Bio-Char III: Production, Characterization and Applications

Tomar, Portugal
17-22 September 2023

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Monday, September 18, 2023

07:30 – 08:30	Breakfast buffet
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PRODUCTION PROCESSES, PRE- AND POST-PROCESSING AND REACTOR TECHNOLOGIES

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09:40 – 10:00	**101 - Evaluation of pyrolysis processes and biochar quality in the operation of flame curtain pyrolysis kiln for sustainable biochar production** 3 Anjali Jayakumar, Newcastle University, UK. David Morrisset, University of Edinburgh, UK. Vasileios Koutsomarkos, University of Edinburgh, UK. Christian Wurzer, University of Edinburgh, UK. Rory M. Hadden, University of Edinburgh, UK. Robert Gordon University, UK. Christine Edwards, Robert Gordon University, UK. Ondřej Mašek, University of Edinburgh, UK.
10:00 – 10:20	**119 - Heat, power and high-temperature biochar cogeneration** 4 Anežka Sedmihradská, University of Chemistry and Technology; The Czech Academy of Sciences, Institute of Chemical Process Fundamentals, Czech Republic. Michael Pohořelý, University of Chemistry and Technology; The Czech Academy of Sciences, Institute of Chemical Process Fundamentals, Czech Republic.
10:20 – 10:50	Coffee Break
10:50 – 11:10	**130 - Activated char produced from chontaduro seeds: a new potential precursor** 5 Luis Angel, IMT Atlantique, France. Audrey Villot, IMT Atlantique, France. Yves Andres, IMT Atlantique, France. Claire Gerente, IMT Atlantique, France. Manuel Rodriguez Susa, Universidad de los Andes, Colombia. Jaime Plazas-Tuttle, Universidad de los Andes, Colombia.
11:10 – 11:30	**103 - Does stirring influence hydrothermal carbonization experiments? A laboratory and computational study of a lignocellulosic biomass** 6 Omar M. Abdeldayem, IHE Delft for Water Education, Netherlands. Md Abdullah Al-Noman, IHE Delft for Water Education, Netherlands. Capucine Dupont, IHE Delft for Water Education, Netherlands. David Ferras, IHE Delft for Water Education, Netherlands. Lat Grand Ndiaye, University Assane Seck of Ziguinchor, Senegal. Maria Kennedy, IHE Delft for Water Education, Netherlands.
11:30 – 11:50	**118 - Process modelling and life cycle assessment of algal biochar-bioenergy system** 7 Jiacheng Sun, University of Edinburgh, UK. Ondřej Mašek, University of Edinburgh, UK
11:50 – 12:10	**129 - Biochar seed-coatings for precision aerial seeding in forest restoration** 8 Sean C. Thomas, Institute of Forestry and Conservation, Univ. of Toronto, Canada

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17:40 – 18:00	**142 - Transformation of zinc during waste tyre pyrolysis using various reactors** Bo Gu, Curtin University, Australia. Yun Yu, Curtin University, Australia. Hongwei Wu, Curtin University, Australia.	10
18:00 – 18:20	**121 - Green functionalization of biochar via mechanochemical approach** Maria Rosaria Acocella, University of Salerno, Italy. Aida Kiani, University of Salerno, Italy. Gianluca Viscusi, University of Salerno, Italy. Elena Lamberti, University of Salerno, Italy. Giuliana Gorrasi, University of Salerno, Italy. Paola Giudicianni, Institute of Sciences and Technologies for Sustainable Energy and Mobility (STEMS) of the National Research Council (CNR), Italy. Corinna Maria Grottola, Institute of Sciences and Technologies for Sustainable Energy and Mobility (STEMS) of the National Research Council (CNR), Italy. Davide Amato, Institute of Sciences and Technologies for Sustainable Energy and Mobility (STEMS) of the National Research Council (CNR), Italy. Raffaele Ragucci, Institute of Sciences and Technologies for Sustainable Energy and Mobility (STEMS) of the National Research Council (CNR), Italy.	11
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Tuesday, September 19, 2023

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CHARACTERIZATION

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10:05 – 10:25 **127 - Impact of temperature and technology on biochar properties from different agricultural residues** 18
Konstantin Moser, Bioenergy and Sustainable Technologies GmbH, Austria. Elisabeth Wopienka, Bioenergy and Sustainable Technologies GmbH, Austria. Christoph Pfeifer, University of Natural Resources and Life Sciences, Vienna.

