



11th EUROPEAN CONFERENCE ON INDUSTRIAL FURNACES & BOILERS

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LIST DRAFT PAPERS SUBMITTED

Each draft paper is now being reviewed by three Referees. Authors will be notified of final acceptance/rejection by 20 January 2017. Final, completed papers will be required by 20 February 2017.

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Austria

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K1-MET GmbH and Montanuniversitaet Leoben (Austria)

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Franz Edler, Christoph Spijker, Harald Raupenstrauch and Bernhard Geier

K1-met GmbH and Chair of Thermal Processing Technology, Montanuniversitaet Leoben (Austria)

THE VIRTUAL BIOMASS GRATE FURNACE - AN OVERALL CFD MODEL FOR BIOMASS COMBUSTION PLANTS

Ali Shiehnejadhesar, Ramin Mehrabian, Robert Scharler and Christoph Hochenauer

BIOENERGY 2020+ GmbH and Institute of Thermal Engineering, Graz University of Technology (Austria)

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Rene Prieler, Petr Bělohradský, Bernhard Mayr, Andreas Rinner and Christoph Hochenauer

Institute of Thermal Engineering, Graz University of Technology and Institute of Process and Environmental Engineering, Brno University of Technology (Austria)

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BIOS BIOENERGIESYSTEME GmbH (Austria)

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Erwin Reisenhofer, Ingwald Obernberger, Thomas Brunner and Werner Kanzian
BIOS BIOENERGIESYSTEME GmbH (Austria)

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Bernhard Mayr, Rene Prieler, Martin Demuth, Luca Moderer and Christoph Hochenauer
Graz University of Technology, Messer Austria GmbH and Marienhütte GmbH (Austria)

CO/CO₂ RATIO IN BIOMASS CHAR OXIDATION

Andrés Anca-Couce, Peter Sommersacher, Robert Scharler and Christoph Hochenauer
Institute of Thermal Engineering, Graz University of Technology and BIOENERGY 2020+ GmbH (Austria)

Belgium

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Université Libre de Bruxelles (Belgium) and Institute for Clean and Secure Energy, University of Utah (USA)

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Université Libre de Bruxelles and Cleanergy AB (Belgium)

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University of Liège (Belgium)

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Drever International S.A. and von Karman Institute for Fluid Dynamics (Belgium)

Brazil

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Universidade do Vale do Rio dos Sinos – UNISINOS and Associação beneficente da indústria carbonífera de Santa Catarina – SATC (Brazil)

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Federal University of Pará (Brazil)

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Federal University of Pará (Brazil)

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ITA Instituto Tecnológico da Aeronáutica (Brazil)

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Denmark

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Aalborg University, Department of Energy Technology (Denmark)

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Aalborg University, Department of Energy Technology (Denmark)

Finland

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VTT Technical Research Centre of Finland Ltd (Finland)

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Lappeenranta University of Technology (Finland) and Federal University of Minas Gerais (Brazil)

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Aalto University, School of Chemical Technology (Finland)

France

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CORIA - CNRS, Normandie Université, Université de Rouen, Air Liquide and CMI GreenLine Europe (France)

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CORIA - CNRS, Normandie Université, Université de Rouen and Air Liquide (France)

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Germany

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RWTH Aachen University, Department for Industrial Furnaces and Heat Engineering and WS Wärmeprozessstechnik GmbH (Germany)

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Karlsruhe Institute of Technology (Germany)

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Birk Liedmann, Siegmund Wirtz, Viktor Scherer and Burkhard Krüger
Department of Energy Plant Technology (LEAT), Ruhr-University, Bochum and Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT (Germany)

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TU Bergakademie Freiberg and Karlsruher Institut für Technologie (Germany)

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Technische Universität Dresden (Germany)

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TU Bergakademie Freiberg (Germany)

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TU Bergakademie Freiberg (Germany)

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Otto von Guericke University Magdeburg (Germany)

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Otto von Guericke University Magdeburg (Germany)

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DBI Gas- und Umwelttechnik GmbH (Germany)

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LSTM - Institute of Fluid Mechanics at Friedrich-Alexander University and SAOT - Erlangen Graduate School in Advanced Optical Technologies (Germany)

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OWI-Oel-Waerme-Institut GmbH (Germany)

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Adnan Al-Hasnawi, Abdul Qayyum and Eckehard Specht

