Hao Wu - DTU Orbit (01/04/2019)
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Department of Chemical and Biochemical Engineering - Associate Professor
CHEC Research Centre

Research outputs:

**Biomass Fly Ash Deposition in an Entrained Flow Reactor**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Influence of H2O on NO formation during char oxidation of biomass**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**KOH capture by coal fly ash**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Reactivity of sewage sludge, RDF, and straw chars towards NO**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Ab initio calculations and kinetic modeling of thermal conversion of methyl chloride: implications for gasification of biomass**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Aerodynamic and physical characterization of refuse derived fuel**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Agglomeration mechanism in biomass fluidized bed combustion – Reaction between potassium carbonate and silica sand**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**A heat transfer corrected isothermal model for CFD modeling of biomass devolatilization in fluidized beds**
Research output: Research - peer-review › Paper – Annual report year: 2018

**An exploratory study of three-dimensional MP-PIC-based simulation of bubbling fluidized beds with and without baffles**
Yang, S., Wu, H., Lin, W., Li, H. & Zhu, Q. 2018 In : Particuology. 39, p. 68-77
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Deposition Properties of Biomass Fly Ash**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018
Devolatilization of wood and torrefied wood with different apparent density: Experimental and modelling study
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Distribution and occurrence of lithium in high-alumina-coal fly ash
Research output: Research - peer-review › Journal article – Annual report year: 2018

Experimental and CPFD study of gas–solid flow in a cold pilot calciner
Research output: Research - peer-review › Journal article – Annual report year: 2018

Experiments and modeling of single plastic particle conversion in suspension
Research output: Research - peer-review › Journal article – Annual report year: 2018

Influence of fuel properties on NOX emission in fluidized bed combustion of biomass
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Optical investigation of gas-phase KCl/KOH sulfation in post flame conditions
Research output: Research - peer-review › Journal article – Annual report year: 2018

Potassium Capture by Kaolin, Part 1: KOH
Research output: Research - peer-review › Journal article – Annual report year: 2018

Potassium Capture by Kaolin, Part 2: K2CO3, KCl, and K2SO4
Research output: Research - peer-review › Journal article – Annual report year: 2018

Reactive additives for alkali capture in biomass combustion
Research output: Research - peer-review › Paper – Annual report year: 2018

Reactivity of sewage sludge, RDF, and straw chars towards NO
Ulusoy, B., Wu, H., Lin, W., Karlström, O., Li, S., Song, W., Glarborg, P. & Dam-Johansen, K. 2018
Research output: Research - peer-review › Poster – Annual report year: 2018

Tensile Adhesion Strength of Biomass Ash Deposits: Effect of the Temperature Gradient and Ash Chemistry
Research output: Research - peer-review › Journal article – Annual report year: 2018

Adiabatic continuous stirred tank reactor
Research output: Research - peer-review › Report – Annual report year: 2017
A grid-independent EMMS/bubbling drag model for bubbling and turbulent fluidization
Research output: Research - peer-review › Journal article – Annual report year: 2017

Deposit Shedding in Biomass-Fired Boilers: Shear Adhesion Strength Measurements
Research output: Research - peer-review › Journal article – Annual report year: 2017

Fly Ash Formation during Suspension-Firing of Biomass. Effects of Residence Time and Fuel-Type
Research output: Research - peer-review › Journal article – Annual report year: 2016

Heat transfer corrected isothermal model for devolatilization of thermally-thick biomass particles
Research output: Research - peer-review › Paper – Annual report year: 2017

Impact of KCl impregnation on single particle combustion of wood and torrefied wood
Research output: Research - peer-review › Journal article – Annual report year: 2017

Mechanisms of agglomeration in fluidized bed: Reactions between potassium carbonate and silica
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Release and transformation of chlorine and potassium during pyrolysis of KCl doped biomass
Research output: Research - peer-review › Journal article – Annual report year: 2017

Adhesion Strength of Biomass Ash Deposits
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

A review: Fly ash and deposit formation in PF fired biomass boilers
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Deposit Shedding in Biomass-fired Boilers: Shear Adhesion Strength Measurements
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Entrained Flow Reactor Study of K-Capture by Solid Additives
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Entrained Flow Reactor Study of KCl Capture by Solid Additives
Research output: Research - peer-review › Poster – Annual report year: 2016

Influence of Torrefaction on Single Particle Combustion of Wood
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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Full-scale ash deposition measurements at Avedøre Power Plant unit 2 during suspension-firing of wood with and without coal ash addition.
Research output: Research › Report – Annual report year: 2012

Co-combustion of Fossil Fuels and Waste
Research output: Research › Ph.D. thesis – Annual report year: 2011

Co-combustion of pulverized coal and solid recovered fuel in an entrained flow reactor- General combustion and ash behavior
Research output: Research - peer-review › Journal article – Annual report year: 2011

Dust-Firing of Straw and Additives: Ash Chemistry and Deposition Behavior
Research output: Research - peer-review › Journal article – Annual report year: 2011

Formation of fine particles in co-combustion of coal and solid recovered fuel in a pulverized coal-fired power station
Research output: Research - peer-review › Journal article – Annual report year: 2011

