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Hydrogen storage media through nanostructured polymeric materials[1] SCOTT KIRKLIN, BRIAN DORNEY, SHENGWEN YUAN, PETER ZAPOL, Argonne National Laboratory, LUPING YU, University of Chicago, DI-JIA LIU, Argonne National Laboratory, ARGONNE NATIONAL LABORATORY COLLABORATION, UNIVERSITY OF CHICAGO COLLABORATION — On-board hydrogen storage is critical to future transportation technologies such as H2-powered fuel cell vehicles. Reported here is our current effort in developing nanostructured polymeric materials as the non-dissociative hydrogen adsorbents for the transportation application. Various porous polymers were prepared. The discussion will be focused on the surface structural characterization using BET approach and hydrogen adsorption capacities and physical properties using a Sieverts type isotherm measurement. Details on improving the accuracy of measurement as well as data analysis will also be reported.

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