretborn, Energy Engineering, Luleå University of Technology, Luleå, Sweden

3CV.2.8

ASSESSING THE HEAT AND ENERGY BALANCES OF HYDROCHAR PRODUCTION VIA HYDROTHERMAL CARBONIZATION OF OLIVE POMACE

Stephane BOSTYN, CNRS - Université d'Orléans, ICARE Dpt., FRANCE

Co-authors: A. Missaoui, V. Belandria, B. Sarh, I. Gokalp, CNRS-ICARE UPR3021, Orléans, France

3CV.2.9

UPGRADING OF PYROLYSIS CHARS IN SYNGAS PURIFICATION: CHARACTERIZATION AND IMPLEMENTATION IN A FIXED BED COLUMN

Audrey VILLOT, Ecole des Mines de Nantes, FRANCE

Co-authors: J. Pena, C. Gerente, Ecole des mines de Nantes, Nantes, France

3CV.2.10

ENERGY POTENTIAL FROM BUCKWHEAT HUSKS THROUGH A THERMOCHEMICAL AND BIOCHEMICAL APPROACHES

Audrey VILLOT, Ecole des Mines de Nantes, FRANCE

Co-authors: M. Elsayed, C. Gerente, Y. Andres, Ecole des Mines de Nantes, France; J. Pena, Ecole des Mines de Nantes / ADEME, Nantes / Angers, France

3CV.2.11

A COMPLETE 1-D MODEL FOR BIOMASS TORREFACTION PROCESS AND RESULTS VALIDATIONS REFERRED TO AN EXPERIMENTAL SCALE REACTOR

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

Co-authors: M. Grigante, University of Trento, Trento, Italy; D. Antolini, Free University of Bozen-Bolzano, Bozen, Italy

3CV.2.13

PRODUCTION OF HIGH PURITY LIGNIN FROM RAPESEED MEAL USING A MICROWAVE-ASSISTED HYDROTHERMAL PROCESS

Javier REMON NUÑEZ, University of York, Chemistry Dpt., UNITED KINGDOM

Co-authors: J. Remon, L. Zhou, J. Fan, D. Macquarrie, V. Budarin, J. Clark, University of York, United Kingdom

3CV.2.14

PYROLYSIS KINETICS OF WET-TORREFIED FOREST RESIDUES

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

Co-author: Q.V. Bach, NTNU, Trondheim, Norway

3CV.2.17

GASIFICATION BEHAVIOURS OF DIFFERENT BIOMASS CHARCOALS UNDER CO₂ ATMOSPHERE

Liang WANG, SINTEF Energy Research, Thermal Energy Dpt., NORWAY
Co-authors: N. Alsaker, Ø. Skreiberg, SINTEF Energy Research, Trondheim, Norway; T. Buø, R. Birkeland, A. Valderhaug, Elkem, Kristiansand, Norway; B. Hovd, SINTEF Materials and Chemistry, Trondheim, Norway

3CV.2.18

CO₂ GASIFICATION REACTIVITY OF BIOCARBON PRODUCED AT DIFFERENT CONDITIONS

Liang WANG, SINTEF Energy Research, Thermal Energy Dpt., NORWAY
Co-authors: P. Maziarka, T. Løvås, Norwegian University of Science and Technology, Trondheim, Norway; Ø. Skreiberg, SINTEF Energy Research, Trondheim, Norway; M. Wadrzyk, AGH University of Science and Technology, Krakow, Poland

3CV.2.23

SUGARCANE STRAW UPGRADING BY WATER WASHING AND ROASTING FOR ITS USE AS A SOLID BIOFUEL

Estela ASSUREIRA, Pontificia Universidad Católica del Perú, Engineering Dpt., PERU
Co-author: M. Assureira, Pontificia Universidad Católica del Perú, Lima, Peru

3CV.2.25

SMALL SCALE TORREFACTION OF LOCAL BIOMASS RESIDUES. TECHNICAL AND ECONOMIC ASSESSMENT

Jean-Bernard MICHEL, Univ. of Applied Sciences and Arts Western Switzerland, Industrial Bioenergy Systems, SWITZERLAND
Co-authors: M. McCormick, University of Applied Sciences and Arts Western Switzerland, Yverdon-les-Bains, Switzerland; C. Tansley, B. Correa, Granit Technology and Engineering, Orbe, Switzerland; M. Schmid, M. Vögeli, Ökozentrum, Langenbruck, Switzerland; J. Ropp, University of Applied Sciences and Arts Western Switzerland, Yverdon-les-Bains, Switzerland

15:15 - 16:45

VISUAL PRESENTATIONS 2CV.3

Gasification Research through Modeling and Pilot Installation Studies and Advances in Gasification and Gas Cleaning of Synthesis Gas Production

ROOM: Poster Area

CHAIRPERSONS:

Wiebren DE JONG, Delft University of Technology, THE NETHERLANDS

Wolter PRINS, University of Ghent, BELGIUM

Matthias KUBA, Bioenergy 2020+, Graz, Austria

2CV.3.3

DEVELOPMENT OF A NEW DESIGN CONCEPT AND OPERATIONAL EXPERIENCE OF A HIGHLY EFFICIENT, COMPACT SIZE MICRO-CHP PLANT FOR VARIOUS BIOMASS FUELS

Markus BUCHMAYR, Graz University of Technology, Institute of Thermal Engineering, AUSTRIA
Co-authors: J. Gruber, M. Hargassner, Hargassner GmbH, Weng, Austria; C. Hochenauer, Graz University of Technology, Austria

2CV.3.4

THE USE OF NATURAL GAS BLENDS WITH SYNGAS FROM BIOMASS IN GAS MICRO TURBINES. THERMAL PERFORMANCE AND EMISSIONS TESTS

Electo Eduardo SILVA LORA, Universidade Federal de Itajubá, Instituto de Engenharia Mecânica, BRAZIL

Co-authors: P.S. Correa, L.R. Pinto, E.E.S. Lora, R. Vieira, UNIFEI, Itajubá, Brazil; A. Ratner, UIOWA, IOWA, Usa

2CV.3.5

DEVELOPMENT OF A HIGHLY EFFICIENT MICRO-SCALE CHP SYSTEM BASED ON FUEL-FLEXIBLE GASIFICATION AND A SOFC

Thomas BRUNNER, Bios Bioenergiesysteme, AUSTRIA

Co-authors: I. Obernberger, Bios Bioenergiesysteme, Graz, Austria; M. Kerschbaum, Windhager Zentralheizung Technik GmbH, Seekirchen, Austria; P.V. Aravind, Delft University of Technology, Delft, The Netherlands; R. Makkus, HyGear BV, Arnhem, The Netherlands; S. Megel, Fraunhofer Institut fuer Keramische Technologien und Systeme, Dresden, Germany; M. Hauth, AVL LIST GmbH, Graz, Austria; T. Goetz, Wuppertal Institut für Klima, Umwelt, Energie GmbH, Wuppertal, Germany; W. Zappa, Utrecht University, Utecht, The Netherlands

