Abstract Submitted
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Isosteric heats of adsorption for activated carbons made from corn cob[1] M. BECKNER, R. OLSEN, J. ROMANOS, J. BURRESS, E. DOHNKE, S. CARTER, G. CASTEEL, C. WEXLER, P. PFEIFER, Dept of Physics, U Missouri — Activated carbons made from corn cob show promise as materials for high-capacity hydrogen storage. As part of our characterization of these materials, we are interested in learning how different production methods affect the adsorption energies. In this talk, we will present experimentally measured isosteric heats of adsorption for various activated carbons calculated using the Clausius-Clayperon equation and hydrogen isotherms at temperatures of 80 and 90K and pressures up to 100 bar measured on a volumetric instrument. We discuss differences observed between isosteric heats determined from Gibbs excess adsorption vs. absolute adsorption curves.

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