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14:00 – 16:45	Networking / *ad hoc* sessions	
16:45 – 17:20	Afternoon Refreshments (Coffee Break)	
17:20 – 17:40	**160 - Quality of sewage sludge-derived biochar from the point of organic pollutants and pyrolysis parameters** Jaroslav Moško, Institute of Chemical Process Fundamentals of the CAS; University of Chemistry and Technology, Czech Republic. Matěj Hušek, Institute of Chemical Process Fundamentals of the CAS; University of Chemistry and Technology, Czech Republic. Michael Pohořelý, Institute of Chemical Process Fundamentals of the CAS; University of Chemistry and Technology, Czech Republic.	23
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18:20 – 18:40	**165 - Evaluation of the effect of torrefaction and slow pyrolysis on porosity and adsorption performance of biochar and activated carbons obtained from palm kernel shell** Marlon Cordoba, University of La Guajira, Colombia. Farid Chejne, National University of Colombia, Colombia. Jader Aleán, University of La Guajira, Colombia. Carlos Gómez, National University of Colombia, Colombia.	26

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18:40 – 19:00	**154 - Comparison of hydrochar fractionation and composition in batch and continuous hydrothermal liquefaction** Maria J. Rivas-Arrieta, Department of Biological and Chemical Engineering, Aarhus University, Denmark. Patrick Biller, Affiliation, Department of Biological and Chemical Engineering, Aarhus University, Denmark.	27
19:00 – 19:30	Free time / Informal networking	
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08:30 – 08:50	**167 - Characterization of biochars by nuclear magnetic resonance** Yann LE BRECH, CNRS-University of Lorraine, France. Roger GADIOU, CNRS-University of Haute-Alsace, France. Luc DELMOTTE, CNRS-University of Haute-Alsace, France. Jésus RAYA, CNRS-University of Strasbourg, France. Younes BOUIZI, University of Lorraine, France. Gwendal KERVERN, University of Lorraine, France. Sebastien LECLERC, CNRS-University of Lorraine, France. Sabine BOUGUET-BONNET, University of Lorraine, France. Anthony DUFOUR, CNRS-University of Lorraine, France.	28
08:50 – 09:10	**143 - Biochars from bioresidues, grouped for easier logistics in fertilizer application** Rianne Visser, TNO Biobased and Circular Technologies, Netherlands	29
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APPLICATIONS

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12:20 – 12:40	**117 - High carbon wood ash biochar for mine tailings remediation: a field assessment of planted tree performance and metals uptake** Jasmine M. Williams, University of Toronto, Canada. Sean C. Thomas, University of Toronto, Canada.	38
12:45 – 14:00	Lunch (buffet)	
14:15	Be in the lobby for excursion to UNESCO World Heritage Site: Convento de Cristo. Tomar's most famous landmark, the Convento is on a hill overlooking town. It is within walking distance of the hotel. The Convento combines architectural styles from the 12th through 17th centuries. An ornate octagonal canopy protects the high altar of the Templo dos Templares, modeled after the Holy Sepulcher in Jerusalem, and the grounds of the convent contain eight cloisters embracing a variety of styles. After the Convento de Cristo, the tour will continue in the historic area of Tomar. Time for leisure in town afterwards.	
14:20	Depart with guides on excursion	
18:00 – 18:30	Return from excursion	
18:30 – 19:30	Reception in Lobby Bar (with music)	
19:30 – 21:00	Dinner	
21:00 – 22:30	Poster Session with Social Hour	

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MARKETS. COMMERCIALIZATION, POLICIES, REGULATIONS AND CARBON OFFSET CREDITS

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