Otto von Guericke University Magdeburg (Germany)

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Karlsruhe Institute of Technology (Germany)

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Rukiye Gültekin, Antje Rückert and Herbert Pfeifer
Department of Industrial Furnaces and Heat Engineering (Germany)

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Jörg Leicher, Anne Giese, Klaus Görner, Matthias Wersch and Hartmut Krause
Gas- und Wärme-Institut Essen e.V. and DBI Gas- und Umwelttechnik GmbH (Germany)

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Gas- und Wärme-Institut Essen e.V. (Germany)

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FVTR GmbH and University of Rostock (Germany)

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University of Stuttgart (Germany)

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A. Becker, M. Schiemann, V. Scherer, D. Haxter and J. Mayer
Ruhr-University and Uniper Technologies GmbH (Germany)

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Technical University of Munich (Germany)

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Andreas Stephan, Christian Wolf, Sebastian Fendt and Hartmut Spliethoff
Technical University of Munich (Germany)

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J. Gorewoda and V. Scherer
Ruhr-Universität Bochum (Germany)

India

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Italy

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Giancarlo Sorrentino, Ugur Göktolga, Mara De Joannon, Jeroen Van Oijen, Antonio Cavaliere and Philip De Goey
Istituto di Ricerche sulla Combustione - Consiglio Nazionale delle Ricerche (Italy), DICMaPI - Università degli Studi di Napoli Federico II (Italy) and Department of Mechanical Engineering, Eindhoven University of Technology (Netherlands)

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Cesare Sacconi, Augusto Bianchini and Marco Pellegrini
Department of Industrial Engineering - University of Bologna (Italy)

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Antonio Coppola, Osvalda Senneca and Piero Salatino
Istituto di Ricerche sulla Combustione - Consiglio Nazionale delle Ricerche and Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale - Università degli Studi di Napoli Federico II (Italy)

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Federico Viganò and Francesco Magli
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Japan

ULTRA-LOW NOX OXYGEN-ENRICHED COMBUSTION SYSTEM USING OSCILLATION COMBUSTION METHOD

Yoshiyuki Hagihara, Kimio Iino, Yasuyuki Yamamoto and Tomoyuki Haniji
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Luxembourg

CONVERSION OF BIOMASS FUEL IN A FLUIDIZED BED USING A DEM-CFD MODEL

Mohammad Mohseni and Bernhard Peters

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Netherlands

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Martin Van 'T Hoff and Robin Zwart

Dahlman Renewable Technology B.V. (Netherlands)

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Hai Wu and Bertie Van Benschop

Tata Steel R&D and Tata Steel (Netherlands)

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X. Huang, M.J. Tummerts and D.J.E.M. Roekaerts

Delft University of Technology (Netherlands)

Norway

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Khanh-Quang Tran, Maria Zabalo Alonso, Liang Wang, Øyvind Skreiberg and Thuat T. Trinh

Norwegian University of Science and Technology and SINTEF Energy Research (Norway)

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Rajesh S Kempegowda, Khanh-Quang Tran, Øyvind Skreiberg and Thuat T. Trinh

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Poland

EXPERIMENTAL STUDY OF COMBUSTION PROCESS OF GASEOUS FUELS CONTAINING NITROGEN COMPOUNDS IN NEW, LOW-EMISSION ZONAL VOLUMETRIC COMBUSTION TECHNOLOGY

Slefarski Rafal, Szewczyk Dariusz, Jankowski Radoslaw and Golebiewski Michal

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POSSIBLE METHODS OF APPLICATION OF UNBURNT CARBON SEPARATED FROM LIGNITE FLY ASH

Wieslaw Rybak, Anna Kisiela, Wojciech Moroń, Krzysztof Czajka, Karol Król, Arkadiusz Szydełko and Wieslaw Ferens

Wroclaw University of Technology (Poland)

Portugal

AIR LEAKS

Jorge Pereira
BA Vidro (Portugal)

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Isabel Brás, M. E. Silva, G. Lobo, A. Cordeiro, M. Faria and L. T. De Lemos
ESTGV/ IPV, CI&DETS/ IPV and Ferrovial Serviços SA (Portugal)

CDF MODELING OF COMBUSTION IN BIOMASS FURNACE

João Silva, José Teixeira, Senhorinha Teixeira, Simone Preziati and J. Cassiano
Universidade do Minho and EDP (Portugal)

