

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Molecular Insights into Dynamics of Self Pillared Two Dimensional Hierarchical Zeolites SHANMUGA VENKATESAN, NEERAJ RAI, Dave C. Swalm School of Chemical Engineering and Center for Advanced Vehicular Systems, Mississippi State University — Zeolites are crystalline solids that have wide applications in industrial areas for its hydrocarbon conversion, adsorption of molecules. Two-dimensional (2D) zeolites, precursor of three-dimensional (3D) zeolite, had significant advantage over 3D zeolites for systems that are rate limited by diffusion of reactants and products into interior of zeolites. Recent studies report biofuel conversion reactions like isomerization using zeolites, shows higher efficiency for 2D zeolites over 3D zeolites. In this presentation, we will share some of our recent progress in modeling diffusion process in self pillared two dimensional hierarchical zeolites.

shanmuga venkatesan
Mississippi State University

Date submitted: 16 Nov 2016

Electronic form version 1.4