2CV.3.6

POLYGENERATION AIMING THE GENERATION OF HYDROGEN AND HYTHANE VIA BIOMASS STEAM GASIFICATION

Michael KRAUSSLER, Bioenergy 2020+, Area Gasification Dpt., AUSTRIA

Co-authors: J. Priscak, Bioenergy2020+, Guessing, Austria; F. Benedikt, H. Hofbauer, TU Wien, Vienna, Austria

2CV.3.8

MULTI-PHASE FLUID DYNAMIC OF SYNGAS FLOW ACROSS A THROTTLE BODY IN A GASIFIER-ENGINE SYSTEM

Giulio ALLESINA, BEELab (Bio Energy Efficiency Laboratory), Enzo Ferrari Engineering Dpt., ITALY

Co-authors: S. Pedrazzi, M. Puglia, N. Morselli, P. Tartarini, BEELab (Bio energy efficiency laboratory), Department of Engineering, University of Modena and Reggio, Modena, Italy; J. Mason, ALL Power Labs, Berkeley, Usa

2CV.3.9

ANALYSIS OF BIOMASS CHARs THERMAL DECOMPOSITION: EXPERIMENTAL TESTS AND MODELLING IN NITROGEN AND IN CARBON DIOXIDE ATMOSPHERE

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

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

2CV.3.10

VALORIZATION PATHWAYS FOR CHAR FROM SMALL SCALE GASIFICATION SYSTEMS IN SOUTH-TYROL: THE "NEXT GENERATION" PROJECT

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

Co-authors: D. Basso, A. Gasparella, M. Baratieri, Free University of Bozen-Bolzano, Bolzano, Italy; W. Tirlir, EcoResearch srl, Bolzano, Italy; S. Dal Savio, IDM Südtirol - Alto Adige, Bolzano, Italy; A. Rizzo, D. Chiamonti, RE-CORD Consortium, Firenze, Italy

2CV.3.13

SEPIOLITE PERFORMANCE AS BED MATERIAL TOWARDS GAS AND TAR COMPOSITIONS DURING C. CARDUNCULUS L. GASIFICATION

Daniel SERRANO GARCIA, Carlos III University of Madrid, Thermal and Fluid Engineering Dpt., SPAIN

Co-authors: S. Sanchez Delgado, Universidad Carlos III de Madrid, Leganes, Spain; A. Horvat, University of Limerick, Limerick, Ireland

2CV.3.14**BIOMASS GASIFICATION CHAR AS A LOW-COST ADSORBENT FOR CO₂ CAPTURE**

Vittoria BENEDETTI, Free University of Bolzano, Faculty of Science and Technology, ITALY

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

2CV.3.15**EXPERIMENTAL RESULTS AND PARAMETRIC ANALYSIS OF WOOD, TORREFIED AND COFFEE GROUNDS PELLETS GASIFICATION CARRIED OUT ON A PILOT PLANT REACTOR**

Daniele ANTOLINI, Free University of Bolzano, Faculty of Science and Technology, ITALY

Co-authors: M. Grigiane, M. Brighenti, University of Trento, Italy

2CV.3.17**INFLUENCE OF THE STOICHIOMETRIC RATIO ON TAR AND HYDROCARBON COMPOSITION DURING FLUIDIZED BED GASIFICATION**

Diego FUENTES-CANO, University of Seville, Chemical and Environmental Engineering Dpt., SPAIN

Co-authors: A. Gómez-Barea, P. Haro, S. Nilsson, University of Seville, Seville, Spain

2CV.3.18**DEVELOPMENT OF A MULTI-STAGE BIOMASS GASIFICATION TECHNOLOGY TO PRODUCE ENERGY QUALITY GAS**

Alexander KOZLOV, Melentiev Energy Systems Institute, Thermodynamics Dpt., RUSSIAN FEDERATION

Co-authors: D. Svishchev, A. Keiko, V. Shamansky, Melentiev Energy Systems Institute of Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russian Federation

2CV.3.19**EFFECT OF FEEDSTOCK HEATING RATE ON SUPERCRITICAL WATER GASIFICATION OF GLUCOSE AND GUAJACOL MIXTURE**

Yukihiko MATSUMURA, Hiroshima University, Energy and Environmental Engineering Division, JAPAN

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2CV.3.21**TAR REMOVAL FROM SYNGAS WITH NATURAL ZEOLITES FROM TUFFS: WET SCRUBBING AND CATALYTIC CRACKING**

Valerio PAOLINI, National Research Council, Institute of Atmospheric Pollution Research, ITALY

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2CV.3.22**MODELLING OF A SMALL SCALE ENERGY CONVERSION SYSTEM BASED ON AN OPEN TOP GASIFIER COUPLED WITH A DUAL FUEL DIESEL ENGINE**

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2CV.3.23

A TECHNO-ECONOMIC ANALYSIS OF ELECTRICITY GENERATION VIA FLUIDISED BED GASIFICATION PROCESS FROM MISCANTHUS

Paul GILBERT, University of Manchester, Tyndall Centre for Climate Change Research, UNITED KINGDOM

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2CV.3.25

DETAILED MODELING OF BIOMASS GASIFICATION AND COMBUSTION UNDER ASPEN PLUS: FROM THE FOREST TO THE PROCESS

Francis BILLAUD, CNRS-LRGP, Process Engineering (Biomass) Dpt., FRANCE

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2CV.3.26

ALGAE CONVERSION TO HYDROGEN AND POWER BY INTEGRATION OF DRYING, GASIFICATION, AND CHEMICAL LOOPING COMBUSTION

Muhammad AZIZ, Tokyo Institute of Technology, Institute of Innovative Research, JAPAN

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2CV.3.30

ASSESSMENT OF THE SYNGAS PRODUCED BY GASIFICATION OF VINE SHOOTS IN AN EXPERIMENTAL DOWNDRAFT REACTOR

Leonardo LONGO, Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria, Dip. Ingegneria agraria, ITALY

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2CV.3.33

BIOMASS GASIFICATION IN DOWNDRAFT DUAL STAGE REACTOR BY EXPERIMENTAL ANALYSIS AND SIMULATION WITH CFD TOOLS

Electo Eduardo SILVA LORA, Universidade Federal de Itajubá, Instituto de Engenharia Mecânica, BRAZIL