NUMERICAL STUDIES OF PREMIXED AND DIFFUSION MESO/MICRO-SCALE FLAMES

A. Cova, P.R. Resende, A. Cuoci, M. Ayoobi, A.M. Afonso and C.T Pinho
Universidade do Porto (Portugal), Universidade Estadual Paulista (Brazil), Politecnico di Milano (Italy) and Wayne State Univ. (USA)

Saudi Arabia

CONICAL QUARL SWIRL STABILIZED NON-PREMIXED FLAMES: FLAME AND FLOW FIELD INTERACTION

Ayman Elbaz and William Roberts
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Russia

LIQUID HYDROCARBONS COMBUSTION WITH SUPPLYING OF SUPERHEATED STEAM JET

Igor Anufriev, Oleg Sharypov, Evgeniy Kopyev and Sergey Alekseenko
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Slovenia

ADVANCED HEAT TRANSFER MODELING OF 600 MWE UTILITY BOILER

Warga Zeljko, Butala Vincenc, Gobbi Massimo and Massimo Gobbi
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Spain

BLAST FURNACE GAS BASED COMBUSTION SYSTEMS IN STEEL REHEATING FURNACES

Víctor Cuervo Piñera, Diego Cifrián Riesgo, Phuc Danh Nguyen, Valerio Battaglia, Massimiliano Fantuzzi, Alessandro Della Rocca, Marco Ageno, Anders Rensgard, Chuan Wang, John Niska, Tomas Ekman, Carsten Rein and Wolfgang Adler
ArcelorMittal (Spain), Centro Sviluppo Materiali (Italy), Tenova (Italy), Swerea MEFOS (Sweden), AGA Linde (Sweden) and VDEh-Betriebsforschungsinstitut (Germany)

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Universidad del País Vasco UPV-EHU, CIEMAT, CEDER-CIEMAT and Instituto de Tecnología Cerámica and INTA (Instituto Nacional de Técnica Aeroespacial) (Spain)

Sweden

ON-LINE ALKALI MEASUREMENT DURING OXY-FUEL COMBUSTION

Tomas Leffler, Magnus Berg, Christian Brackmann, Zhongshan Li and Marcus Aldén
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Switzerland

COMBUSTION OF TORREFIED BIOMASS CHIPS AND PELLETS PRODUCED LOCALLY IN SMALL AND MEDIUM SCALE BOILERS. COMPARISON WITH NON-TORREFIED FUEL OPERATION

Michel Jean-Bernardl, Mark McCormick, Claire Tansley, Boris Correa, Justyna Eaves, Martin Schmid and Mario Vogeli
University of Applied Sciences Western Switzerland, Granit Technology SA and Ökozentrum (Switzerland)

NEW DEVELOPMENTS IN FLOW SENSORS FOR INDUSTRIAL FURNACES

Oliver Seifert
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PREVENTING AUTOIGNITION INSIDE THE BURNER WITH HIGH TEMPERATURE OXIDANT PREHEATING

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ROTATING CYLINDERS FOR DEVELOPMENT OF CONVECTION IN HIGH TEMPERATURE COIL ANNEALING (HTCA) FURNACES

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Cardiff University, COGENT Power and TATA Steels (United Kingdom)

EXPERIMENTAL AND NUMERICAL INVESTIGATION OF AN ULTRA-LOW NOX METHANE BURNER

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NOX REDUCTION USING ADVANCED TECHNIQUES IN A 175MWTH MULTI-FUEL CORNER-FIRED BOILER

Michael Kryjak, James Dennis and Graeme Ridler
RJM Corporation (EC) Ltd (United Kingdom)

**A STUDY INTO THE EFFECT OF AGGLOMERATE FORMATION DURING BIOMASS COMBUSTION
IN A PILOT SCALE BUBBLING FLUIDISED BED UNIT AND ASSOCIATED DESIGN MODIFICATION**

Stephen Chilton and William Nimmo
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CFD MODELLING EVALUATION OF SPRAY NOZZLES

Allan Walsh
Jansen Combustion and Boiler Tech, Inc. (USA)

DESIGN CHALLENGES FOR TWO HAZARDOUS WASTE BOILERS WITH POLLUTION CONTROL

William Norris and Michael Mannuzza
O'Brien & Gere (USA)