

Publications

Recent Publications

1. Case, P.A.; Wheeler, M.C.; and DeSisto, W.J.; Effect of residence time and hot gas filtration on the physical and chemical properties of pyrolysis oil, *Energy & Fuels*, accepted for publication.
2. Case, P.A.; Bizama, C.; Segura, C.; Wheeler, M.C.; Berg, A.; and DeSisto, W.J.; Pyrolysis of pre-treated tannins obtained from radiata pine bark, *Journal of Analytical and Applied Pyrolysis*, **107**, 250-255 (2014).
3. Pollock, R.A.; Gor, G.Y.; Walsh, B.R.; Fry, J.; Ghampson, I.T.; Melnichenko, Y.B.; Kaiser, H.; DeSisto, W.J.; Wheeler, M.C.; and Frederick, B.G.; Role of liquid vs. vapor water in the hydrothermal degradation of SBA-15, *Journal of Physical Chemistry C*, **116**, 22802-22814 (2012).
4. Ghampson, I.T.; Sepulveda, C.; Garcia, R.; Radovic, L.R.; Fierro, J.L.G.; DeSisto, W.J. and Escalona, N.; Hydrodeoxygenation of guaiacol over carbon-supported molybdenum nitride catalysts: effects of nitriding methods and support properties; *Applied Catalysis A: General*, **439**, 111-124 (2012).
5. Ruiz, P.E.; Frederick, B.G.; DeSisto, W.J.; Austin, R.N.; Radovic, L.R.; Garcia, R.; Escalona, N. and Wheeler, M.C., Guaiacol hydrodeoxygenation on MoS₂ catalysts: Influence of activated carbon supports, *Catalysis Communications*, **27**, 44-48 (2012).
6. Ghampson, I.T.; Sepulveda, C.; Garcia, R.; Fierro, J.L.; Wheeler, M.C.; Escalona, N. and DeSisto, W.J., Comparison of alumina and SBA-15 supported molybdenum nitride catalysts for hydrodeoxygenation of guaiacol, *Applied Catalysis A: General*, **435**, 51-60 (2012).
7. DeSisto, W.J., Merging atomic layer deposition with membrane synthesis, ResearchMedia (2012).
8. Cassidy, D. and DeSisto, W.J., Atomic Layer Deposition Modified Mesoporous Silica Membranes, *Chemical Vapor Deposition*, **18**, 22-26 (2012).
9. Mukkamala, S.; Wheeler, M.C.; van Heiningen, A.R.P. and DeSisto, W.J., Formate-Assisted Fast Pyrolysis of Lignin, *Energy & Fuels*, **26**, 1380-1384 (2012).
10. Ghampson, I.T.; Sepulveda, C.; Garcia, R.; Frederick, B.G.; Wheeler, M.C.; Escalona, N. and DeSisto, W.J., Guaiacol transformation over unsupported molybdenum-based nitride catalysts, *Applied Catalysis A: General*, **413**, 78-84 (2012).
11. Pollock, R.A.; Walsh, B.R.; Fry, J.; Ghampson, I.T.; Melnichenko, Y.B.; Kaiser, H.; Pynn, R.; DeSisto, W.J.; Wheeler, M.C. and Frederick, B.G., Size and spatial distribution of micropores in SBA-15 using CM-SANS, *Chemistry of Materials*, **23**, 3828-3840 (2011).
12. Sepulveda, C.; Leiva, K.; Garcia, R.; Radovic, L.R.; Ghampson, I.T.; DeSisto, W.J.; Garcia Fierro, J.L.; Escalona, N., Hydrodeoxygenation of 2-methoxyphenol over molybdenum nitride catalysts supported on activated carbons, *Catalysis Today*, **172**, 232-239 (2011).

13. Kennard, R.; DeSisto, W.J.; Mason, M.D., Molecular diffusivity measurement through an alumina membrane using time-resolved fluorescence microscopy, *Applied Physics Letters*, **97**, 213701 (2010).
14. Thibodeau, T.; Canney, A.S.; DeSisto, W.J.; Wheeler, M.C.; Frederick, B.G., Composition of Tungsten Oxide Bronzes active for hydrodeoxygenation, *Applied Catalysis A: General*, **388**, 57-67 (2010)
15. Hurley, K.D.; Frederick, B.G.; DeSisto, W.J.; van Heiningen, A.R.P.; Wheeler, M.C.; Catalytic reaction characterization using micromachined nanocalorimeters, *Appl. Catal. A: General*, **390**, 84-93 (2010).
16. Ghampson, I.T.; Newman, C.; Kong, L.; Pier, E.; Hurley, K.D.; Pollock, R.A.; Walsh, B.R.; Goundi, B.; Wright, J.; Wheeler, M.C.; Meulenber, R.; DeSisto, W.J.; Frederick, B.G.; Austin, R.N.; Effect of support pore diameter, particle size and cobalt phase on turn over frequencies in mesoporous silica supported cobalt Fischer-Tropsch catalysts, *Appl. Catal. A: General*, **388**, 86-95 (2010).
17. DeSisto, W.J., Opinion: Opportunities for the Development of Biofuels, *Lignum* p.62, May 2010.
18. Joseph, J.; Baker, C.; Mukkamala, S.; Beis, S.; Wheeler, M.C.; DeSisto, W.J.; Jensen, B.L., Frederick, B.G.; Chemical Shifts and Lifetimes for NMR Analysis of Bio-fuels, *Energy & Fuels*, **24**, 5153-5162 (2010).
19. Beis, S.H.; Mukkamala, S.; Hill, N.; Joseph, J.; Baker, C.; Jensen, B.; Stemmler, E.A.; Wheeler, M.C.; Frederick, B.G.; van Heiningen, A.; Berg, A.G.; DeSisto, W.J., Fast Pyrolysis of Lignins, *Bioresources*, **5**, 1408-1424 (2010).
20. DeSisto, W.J.; Hill, N.; Beis, S.; Mukkamala, S.; Joseph, J.; Baker, C.; Hong, T-H.; Stemmler, E.; Wheeler, M.C.; Frederick, B.G.; van Heiningen, A., Fast Pyrolysis of Pine Sawdust, *Industrial & Engineering Chemistry Research*, **24** 2642-2651 (2010).