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2CV.3.34

TECHNICAL EVALUATION OF RESIDUAL BIOMASSES IN COLOMBIA FOR GASIFICATION IN FLUIDIZED BED

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2CV.3.35

CFD SIMULATION OF A SMALL-SCALE UP-DRAFT CO-GASIFICATION OF WOOD PELLET AND CHARCOAL WITH EXPERIMENTAL VERIFICATION

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2CV.3.37

VAPOR-PHASE REACTIONS OF CELLULOSE GASIFICATION

Haruo KAWAMOTO, Kyoto University, Graduate School of Energy Science, JAPAN
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2CV.3.40

THE FLEDGED PROJECT: DME PRODUCTION FROM BIOMASS GASIFICATION WITH FLEXIBLE SORPTION-ENHANCED PROCESSES

Matteo Carmelo ROMANO, Polytechnic of Milan, Group of Energy Conversion Systems, ITALY

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2CV.3.41

PILOT PLANT AIR-STEAM GASIFICATION OF NUT SHELLS FOR SYNGAS PRODUCTION

Francesco ZIMBARDI, ENEA Research Centre, Energy Technologies Department, ITALY
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2CV.3.45

MULTI-STEP REACTION KINETIC MODEL FOR SECONDARY VAPOR-PHASE CRACKING OF LIGNIN-DERIVED TAR

Elmer LEDESMA, University of St. Thomas, Chemistry and Physics Dpt., USA

2CV.3.47

CHARACTERISATION OF THE CHAR OBTAINED FROM BIOMASS GASIFICATION IN A SPOUTED BED REACTOR

Filippo MARCHELLI, Free University of Bolzano, Faculty of Sciences and Technology, ITALY

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2CV.3.49

BIOMASS PARTICLE GASIFICATION: TOWARDS A RELIABLE COMPREHENSIVE MODEL FOR BIOMASS PARTICLE GASIFICATION

Xiyan LI, Aalborg University, Energy Technology Dpt., DENMARK
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2CV.3.50

COMBINED STEAM AND CO₂-GASIFICATION IN FLUIDISED BED STEAM GASIFIERS AND INFLUENCE ON SUBSEQUENT HOT GAS CLEANING

Felix FISCHER, Technische Universität München, Institute for Energy Systems, GERMANY

Co-authors: S. Fendt, H. Spliethoff, Institute for Energy Systems, Munich, Germany

2CV.3.54

A KINETIC STUDY OF STEAM GASIFICATION OF RESIDUAL BIOMASS FROM SICILIAN AGRO-INDUSTRIES

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

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2CV.3.55

NON-THERMAL PLASMA-CATALYTIC PROCESSING FOR TAR REDUCTION TO DELIVER HIGH QUALITY SYNGAS FROM REAL BIOMASS GASIFICATION

Ella BLANQUET, University of Leeds, School of Chemical & Process Engineering, UNITED KINGDOM

Co-authors: M.A. Nahil, P.T. Williams, University of Leeds, United Kingdom

2CV.3.61

COMPARISON BETWEEN EQUILIBRIUM AND KINETIC MODELS WITH ASPEN PLUS FOR A FULL SCALE BIOMASS DOWNDRAFT GASIFIER

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

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2CV.3.62

CRYSTAL-PLANE EFFECT OF CERIA ON THE ACTIVITY OF AU/CEO₂ FOR PREFERENTIAL CO OXIDATION

Mike CARLTONBIRD, The Petroleum and Petrochemical College, Chulalongkorn University, THAILAND

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2CV.3.63

ADSORPTION AND DESORPTION OF METHANE AND CARBON DIOXIDE ON COCONUT SHELL ACTIVATED CARBON: EFFECT OF DESORPTION TIME AND CARBON DIOXIDE ADSORPTION

Suwadee UTTARAPHAT, Chulalongkorn University, The Petroleum and Petrochemical College, THAILAND

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2CV.3.65

INVESTIGATION OF AMMONIA REMOVAL IN THE SIMULATED GAS OF BIOMASS GASIFICATION BY H₂-REDUCED TITANOMAGNETITE

Yanjie WANG, University of Canterbury, Chemical and Process Engineering Dpt., NEW ZEALAND

Co-authors: S. Pang, S. Pang, University of Canterbury, Christchurch, New Zealand

17:00 - 18:30

VISUAL PRESENTATIONS 2CV.4

Optimising Biogas Processes by Feedstocks, Technologies and Gas Utilisation

ROOM: Poster Area

CHAIRPERSONS:

Jens Bo HOLM-NIELSEN, Aalborg University, DENMARK

Bernhard DROSG, Bioenergy 2020+, AUSTRIA

Alessandro AGOSTINI, ENEA, Italy

2CV.4.1

BIOGAS TREATMENT USING ALTERNATIVE ADSORBENTS: PILOT TEST RESULTS WITH MUNICIPAL SOLID WASTE INCINERATION BOTTOM ASH

Marta FONTSERE OBIS, INSA Lyon, DEEP Laboratory, FRANCE

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2CV.4.5

EFFECT OF MECHANICAL, CHEMICAL AND BIOLOGICAL PRE-TREATMENTS IN THE ANAEROBIC DIGESTION OF WOOD

Ioannis ZARKADAS, Aristotle University of Thessaloniki, Chemical Engineering Dpt., GREECE

Co-authors: D. Sarigiannis, F. Kaldis, M. Lioti, Aristotle University of Thessaloniki, Greece; P. Katopodis, University of Ioannina, Greece

2CV.4.6

A SUSTAINABLE BIOENERGY GENERATION PROCESS COMBINING DIGESTATE FOR ALGAE CULTIVATION AND FURTHER ANAEROBIC DIGESTION FOR METHANE PRODUCTION

Na DUAN, China Agricultural University, College of Water Resources and Civil Engineering, P.R. CHINA

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2CV.4.7

COMPARATIVE STUDY CONCERNING ANAEROBIC FERMENTATION OF CEREAL DEGRADED MATERIALS

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

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2CV.4.12

BIOGAS YIELD OF THE RESIDUES FROM THE CARDOON SEEDS MILLING: RESULTS OF THE PRELIMINARY LABORATORY EXPERIMENTATIONS

Andrea NICOLINI, University of Perugia, CIRIAF, ITALY

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2CV.4.13

Software Development for Bioelectrochemical System Modelling

Mobolaji SHEMFE, University of Surrey, Centre for Environment and Sustainability, UNITED KINGDOM

