



Program

3rd International Workshop on Oxyfuel Combustion
organized by the

Collaborative Research Center Oxyflame

Schloss Montabaur in Montabaur, Germany

March 3rd, 2020, 19:00: *Pre-workshop dinner* at the hotel restaurant "Weitblick"

March 4th, 2020, 08:00: *Workshop registration*

March 4th - 5th, 2020: *Scientific program*

Program for Wednesday 4th March 2020:

08.00 - 08.30 am	Workshop registration
08.30 am	Welcome (Prof. Dr. Andreas Dreizler/Prof. Dr.-Ing. Reinhold Kneer)
09.00 am	Keynote 1 – P. Glarborg: Bio-dust Combustion for Heat and Power Production
09.40 am	Keynote 2 – H. Spliethoff: Reaction Kinetics of Pulverized Fuels in Combustion and Gasification Atmospheres
10.20 am	Coffee break and poster session
10.50 am	Session 1: Pyrolysis and Gasification (Session Chair: Mário Costa)
	<i>M. Chishty: Investigation of biomass gasification process under various operating conditions inside entrained flow cyclone gasifier</i>
	<i>T. Jayawickrama: The effect of Stefan flow on the gasification of suspended char particles</i>
	<i>C. Wedler: Evolution of micro- and mesopore structure during pyrolysis of coal and biomass in different atmospheres</i>
	<i>P. Debiagi: Systematic evaluation and kinetic modeling of low heating rate sulfur release in pyrolysis and oxidation in various atmospheres</i>
12.10 pm	Lunch break
01.30 pm	Session 2: Ignition (Session Chair: Heinz Pitsch)
	<i>M. Costa: Ignition and combustion of single pulverized biomass and coal particles in N₂/O₂ and CO₂/O₂ environments</i>
	<i>P. Farmand: Direct numerical simulation of solid fuel ignition and combustion in laminar and turbulent jets in oxy-atmosphere</i>
02.10 pm	Coffee break and poster session
04.20 pm	Session 3: Experiments (Session Chair: Hartmut Spliethoff)
	<i>Y. Gu: Comparison of scattering phase functions of reacting and non-reacting pulverized fuel particles</i>
	<i>Chr. Geschwindner: Experimental and numerical investigation of solid fuel particle group combustion under air- and oxy-atmospheres</i>
	<i>M. Vodička: Experimental study of the staged supply of oxygen in the oxy-fuel combustion in a bubbling fluidized bed</i>
	<i>A. Maßmeyer: Stability analysis of 60 kW coal flames under air and oxyfuel- conditions</i>
	<i>M. Sentko: Determination of temperature and concentration of major combustion species in fuel-rich methane flames under elevated pressure</i>
06.00 pm	Workshop dinner

Program for Thursday 5th, March 2020:

08.30 am	Keynote 3 – M. Hupa: Chemical Challenges in Combustion of Biomass Fuels
09.10 am	Session 4: Pollutants (Session Chair: Peter Glarborg)
	<i>L. Diez: The effect of large steam addition on the NO_x formation during oxy-combustion of bituminous and subbituminous coals</i>
	<i>J. Sun: Investigation of soot formation characteristics during oxy-coal combustion in reducing-to-O₂/CO₂ ambiences</i>
09.50 am	Coffee break and poster session
10.30 am	Keynote 4 – H. Lampe: 4C-Chances and Challenges for Climate Changes caused by the Cement Industry
11.10 am	Session 5: Pollutants – cont. (Session Chair: Peter Glarborg)
	<i>D. Schmidt: Experimental assessment of the release of Nitrogen, Sulfur and Chlorine species during pyrolysis of coal and torrefied biomass in CO₂ atmosphere</i>
	<i>J. Nwaboh: Direct, absolute and selective NO₂ measurements as from fuel combustion process emissions using dTDLAS</i>
11.50 am	Lunch break
01.00 pm	Session 6: Modelling (Session Chair: Christian Hasse)
	<i>C. Pflieger: Reactivity of mineral-free and doped synthetic chars in O₂-, CO₂- and H₂O-containing atmospheres</i>
	<i>K. Fröhlich: Development of drag correlations for ellipsoidal particles using fully resolved simulations</i>
	<i>A. Shamooni: Investigation of turbulent solid fuel combustion using a comprehensive Euler-Lagrange framework with detailed homogeneous and heterogeneous kinetics</i>
	<i>D. Meller: Evaluation of a moving reference frame approach for the numerical analysis of pulverized coal combustion</i>
	<i>M. Richter: Spectral modeling of an oxy-fuel pulverized coal fired boiler considering non-gray gas and particles</i>
	<i>H. Nicolai: Large Eddy Simulation of a semi-industrial pulverized coal combustion chamber under oxyfuel atmospheres using tabulated chemistry</i>
03.00 pm	Final discussion
03.10 pm	End of Workshop