

## Journal publications

1. Boström D., Skoglund N., Grimm A., Boman C., Öhman M., Broström M., Backman R. "Ash Transformation Chemistry during Thermochemical Conversion of Biomass" *Energy & Fuels* 26 (2012) 85-93.
2. Broström, M., Enestam, S., Backman, R., Mäkilä, K., " Condensation in the KCl-NaCl system" *Fuel Processing Technology* 102 (2012) 142-148
3. Broström, M., Nordin, A., Pommer, L., Branca, C., Di Blasi, C. " Influence of torrefaction on the devolatilization and oxidation kinetics of wood". *Journal of Analytical and Applied Pyrolysis*, 96 (2012) 100-109
4. Konttinen, J., Backman, R., Hupa, M., Moilanen, A., Kurkela, E., "Trace element behaviour in the fluidized bed gasification of solid recovered fuels – A thermodynamic study" *Fuel* 102 (2012)
5. Lindberg, D., Backman, R., Chartrand, P., Hupa, M. " Towards a comprehensive thermodynamic database for ash-forming elements in biomass and waste combustion — Current situation and future developments" *Fuel Processing Technology* 105 (2013) 129-141
6. Lycksam, H., Sjö Dahl, M., Gren, P., Öhman, M., Gebart, R. "High-speed interferometric measurement and visualization of the conversion of a black liquor droplet during laser heating" *Optics and Lasers in Engineering* 50 (2012) 1654-1661
7. Umeki, K., Kirtania, K., Chen, L., Bhattacharya, S., "Fuel Particle Conversion of Pulverised Biomass during Pyrolysis in an Entrained Flow Reactor" *Ind. Eng. Chem. Res.* 51 (2012) 13973-13979
8. Umeki, K., Moilanen, A., Gomez-Barea, A., Konttinen, j., "A Model of Biomass Char Gasification Describing the Change in Catalytic Activity of ash" *Chemical Engineering Journal* 208 (2012) 616-624
9. Öhrman, O., Häggström, C., Wiinikka, H., Hedlund, J., Gebart, R "Analysis of trace components in synthesis gas generated by black liquor gasification" *Fuel* 102 (2012)
10. Karlfeldt Fedje, K., Ekberg, C., Skarnemark, G., Pires, E. and Steenari, B-M., "Initial studies of the recovery of Cu from MSWI fly ash leachates using solvent extraction, *Waste Management & Research* 30(10) 1072–1080, 2012
11. He, J., Göransson, K., Söderlind, U. and Zhang, W.; "Simulation of biomass gasification in a dual fluidized bed gasifier"; *Biomass Conversion & Biorefinery*, 2, 1-10; (2012)

12. Golnar Azimi, Martin Keller, Amin Mehdipour, Henrik Leion, Experimental evaluation and modeling of steam gasification and hydrogen inhibition in Chemical-Looping Combustion with solid fuel, International Journal of Greenhouse Gas Control, Volume 11, 2012
13. Lind, F. ; Israelsson, M. ; Seemann, M. et al. (2012). Manganese oxide as catalyst for tar cleaning of biomass-derived gas. Biomass Conversion and Biorefinery. 2 (2) s. 133 – 140

## Conference articles

1. Ma, C., Weiland, F., Boström, D., Backman, R., Öhman, M. "Ash Formation during Pilot-Scale Trials of Pressurized Entrained-flow Gasification of Woody Biomass" Impacts of Fuel Quality on Power Production and the Environment, September 23-27, 2012 in Puchberg, Austria.
2. Risberg, M., Öhrman, O.G.W., Gebart, B.R. "Experimental Investigation of Air-Blown Cyclone Gasification of Different Biomasses, Proceedings 20th European Biomass Conference and Exhibition, June 18-22, 2012 in Milano, Italy.
3. Charlotte Parsland and Jan Brandin, Nickel-substituted Ba-hexaaluminates as catalyst in steam reforming of tars. 20th European biomass conference and exhibition, 18-22 Juni 2012, Milano Italy
4. Elena Tomás-Aparicio, Hailong Li, Fredrik Starfelt, Erik Dahlquist, Dynamic modeling of Torrefaction, 4th International Conference on Applied Energy, ICAE 2012, July 5-8, 2012, Suzhou, China
5. Erik Dahlquist, Guilnaz Mirmoshtaghi, Eva K. Larsson, Eva Thorin, Jinyue Yan, Klas Engvall, Truls Liliedahl, Changqing Dong, Xiaoying Hu; Biomass gasification in combination with CHP submitted to IEEE conference: 1st International Biomass Conversion and Utilization Conference at NCEPU, Beijing, China 2012-10-16—18.
6. Seyedeh Guilnaz Mirmoshtaghi, Mats Westermark, Farzad Mohseni Tabrizi , SIMULATION OF A LAB-SCALE METHANATION REACTOR, ICAE 2012, International Conference on Applied Energy, July 5-8, 2012, Suzhou, China.
7. V. Nemanova, K. Engvall, Development and Optimisation of Biomass Gasification at KTH, International Workshop X <<Energy, Environment and Sustainable Development>> CUBASOLAR, Santiago de Cuba, Cuba, 23-27 April 2012

8. Sette, E. ; Gómez García, A. ; Pallares, D. ; Filip Johnsson (2012). Quantitative evaluation of inert solids mixing in a bubbling fluidized bed, 21st International Conference on Fluidized Bed Combustion.
9. Alamia, A. ; Thunman, H. ; Lind, F. (2012). Hydrogen from Biomass Gasification for Utilization in Oil Refineries.
10. D. Neves, H.Thunman, L. Tarelho, A. Larsson, M. Seemann, A. Matos, On-line measurement of raw gas elemental composition in fluidized bed biomass steam gasification, World Bioenergy 2012, Conference and Exhibition on Biomass for Energy, Jönköping, Sweden 29-31 May 2012
11. Lassesson, H. and Steenari, B-M. "POSSIBILITIES OF ASH SPECIATION WITH SYNCHROTRON BASED X-RAY ABSORPTION SPECTROSCOPY (XAS)", Proc of the 21st Int Conf on Fluidised Bed Combustion, Naples, June 2012, ID99
12. Göransson, K., Söderlind, U. and Zhang, W.; "Tar/CH<sub>4</sub> reforming by catalytically active materials with internal regeneration in a biomass dual fluidized bed gasifier"; to be presented at 20th European Biomass Conference & Exhibition, June 18-22, 2012, Milano, Italy; (2012).
13. Martin Keller, Henrik Leion, Tobias Mattisson, Interactions Between Oxygen Carriers and Ash Components in a CLC Process, 62nd Canadian Chemical Engineering Conference
14. Lind, F. ; Berguerand, N. ; Seemann, M. et al. (2012). Comparing three materials for secondary catalytic tar reforming of biomass derived gas, 244th American Chemical Society National Meeting & Exposition