PSO Project 10085: Final Report – Co-Firing of Coal and RDF in Suspension
Research output: Research - peer-review › Report – Annual report year: 2011

Release and Transformation of Inorganic Elements in Combustion of a High-Phosphorus Fuel
Research output: Research - peer-review › Journal article – Annual report year: 2011

Solid fuel interactions in co-combustion: a literature survey
Wu, H., Jappe Frandsen, F. & Dam-Johansen, K. 2011 Technical University of Denmark, Department of Chemical Engineering. 64 p.
Research output: Research - peer-review › Report – Annual report year: 2011

A global equilibrium analysis of co-firing coal and solid recovered fuel
Wu, H., Glarborg, P., Jappe Frandsen, F. & Dam-Johansen, K. 2010 Technical University of Denmark, Department of Chemical Engineering. 20 p.
Research output: Research - peer-review › Report – Annual report year: 2010

Ash behavior in the combustion of phosphorus rich biofuels - literature survey and experimental studies
Research output: Research › Report – Annual report year: 2010

Behaviors of trace element in co-combustion of solid: Impacts of Fuel Quality on Power Production and the environment
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010
Co-combustion of solid recovered fuel with coal in an entrained flow reactor and the effect of additives: The 35th International Technical Conference on Clean Coal & Fuel Systems
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Combustion aerosols from co-firing of coal and solid recovered fuel in a 400 mw pf-fired power plant
Research output: Research - peer-review › Conference article – Annual report year: 2010

Thermogravimetric analysis of combustible waste components
Munther, A., Wu, H. & Glarborg, P. 2010 Technical University of Denmark, Department of Chemical Engineering. 16 p.
Research output: Research - peer-review › Report – Annual report year: 2010

Aerosol formation during co-combustion of coal and solid recovered fuel in a pulverized coal-fired power plant
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Co-combustion of coal and SRF in an entrained flow reactor: a preliminary study
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Projects:

Hydrodynamics in Circulating Fluidized Beds
01/03/2019 → 28/02/2022
Project: PhD

Experimental and Theoretical Study of Cyclone Reactors
Guo, B., Dam-Johansen, K., Lin, W. & Wu, H.
15/02/2019 → 14/02/2022
Project: PhD

Flame Synthesis of Nano-particles
Gao, J., Dam-Johansen, K., Lin, W. & Wu, H.
Samfinansieret - Andet
15/05/2018 → 14/05/2021
Project: PhD

Mechanisms of High Temperature agglomeration in fluidized beds
Zhao, L., Dam-Johansen, K., Lin, W. & Wu, H.
Stipendie fra udlandet
15/05/2018 → 14/05/2021
Project: PhD

Optimized high temperature cyclones used for stone wool production by CFD modelling
Industrial PhD
15/04/2018 → 06/06/2021
Project: PhD
NOx control in combustion of alternative fuels
Krum, K. R. K., Glarborg, P., Norman, T. & Wu, H.
Samfinansieret - Andet
01/09/2017 → 31/08/2020
Project: PhD

CFD Simulation of Heterogeneous Reacting Systems
Luo, H., Dam-Johansen, K. & Wu, H.
Samfinansierede - Virksomhed
01/10/2016 → 30/09/2019
Project: PhD

Fluidized bed combustion of biomass
Ulusoy, B., Dam-Johansen, K., Lin, W. & Wu, H.
Samfinansieret - Andet
01/09/2016 → 31/08/2019
Project: PhD

Development Reactors
Svith, C. S., Dam-Johansen, K., Lin, W. & Wu, H.
Samfinansierede - Virksomhed
15/09/2016 → 14/11/2019
Project: PhD

Thermochemical Conversion of Biomass
Samfinansieret - Andet
01/08/2015 → 30/09/2018
Project: PhD

Multiphase flow and fuel conversion in cement calciner
Samfinansierede - Virksomhed
15/05/2015 → 12/11/2018
Project: PhD

Using Coal Ash and other Additives in Suspension Fired Biomass Power Plant Boilers using Coal Ash and other Additives in Supension Fired Biomass Power plant Boilers
Eksternt finansieret virksomhed
01/10/2014 → 22/05/2018
Project: PhD

Co-Combustion of Fossil Fuels and Waste
Wu, H., Glarborg, P., Dam-Johansen, K., Jappe Frandsen, F., Leckner, B., Hupa, M. M. & Hustad, J. E.
DTU-lønnet stipendie
01/11/2007 → 21/09/2011
Project: PhD

Activities:

Influence of fuel properties on NOx emission in fluidized bed combustion of biomass
Ulusoy, B. (Speaker), Wu, H. (Other), Lin, W. (Other), Glarborg, P. (Other), Dam-Johansen, K. (Other)
27 Oct 2018
Activity: Talks and presentations › Conference presentations
Reactivity of sewage sludge, RDF, and straw chars towards NO
Ulusoy, B. (Speaker), Wu, H. (Other), Lin, W. (Other), Oskar Karlström (Other), Songgeng Li (Other), Wenli Song (Other), Glarborg, P. (Other), Dam-Johansen, K. (Other)
2018
Activity: Talks and presentations › Conference presentations