Co-author: J. Sadhukhan, University of Surrey, Guildford, United Kingdom

2CV.4.14

INVESTIGATION AND OPTIMIZATION OF THE MIXING IN A BIOGAS DIGESTER WITH A LABORATORY EXPERIMENT AND AN ARTIFICIAL MODEL SUBSTRATE

Leonhard WIEDEMANN, Technische Hochschule Ingolstadt, Institute of New Energy Systems, GERMANY

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2CV.4.16

EVALUATION OF LOW-COST ENHANCED BIODIGESTERS FOR PUBLIC USE IN RURAL SOCIETIES IN COLOMBIA

Eric Charles PETERSON, Universidad Icesi, Biochemical Engineering Dpt., COLOMBIA

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2CV.4.17

ANAEROBIC DIGESTION OF FOOD WASTE

Gilberto MARTINS, Universidade Federal do ABC, CECS Dpt., BRAZIL

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2CV.4.18

ANAEROBIC DIGESTION OF ENERGY BEETS

Vilis DUBROVSKIS, Latvia University of Agriculture, Institute of Energetics, LATVIA

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2CV.4.19

DUCKWEED AS INNOVATIVE FEEDSTOCK FOR BIOGAS PRODUCTION - A COMPARISON OF TWO FERMENTER CONCEPTS

Torsten REINELT, DBFZ-German Biomass Research Centre, Biochemical Conversion Dpt., GERMANY

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2CV.4.25

THE COMPARISON OF INOCULUM SOURCES ON START-UP OF ANAEROBIC DIGESTION TREATING PROTEIN- AND LIPID-RICH SUBSTRATE

Seokhwan HWANG, Pohang University of Science and Technology, KOREA

Co-authors: J Lee, SG Shin, J Shin, POSTECH, Pohang, Korea

2CV.4.28

GRASS FROM LANDSCAPING MEASURES IN BIOGAS PRODUCTION - A SYSTEMS ANALYTICAL APPROACH

Tobias DOMNIK, Karlsruhe Institute of Technology, Institute for Technology Assessment and System Analysis, GERMANY

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2CV.4.29

CONVERSION OF FOOD WASTE INTO ENERGY: IMPACT OF THERMAL PRE-TREATMENT ON HYDROGEN AND METHANE PRODUCTION

Camilla Maria BRAGUGLIA, CNR - Istituto di Ricerca sulle Acque, ITALY

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2CV.4.30

EFFECT OF HYDRAULIC RETENTION TIME ON PERFORMANCE AND MICROBIAL COMMUNITY STRUCTURE IN ANAEROBIC DIGESTION OF WASTE ACTIVATED SLUDGE

Seung Gu SHIN, Pohang University of Science and Technology, School of Environmental Science and Engineering, KOREA

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2CV.4.33

MULTI-STAGE SEMI-DRY ANAEROBIC DIGESTION OF OFMSW AND CATTLE MANURE IMPROVED BY NATURAL ZEOLITES

Valerio PAOLINI, National Research Council, Institute of Atmospheric Pollution Research, ITALY

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2CV.4.35

EVALUATION AND MODELLING THE ENERGY EFFICIENCY OF COMMERCIAL SCALE BIOGAS PLANTS

René CASARETTO, Hochschule Flensburg, Green Engineering Dpt., GERMANY

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2CV.4.37

ANAEROBIC DIGESTION SYSTEM FOR BIO-CH₄ AND BIO-H₂ PRODUCTION UTILIZING FISH WASTE IN NORWAY: A COMPARISON BETWEEN A SINGLE STAGE AND TWO STAGE REACTOR PROCESS

Shiplu SARKER, Norwegian University of Science and Technology, Energy and Process Engineering, NORWAY

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2CV.4.38

ISOLATION OF PROTEASE-PRODUCING BACILLUS SP. FROM WASTEWATER SLUDGE FOR SOLUBILIZATION OF PRIMARY SLUDGE

Junghyun JU, Korea Research Institute of Bioscience and Biotechnology, KOREA

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2CV.4.42

SCREENING OF LIPASE-PRODUCING BURKHOLDERIA SP. FROM WASTEWATER SLUDGE FOR SOLUBILIZATION OF PRIMARY SLUDGE

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2CV.4.44

THE USE OF THE HYDRODYNAMIC CAVITATION FOR DISINTEGRATION OF LIGNOCELLULOSIC BIOMASS

Magdalena ZIELINSKA, University of Warmia and Mazury, Environmental Biotechnology Dpt., POLAND

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2CV.4.45

EFFECT OF HYDRODYNAMIC DISINTEGRATION OF THE LIGNOCELLULOSIC SUBSTRATE ON THE EFFECTIVENESS OF THE AGRICULTURAL BIOGAS PLANT

Agnieszka CYDZIK-KWIATKOWSKA, University of Warmia and Mazury in Olsztyn, Environmental Biotechnology Dpt., POLAND

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09:00 - 10:30

VISUAL PRESENTATIONS 1DV.1

Quantifying Biomass Availability for Bioenergy and Biomass Characterisation Studies. Municipal and Industrial Biowaste Innovations in Processing and Products

ROOM: Poster Area

CHAIRPERSON:

Peter KUIKMAN, Alterra Wageningen UR, THE NETHERLANDS

Gianni FACCIOTTO, CREA- Council for Agricultural Research & Economics, Casale Monferrato, Italy

1DV.1.1

SUSTAINABLE BIOMASS PRODUCTION ON MARGINAL LANDS (SEEMLA)

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

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1DV.1.2

ASSESSMENT OF SHRUB BIOMASS AVAILABILITY AND ENVIRONMENTAL IMPACTS OF ITS HARVESTING FOR ENERGY PURPOSES: A METHODOLOGICAL APPROACH IN THE MEDITERRANEAN

Borja Daniel GONZALEZ-GONZALEZ, INIA, SPAIN

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1DV.1.3

SHORT ROTATION WOODY CROPS: EXPERIENCES FROM THE EU PROJECT SRCPLUS

Dominik RUTZ, WIP, Biomass Unit, GERMANY

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1DV.1.6

CHARACTERIZATION OF BRAZILIAN SUGARCANE BAGASSE AND SUGARCANE STRAW BASED ON EUROPEAN METHODOLOGIES TO EVALUATE THE POTENTIAL FOR ENERGY CONVERSION

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

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1DV.1.7

SPATIAL BIOMASS SUPPLY OF FAST-GROWING PLANTATIONS FOR ENERGY

Blas MOLA, University of Easter Finland, FINLAND

Co-authors: B. Mola-Yudego, UEF/SLU, Joensuu, Finland; I. Dimitriou, SLU, Uppsala, Sweden

