## Effect of steam and CO<sub>2</sub> in ethane activation on Zn-ZSM-5

Ali Mehdad, Nicholas S. Gould, Bingjun Xu and Raul F. Lobo\*

Center for Catalytic Science and Technology, Department of Chemical and Biomolecular Engineering, University of Delaware, 150 Academy St., Newark, DE 19716, USA

\*Corresponding Author: lobo@udel.edu

## **Supporting Information**

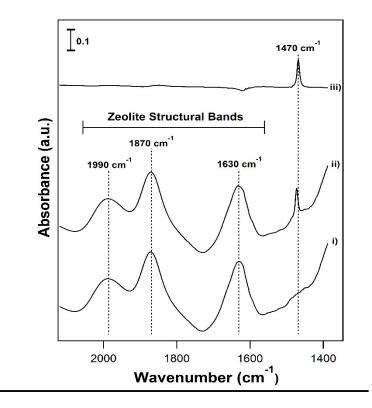


Figure S1: IR spectrum of benzene adsorption at 150 °C on 5% Zn-ZSM-5 (11.5). (i) clean Zn-ZSM-5 at vacuum, (ii) benzene adsorption on Zn-ZSM-5 at vacuum, and (iii) subtraction of ii and iii.

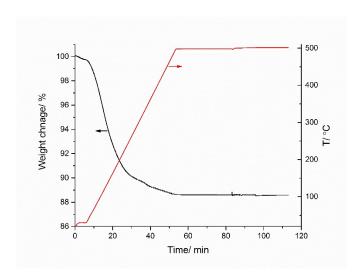


Figure S2: Weight change of 5% Zn-ZSM-5 (11.5) during thermal treatment in 100% CO<sub>2</sub>.