

Abstract Submitted  
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**Industrial Scale Measurements of Hydrogen Uptake and Delivery in KOH Activated Carbons<sup>1</sup>** TYLER RASH, DAVE STALLA, MATT BECKNER, JIMMY ROMANOS, G. SUPPES, A TEKEEI, University of Missouri, P. BUCKLEY, P. DOYNOV, MRIGlobal, PETER PFEIFER, University of Missouri, ALL-CRAFT TEAM — The Alliance for Collaborative Research in Alternative Fuel Technologies (ALL-CRAFT) has been producing high surface area activated carbons. Here we will investigate the hydrogen adsorption characteristics of these activated carbons using a custom built 10 liter hydrogen adsorption apparatus filled with 4 kg of activated carbon. We will discuss problems and solutions specific to filling and delivering hydrogen from industrial scale systems. Results show that activated carbons can produce a significant but surmountable, amount of impedance to hydrogen flow. The 10 liter hydrogen storage system measures adsorption at temperatures between -78 Celsius and 100 Celsius and at pressures between zero and 100 bar. The 10 liter hydrogen adsorption uptakes are compared against results obtained with the Hiden Isochema HTP1 volumetric gas analyzer.

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