1DV.1.8

ASSESSING BIOMASS RESOURCES FROM OLIVE OIL PRODUCTION IN SPAIN

Paloma MANZANARES, CIEMAT, Biofuels Unit, Renewable Energy Division, SPAIN
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1DV.1.14

ENERGY CROPS FOR THE TROPICS AND SUBTROPICS

Andrew HASHIMOTO, University of Hawaii at Manoa, Molecular Biosciences and Bioengineering Dpt., USA
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1DV.1.16

BIOENERGY DEVELOPMENT AS A SUSTAINABLE ENERGY TO COUNTER ENERGY CRISIS IN BANGLADESH

Muntasir MURSHED, North South University, School of Business and Economics, BANGLADESH
Co-author: S.B. Amin, North South University, Dhaka, Bangladesh

1DV.1.21

BIOMASS DEMAND POINT LOCATION ANALYZE AT REGIONAL LEVEL AGENT-BASED SIMULATION

Mika AALTO, Lappeenranta University of Technology, Laboratory of Bioenergy, FINLAND
Co-authors: O.-J. Korpinen, T. Ranta, Lappeenranta University of Technology, Mikkeli, Finland

1DV.1.22

COMPOSTING OF DIFFERENT AGRICULTURAL BY-PRODUCTS WITH RAW DIGESTATE: PRELIMINARY CONSIDERATIONS ABOUT TECHNICAL FEASIBILITY

Massimo BRAMBILLA, Consiglio per la Ricerca in Agricoltura e l'analisi dell'economia Agraria, Unità di Ricerca per l'Ingegneria Agraria, ITALY
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1DV.1.25

VACUUM TECHNOLOGY FOR WOODCHIPS DRYING

Vaclav MAREK, University of West Bohemia, Mechanical Engineering Dpt., CZECH REPUBLIC

1DV.1.27

REGIONAL BIOMASS POTENTIALS FROM AIRBORNE LASER SCANNING DATA, CASE SOUTH-EAST FINLAND

Mika LAIHANEN, Lappeenranta University of Technology, LUT Energy Dpt., FINLAND
Co-authors: A. Karhunen, T. Ranta, Lappeenranta University of Technology, Finland

1DV.1.28

A BI-OBJECTIVE MODEL TO LOCATE SEVERAL BIO-REFINERIES AND OPTIMIZE THEIR SUPPLIES

Nasim ZANDI ATASHBAR, University of Technology of Troyes, FRANCE
Co-authors: N. Labadie, C. Prins, University of Technology of Troyes, Troyes, France

1DV.1.30

COMPARATIVE STUDY OF TIME INVESTMENT ON COOKING ENERGY FUEL TRANSITION IN RURAL INDIA AND NEPAL

Karabee DAS, University of Groningen, IVEM, ESRIG Dpt., THE NETHERLANDS
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1DV.1.32

AGRICULTURAL AND FOREST RESIDUES IN PERU: POTENTIAL FOR BIOENERGY USE

Estela ASSUREIRA, Pontificia Universidad Católica del Perú, Engineering Dpt., PERU
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1DV.1.35

EUBCE STUDENT AWARDEE PRESENTATION

HOW TO PRESERVE THE ENERGY POTENTIAL OF ORGANIC RESIDUES DURING STORAGE? FOCUS ON ANAEROBIC DIGESTION

Ruben FRANCO, Université de Lyon, INSA Lyon, DEEP Research Group, FRANCE
Co-authors: R. Teixeira Franco, P. Buffiere, R. Bayard, Université de Lyon, INSA Lyon, DEEP Laboratory, Villeurbanne, France

1DV.1.36

VANE TORQUE TESTER FOR FOREST BIOMASS

Mateusz STASIAK, Institute of Agrophysics, Polish Academy of Sciences, POLAND
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1DV.1.38

WOODY BIOMASS FOR ENERGY USE FROM RESIDUES AND WASTE OF FOREST UTILISATIONS AND PRUNING WOODY CROPS IN ITALY

Domenico COALOA, CREA-Council for Agricultural Research and Economics, Trasformazioni Industriali Dpt., ITALY
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1DV.1.39

MECHANICAL PROPERTIES OF GRANULAR BIOMASS DETERMINED IN VANE TORQUE TESTER

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1DV.1.41

ENERGY-EFFICIENT COLD-AIR VENTILATION OF COARSE WOOD CHIPS FROM SHORT ROTATION COPPICE

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1DV.1.42

MECHANICAL EXTRACTION AND RECOVERY OF ROOTSTOCKS FROM END LIFE ORCHARDS TO PRODUCE BIOENERGY

Luigi PARI, CREA- Council for Agricultural Research and Economics, Unità di Ricerca per l'Ingegneria Agraria - CREA-ING, ITALY
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1DV.1.43

A PRELIMINARY ANALYSIS ON THE POTENTIAL BIOENERGY PRODUCTION FROM AGRO-FORESTRY CROPS AND RESIDUES IN ANGOLA

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

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1DV.1.48

AMBIENT DRYING OF EUCALYPTUS GRANDIS IN HAWAII: EXPERIMENTAL AND MODEL RESULTS

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1DV.1.50

CONCEPTUAL DESCRIPTION OF INTEGRATED BIOMASS LOGISTICAL CENTRES (IBLCS)

Bert ANNEVELINK, Wageningen Food & Biobased Research, Biorefinery & Sustainable Value Chains Dpt., THE NETHERLANDS

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1DV.1.55

CHARACTERIZATION OF TORREFIED BIOMASS AND CO-FIRING EXPERIMENTAL INVESTIGATION IN PILOT SCALE COMBUSTION SYSTEM

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1DV.1.58

BENCHMARKING DIFFERENT TREATMENT METHODS FOR ORGANIC MUNICIPAL SOLID WASTE

Dominik RUTZ, WIP, Biomass Unit, GERMANY

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1DV.1.59

BIOMASS-CONCEPTS FOR TOURISM AREAS

Gerold HAFNER, University of Stuttgart, ISWA - Institute for Sanitary Engineering, Water Quality and Solid Waste Management Dpt., GERMANY

1DV.1.61

ECONOMIC EVALUATION OF THE PRODUCTION AND UTILIZATION OF BIO-FERTILIZERS FROM ORGANIC WASTE DIGESTATES IN COMPARISON TO MINERAL FERTILIZERS

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1DV.1.62

A FOUR-STEP GASIFICATION-COMBUSTION PROCESS FOR THE CLEAN CONVERSION OF MSW

Ruizhi ZHANG, Shanghai Jiao Tong University, Institute of Thermal Energy Engineering, P.R. CHINA

