

**PhD examinations at the Subject of Energy Engineering, Luleå University of Technology**

1. 1993 Dahl, J. Short term water heat storage: studies of velocity and temperature fields and their importance for sizing of the storage
2. 1993 Hermansson, R Short term water heat storage: an experimental and numerical investigation of phenomena that affect the degree of thermal stratification
3. 1995 Westerlund, L. Open absorption system for drying of moist air
4. 1998 Veber, P. Studies of the flow pattern in short term hot water storages
5. 1999 Fredriksson, C. Exploratory experimental and theoretical studies of cyclone gasification of wood powder
6. 2000 Gabra, M. Study of possibilities and some problems of using cane residues as fuel in a gas turbine for power generation in the sugar industry
7. 2001 Salman, H. Evaluation of a cyclone gasifier design to be used for biomass fuelled gas turbines
8. 2004 Larsson, M. Process integration in the steel industry: possibilities to analyse energy use and environmental impacts for an integrated steel mill
9. 2004 Lundgren, J. Design and experimental studies of a biomass fired furnace for small- and medium scale heating applications
10. 2005 Wiinikka, H. High temperature aerosol formation and emission minimisation during combustion of wood pellets
11. 2007 Johansson, L. Efficient energy use in different applications
12. 2007 Wang, C. Possibilities of CO<sub>2</sub> emission reduction: process integration analysis and carbon trading schemes
13. 2009 Leduc, S. Development of an optimization model for the location of biofuel production plants
14. 2009 Eriksson, G. Residues from biochemical production of transport biofuels in Northern Europe: combustion properties and applications
15. 2010 Lundmark, M. The zone concept: design of low-voltage installations considering the spread of high frequency harmonics
16. 2011 Larsson, A. On high-frequency distortion in low-voltage power systems
17. 2011 Carlsson, P. Large scale experiments and modeling of black liquor gasification

18. 2012 Grimm, A. Experimental studies of ash transformation processes in combustion of phosphorus-rich biomass fuels
19. 2013 Rönnerberg, S. Emission and interaction from domestic installations in the low voltage electricity network, up to 150 kHz
20. 2013 Risberg, M. Entrained flow gasification of biomass: On atomisation, transport processes and gasification reactions
21. 2014 Shen, G. Extension of PC-SAFT to model inhomogeneous and transport properties
22. 2014 Andersson, J.-O. Energy and Resource Efficiency in Convective Drying Systems in the Process Industry
23. 2015 Biswas, A. Effect of chemical and physical properties on combustion of biomass particle
24. 2015 Weiland, F. Pressurized entrained flow gasification of pulverized biomass: Experimental characterization of process performance
25. 2015 Göktepe, B. Entrained flow gasification of biomass: soot formation and flame stability
26. 2016 Andersson, J. Systems Analysis of Chemicals Production via Integrated Entrained Flow Biomass Gasification: Quantification and improvement of techno-economic performance
27. 2016 Zhang, Y. Thermodynamic Analysis and Screening ILs/DESSs-based Absorbents for CO<sub>2</sub> Separation
28. 2016 Mesfun, S. Process integration to increase woody biomass utilization for energy purposes
29. 2016 Xie, Y. CO<sub>2</sub> separation with ionic liquids - from properties to process simulation
30. 2016 Näzelius, I.-L. Slag formation in fixed bed combustion of phosphorus-poor biomass
31. 2017 Vesterlund, M. District heating system analysis and challenges within the urban transformation of Kiruna
32. 2017 He, H. Layer Formation on Bed Particles during Fluidized Bed Combustion and Gasification of Woody Biomass
33. 2017 Ma, C. Aspects of Ash Transformations in Pressurised Entrained-Flow Gasification of Woody Biomass: Pilot-scale studies
34. 2018 Risberg, D. Analysis of The Thermal Indoor Climate with Computational Fluid Dynamics for Buildings in Sub-arctic Regions

35. 2018 Carvalho, L. Opportunities to Broaden Biomass Feedstocks in Thermochemical Conversion Technologies
36. 2018 Bach Oller, A. Alkali-enhanced gasification of biomass – Laboratory-scale experimental studies
37. 2019 Ögren, Y. Improving the efficiency of entrained flow gasifiers by real-time in-situ diagnostics and burner design
38. 2019 Jafri, Y. Biofuels from Kraft Black Liquor – Pilot-Scale Gasification Development and Techno-Economic Evaluation of Industrially Relevant Biofuel Production Pathways
39. 2020 Chen, J. CO<sub>2</sub> separation using ionic liquid-based absorbents: thermodynamics and kinetics
40. 2020 Gao, Q. Molecular Simulations of Microstructure, Thermodynamics, and Dynamics of Complex Liquid Mixtures at Interfaces and Confined Spaces
41. 2020 Wu, N. Molecular Thermodynamic Models for Nano-Micro Fluid/Solid Interfaces