

Abstract Submitted  
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**A high volume, high throughput volumetric sorption analyzer<sup>1</sup>**

Y.C. SOO, M. BECKNER, J. ROMANOS, C. WEXLER, P. PFEIFER, U of Missouri, P. BUCKLEY, J. CLEMENT, MRI — In this talk we will present an overview of our new Hydrogen Test Fixture (HTF) constructed by the Midwest Research Institute<sup>2</sup> for The Alliance for Collaborative Research in Alternative Fuel Technology<sup>3</sup> to test activated carbon monoliths for hydrogen gas storage. The HTF is an automated, computer-controlled volumetric instrument for rapid screening and manipulation of monoliths under an inert atmosphere (to exclude degradation of carbon from exposure to oxygen). The HTF allows us to measure large quantity (up to 500 g) of sample in a 0.5 l test tank, making our results less sensitive to sample inhomogeneity. The HTF can measure isotherms at pressures ranging from 1 to 300 bar at room temperature. For comparison, other volumetric instruments such as Hiden Isochema's HTP-1 Volumetric Analyser can only measure carbon samples up to 150 mg at pressures up to 200 bar.

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<sup>2</sup><http://www.mriresearch.org>

<sup>3</sup><http://all-craft.missouri.edu>

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