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1DV.1.63

DEMAND-ORIENTED GENERATION OF SEWAGE GAS FROM ORGANIC WASTE MATERIAL BY CO-FERMENTATION OF LIQUID COMPONENTS IN SEWAGE SLUDGE DIGESTERS

Philipp PILSL, University of Stuttgart, Institute for Sanitary Engineering, Water Quality and Solid Waste Management, GERMANY

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1DV.1.66

TECHNOLOGY OF DRYING AND CHARACTERISTICS OF SOLID REFUSE FUEL FROM ORGANIC WASTES WITH HIGH WATER CONTENTS

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1DV.1.68

CHARACTERIZATION OF ASHES FROM MSW INCINERATION PLANTS

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1DV.1.72

ORGANIC WASTE AND RESOURCE MANAGEMENT IN TOURISM AREAS

Dominik LEVERENZ, University Stuttgart, Institute for Sanitary Engineering, Water Quality and Solid Waste Management, GERMANY

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1DV.1.73

PERFORMANCE AND MICROBIAL DYNAMICS OF FULL-SCALE WASTEWATER TREATMENT PLANT THAT DIVERSIFIED DENITRIFICATION CARBON SOURCE BY USING TWO ORGANIC WASTES

Seokhwan HWANG, Pohang University of Science and Technology, KOREA

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1DV.1.74

COMPARISON OF DIFFERENT METHODS TO DETERMINE THE SOLIDS CONTENT FOR MSW CHARACTERIZATION

Aline RUIZ, Universidade Federal do ABC, BRAZIL

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1DV.1.76

CYCLONE DRYING OF SECONDARY SLUDGE FROM PULP AND PAPER MILLS

Alejandro GRIMM, Swedish University of Agricultural Sciences, Forest Biomaterials and Technology Dpt., SWEDEN

Co-authors: M. Segerström, S.H. Larsson, Swedish University of Agricultural Sciences, Umea, Sweden

1DV.1.79

INTERNAL PELLETT DENSITY HETEROGENEITY VIEWED IN 3D USING X-RAY TOMOGRAPHY

Mikael THYREL, Swedish University of Agricultural Sciences, Forest Biomaterials and Technology Dpt., SWEDEN

Co-author: T.A Lestander, Swedish University of Agricultural Sciences, Umeå, Sweden

1DV.1.81

PREDICTION OF LOWER HEATING VALUE OF WASTES OF SANTO ANDRE USING MULTIVARIATE REGRESSION

Juliana Tofano. DE CAMPOS LEITE TONELI, Universidade Federal do ABC

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1DV.1.83

ROLE OF EFFICIENT MICROORGANISMS IN RAPID COMPOSTING OF KITCHEN WASTE

Ritika PATHAK, Indian Institute of Technology, Centre for Rural Development and Technology, INDIA

Co-authors: S. Sharma, R. Prasad, Indian Institute of Technology, Delhi, India

1DV.1.86

OPTIMIZATION OF WASTE MANAGEMENT SCENARIOS BY PRINCIPAL COMPONENT ANALYSIS: A CASE STUDY IN REUNION ISLAND.

Christelle HATIK, University of La Reunion, FRANCE

Co-authors: J.C. Gatina, University of la Réunion, Le Tampon, FRANCE

1DV.1.84

ESTIMATION OF CROP RESIDUE PRODUCTION IN THE EUROPEAN UNION WITH EMPIRICAL MODELS. A NEW APPROACH CONSIDERING CROP PHYSIOLOGICAL CHARACTERISTICS

Sara GARCIA CONDADO, European Commission, JRC, Directorate for Sustainable Resources - Food Security Unit (D.5), ITALY

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1DV.1.88

HEATING VALUE MODELLING USING COMPUTATIONAL AND MATHEMATICAL TECHNIQUES

Gilberto MARTINS, Universidade Federal do ABC, CECS Dpt., BRAZIL

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10:45 - 12:15

VISUAL PRESENTATIONS 1DV.2

Dedicated Bioenergy Crops from Planting to Harvesting and Novel Production Systems. Potential and Impact of Algae Production

ROOM: Poster Area

CHAIRPERSONS:

Neeta SHARMA, ENEA Research Centre, ITALY

Scott TURN, University of Hawaii, USA

Luigi PARI, CREA- Council for Agricultural Research and Economics, ITALY

1DV.2.1

GENETIC DIVERSITY OF ELEPHANTGRASS ECOTYPES FOR BIOENERGY PRODUCTION

João DO AMARAL SANTOS DE CARVALHO ROCHA, Federal University of Viçosa, BRAZIL

Co-authors: J.R.A.S.C. Rocha, P.C.S. Carneiro, Universidade Federal de Viçosa, Brazil; R.A.D.C. Ferreira, Universidade Federal de Viçosa, Viçosa, Brazil; J.C. Carneiro, J.C. Machado, Embrapa Gado de Leite, Juiz de Fora, Brazil

1DV.2.2

MOLECULAR MECHANISM OF RESPONSE AND ADAPTATION OF THE ENERGY PLANT JATROPHA CURCAS L. TO COLD STRESS

Ming GONG, Yunnan Normal University, School of Life Sciences, P.R. CHINA

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1DV.2.3

BREEDING NEW VARIETY OF CAMELINA SATIVA ADAPTED TO TEMPERATE CONTINENTAL CLIMATE

Florentina MATEI, University of Agronomical Sciences, Biotechnologies Dpt., ROMANIA

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1DV.2.5

DETERMINATION OF IMPORTANT TRAITS FOR SEED OIL OF GARDEN CRESS (LEPIDIUM SATIVUM L.) AS A POTENTIAL FOR BIODIESEL PRODUCTION

Naser SABAGHNI, University of Maragheh, Plant Breeding Dpt., IRAN

Co-author: M. Mohebodini, University of Maragheh, Iran

1DV.2.6

VEGETATIVE PROPAGATION OF ULMUS PUMILA L. BY STEM CUTTINGS WITH A VIEW TO THE DEVELOPMENT OF BRED LINES FOR WOODY BIOMASS PLANTATIONS

Pedro V. MAURI ABLANQUE, IMIDRA, Investigación Agroambiental Dpt., SPAIN

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1DV.2.7

ASSESSMENT OF OPTIMAL PLANT DENSITY FOR SWITCHGRASS TRANSPLANTS OBTAINED BY THE FLOAT SYSTEM

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

Co-author: F. Castelli, CREA- Council for Agricultural Research and Economics, Bovolone, Italy

1DV.2.10

POPLAR SHORT-ROTATION COPPICE IN SOUTHERN ITALY

Gianni FACCIOTTO, CREA- Council for Agricultural Research & Economics, Foreste e Legno Dpt., ITALY

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1DV.2.13

PERENNIAL GRASSES: BIOMASS QUALITY AND YIELD COMPARISON OF 12 DIFFERENT SPECIES IN THE NORTHERN GREAT PLAINS OF THE UNITED STATES

Carlos Sixto CIRIA RAMOS, CIEMAT, Biomasa Dpt., SPAIN

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1DV.2.15

ENERGY CROPS: HERBACEOUS PERENNIAL IN PRODUCTION WITH DIFFERENT FERTILIZERS IN THE CENTER OF SPAIN

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1DV.2.16

EVALUATION OF NEW PERENNIAL GRASSES FOR BIOMASS PRODUCTION ITALY

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1DV.2.17

PATH ANALYSIS OF BIOMASS AND SEED YIELD OF GARDEN CRESS FOR HIGH BIODIESEL PRODUCTION

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1DV.2.18

EVALUATION OF BIOMASS QUALITY OF ENDEMIC PLANTS OF CAPE VERDE AIMING ITS POSSIBLE USE FOR FIBER AND ENERGY PRODUCTION

Maria Paula DUARTE, Universidade NOVA de Lisboa, Ciências e Tecnologia da Biomassa Dpt., PORTUGAL

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1DV.2.21

COMBINING HARVEST DATE AND CUTTING HEIGHT TO OPTIMIZE THE SUSTAINABILITY OF MISCANTHUS PRODUCTION FOR ENERGY IN THE MEDITERRANEAN REGION

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

1DV.2.22

RESPONSE OF THE ENERGY GRASS GIANT REED TO THREE HARVEST STRATEGIES: CROP GROWTH RATE AND DRY MATTER YIELD

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1DV.2.23

USE OF A FLEXIBLE BAR IN STONY SOIL

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1DV.2.24

PROTOTYPE FOR UNLOADING FRESH BIOMASS FROM SILO-BAGS

Alberto ASSIRELLI, CRA - Agricultural Research Council, ITALY

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1DV.2.25

INNOVATIVE SYSTEM FOR INDUSTRIAL HEMP HARVESTING

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1DV.2.26

JATROPHA CURCAS L. HARVESTING METHODS: AN ECONOMIC ASSESSMENT

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1DV.2.32

EFFECT OF BLUE LIGHT ON GROWTH AND OIL ACCUMULATION IN THE MODEL GREEN MICROALGA CHLAMYDOMONAS REINHARDTII

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1DV.2.35

OPTIMIZATION OF MICROALGAE CULTURE CONDITIONS FOR BETTER QUALITY BIODIESEL PRODUCTION

Xiaoling MIAO, Shanghai Jiao Tong University, School of Life Sciences & Biotechnology, P.R. CHINA

1DV.2.37

MICROALGAE AS A WATER TREATMENT SYSTEM FOR RECIRCULATING FISH WATER POOL

Katariina LAHTI, Helsinki University, Environmental Sciences Dpt., FINLAND

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1DV.2.41

AQUATIC WEEDS AS BIOMASS SOURCE: THE HARVESTING TECHNIQUE IN NORTH ITALY

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1DV.2.42

SALTGAE: ALGAL TREATMENT OF SALINE WASTE WATER COUPLED WITH BIOGAS PRODUCTION AND BIOMASS VALORISATION

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1DV.2.44

ENVIRONMENTAL IMPACTS ASSESSMENT OF ALTERNATIVE MICROALGAL BIOFUELS SYSTEMS

Jacopo GIUNTOLI, European Commission, JRC, Directorate C: Energy, Transport and Climate, THE NETHERLANDS

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1DV.2.46

ALGAL BIOPROSPECTING TO FEEDSTOCK PRODUCTION: THE TRINIDAD AND TOBAGO CASE STUDY

Trina HALFHIDE, University of the West Indies, Life Sciences, TRINIDAD AND TOBAGO REPUBLIC

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1DV.2.50

ENHANCING THE QUALITY AND QUANTITY OF PANICUM MAXIMUM JACQ. BIOMASS BY EMPLOYING BENEFICIAL ACC DEAMINASE PRODUCING RHIZOBACTERIA UNDER ABIOTIC STRESS CONDITION FOR BIOENERGY APPLICATIONS

Garima TIWARI, Indian Institute of Technology, Centre For Rural Development And Technology, INDIA

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1DV.2.52

COST AND PROFITABILITY FOR ROTATIONAL GRASS/CLOVER AS BIOGAS FEEDSTOCK: A SWEDISH SCENARIO STUDY

Carina GUNNARSSON, SP Technical Research Institute of Sweden, Food and Bioscience Dpt., SWEDEN

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1DV.2.56

SIMPLIFICATION OF OIL PRODUCTION PROCEDURES THROUGH MEDIATION OF FENTON REACTION AND ELECTRO-COAGULATION-FLOTATION (ECF)

Ahream YANG, Korea Advanced Institute of Science and Technology, Chemical & Biomolecular Engineering Dpt., KOREA

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1DV.2.58

EFFECT OF SERIAL SUBCULTURING ON THE ADAPTIVE POTENTIAL OF DUNALIELLA SALINA STRAIN KU11

Wipawee DEJTISAKDI, King Mongkut's Institute of Technology Ladkrabang, Biology Dpt., THAILAND

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1DV.2.59

CONTINUOUS CULTIVATION OF MICROALGAE AS AN EFFICIENT METHOD TO IMPROVE CARBOHYDRATE PRODUCTIVITY AND BIOCHEMICAL STABILITY

Carlos Eduardo DE FARIAS SILVA, University of Padua, Industrial Engineering Dpt., ITALY

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1DV.2.60

MARGINAL LAND FOR GROWING INDUSTRIAL CROPS: TURNING A BURDEN INTO AN OPPORTUNITY

Efthymia ALEXOPOULOU, Center for Renewable Energy Sources, Biomass Dpt., GREECE

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1DV.2.61

POTENTIAL USE OF NON-FOOD CROPS IN HEAVY METAL (-LOIDS) PHYTOEXTRACTION

Eleni KOUKOUNA, Agricultural University of Athens, Crop Science Dpt., GREECE

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1DV.2.63

MICROALGAE BIOMASS PRODUCTION FROM ANAEROBIC EFFLUENT

Marcos Vinicius NOGUEIRA LAVAGNOLI PEREIRA, UFES - Federal University of Espírito Santo, Environmental Engineering Dpt., BRAZIL

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1DV.2.64

TWO-YEAR OLD GIANT REED ECOTYPES ADAPTATION TO DROUGHT

Walter ZEGADA-LIZARAZU, University of Bologna, Department of Agricultural Science, ITALY

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1DV.2.65

QUANTITATIVE AND QUALITATIVE BIOMASS PRODUCTION POTENTIAL OF GIANT REED MUTANTS UNDER RAINFED AND IRRIGATED CONDITIONS

Walter ZEGADA-LIZARAZU, University of Bologna, Department of Agricultural Science, ITALY

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1DV.2.66

FORAGE BIOMASS: A THERMAL ENERGY SOURCE IN THE CEMENT MANUFACTURING PROCESS

Marcelo AYRES CARVALHO, Embrapa - Brazilian Agriculture Research Corporation, Cerrados Research Center, BRAZIL

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13:30 - 15:00

VISUAL PRESENTATIONS IDV.3

Industrial Innovations in Feedstock Production, Power, Biogas and Advanced Biofuels Generation

ROOM: Poster Area

CHAIRPERSON:

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

IDV.3.4

QUALITY GUIDELINES OF WOOD CHIPS AND HOG FUELS - APPLYING INTERNATIONAL SOLID BIOFUELS STANDARDS

Eija ALAKANGAS, VTT Technical Research Centre of Finland, Renewable Energy Processes Dpt., FINLAND

IDV.3.6

PREDICTING BIOMASS YIELDS OF CORN STOVER FROM SATELLITE IMAGING IN EASTERN CANADA

Charles LALONDE, Ontario Federation of Agriculture, CANADA

Co-authors: M. Wellisch, J. Lui, J. Shang, T. Huffman, A. Davidson, Agriculture and AgriFood Canada, Ottawa, Canada

IDV.3.8

FOREST PLANTATION AND HARVESTING SYSTEMS FOR EUCALYPTUS BIOMASS INVESTMENTS IN FLORIDA USA

Tom WILLIAMS, Harvest Logistics, USA

Co-author: J. Wright, Durania, Boone NC, Usa

IDV.3.9

SELF-PROPELLED BIOMASS HARVESTER MACHINE FOR PRUNING RESIDUES REMOVAL AND PRE-PROCESSING IN ORCHARDS AND VINEYARDS

Maurizio CUTINI, CREA, ITALY

Co-authors: M. Brambilla, C. Bisaglia, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, Unità di ricerca per, Treviglio, Italy; G. Rota, G. Minuti, R. Sargiani, CAEB International, Petosino di Sorisole, Italy

IDV.3.10

OPERATIONAL AND DESIGN PARAMETERS OF MICROALGAE CULTIVATION SYSTEMS FOR ITS APPLICATION IN INDUSTRIAL SCALE

Vojtech BELOHLAV, Czech Technical University in Prague, Process Engineering Dpt., CZECH REPUBLIC

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IDV.3.12

BUSH ENCROACHMENT IN NAMIBIA - TURNING AN ENVIRONMENTAL HAZARD INTO A SOCIO-ECONOMIC OPPORTUNITY

Dagmar HONSBEIN, Namibia Biomass Industry Group, NAMIBIA

Co-author: C.M. Lindeque, N-BiG, Windhoek, Namibia

IDV.3.13

BIOHYDROGAS. A NEW TECHNOLOGY FOR PRODUCING H2

Francisco GARCIA CARRO, Magna Dea, SPAIN

Co-author: S. Solis Gutierrez, Magna Dea, Oviedo, Spain

IDV.3.14

EFFICIENT WAY TO PRODUCE BIOFUELS FROM MUNICIPAL SOLID WASTES

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IDV.3.21

REMOTE CONDITION MONITORING OF AUTOMATED BIOMASS POWER STATIONS

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IDV.3.22

INNOVATIVE APPROACH AND TECHNICAL DEVELOPMENT ABOUT SOLID BIOMASS UTILIZATION FOR POWER PLANT BOILERS IN IHI

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IDV.3.24

EXPERIMENTAL AND NUMERICAL STUDY ON TWO-STAGE COMBUSTION PROCESS OF SYNGAS FUELS WITH HIGH CONTENT OF NITROGEN BOUNDED COMPOUNDS

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IDV.3.26

AN EFFICIENT PAPER SLUDGE HYDROLYSIS METHOD USING WHOLE CELL BIOCATALYSTS, RENDERING PAPER SLUDGE IDEAL FOR BIOGAS PRODUCTION.

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IDV.3.31

BIOETHANOL PRODUCTION BY CRUDE GLYCEROL FERMENTATION

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IDV.3.34

CHALLENGES IN SCALING UP AN NON-ENZYMATIC PROCESS FOR THE PRODUCTION OF SECOND GENERATION SUGARS

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IDV.3.35

BIORESCUE: ENHANCED BIOCONVERSION OF AGRICULTURAL RESIDUES THROUGH CASCADING USE

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IDV.3.36

PAVING THE WAY FOR A NEXT GENERATION BIOBUTANOL (BUTANEXT)

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IDV.3.37

TECHNICAL PRODUCTION PROCESS FOR INNOVATIVE ANTIOXIDANTS USING NOVEL ENZYMES AS BIOCATALYST

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IDV.3.39

CONCEPT STUDY FOR "MANURE-TO-ELECTRICITY" AT SMALL-SCALE FARMS: THE SWISS CASE

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IDV.3.41

NOVEL ENZYME ACTIVITY SCREENING ON COMPLEX BIOMASS STRUCTURES

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IDV.3.46

LIFE CYCLE ASSESSMENT OF HYDROTHERMAL CARBONIZATION OF FOUR WET BIOMASS WASTE STREAMS AT INDUSTRY-RELEVANT SCALES

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IDV.3.48

THE NEW EUROPEAN TECHNOLOGY AND INNOVATION PLATFORM FOR BIOENERGY: PROMOTING THE MARKET UPTAKE OF COST-COMPETITIVE INNOVATIVE BIOENERGY AND BIOFUELS VALUE CHAINS

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IDV.3.49

WEALTH FROM BIO ECONOMY - NATIONAL ECONOMY PERSPECTIVE ON INTEGRATED BIO- AND LOW CARBON TECHNOLOGIES

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IDV.3.50

AUTOMATED MOISTURE, VOLATILE AND ASH DETERMINATION WITH A TGA SYSTEM.

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IDV.3.54

THE QUANTITATIVE AND QUALITATIVE ANALYSIS OF ALTERNATIVE AND RENEWABLE SOLID BIOFUELS - DEVELOPMENT AND VALIDATION

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IDV.3.55

BIOMASS FOR RESIDENTIAL AND COMMERCIAL HEATING IN A REMOTE CANADIAN ABORIGINAL COMMUNITY

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IDV.3.58

IEA BIOENERGY: POLICIES AND STATUS OF IMPLEMENTATION

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