

Electronic Supplementary Information

Preparation of Rh-SiO₂ fiber catalyst with superior activity and reusability by electrospinning

Rui Zou,^{a, b} Shipeng Wen,^c Liqun Zhang,^{a, b} Li Liu,^{c*} and Dongmei Yue^{a, b*}

^a State Key Laboratory of Organic-Inorganic Composites, Beijing University of Chemical Technology, Beijing 100029, China

^b Beijing Engineering research center of advanced elastomers, Beijing University of Chemical Technology, Beijing 100029, China

^c State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing 100029, China

*Corresponding authors: Dongmei Yue,

E-mail: Yuedm@mail.buct.edu.cn,

Tel.: +86-010-64436201; Fax: +86-010-64436201.

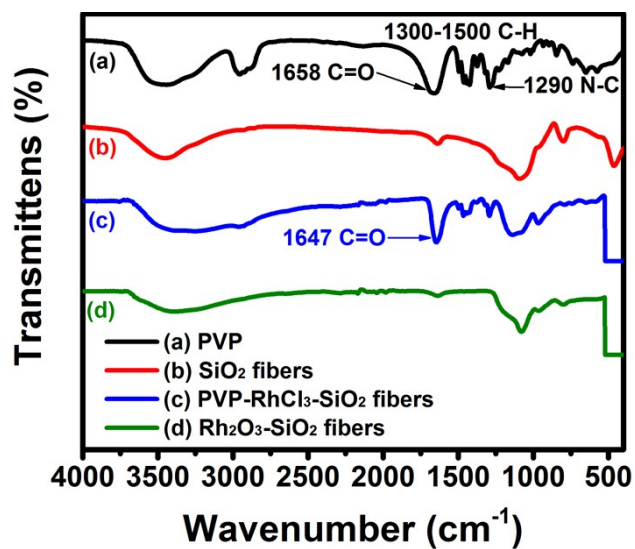


Figure S1. FTIR spectra of (a) PVP, (b) SiO₂ fibers, (c) PVP-RhCl₃-SiO₂ fibers, and (d) Rh₂O₃-SiO₂ fibers.

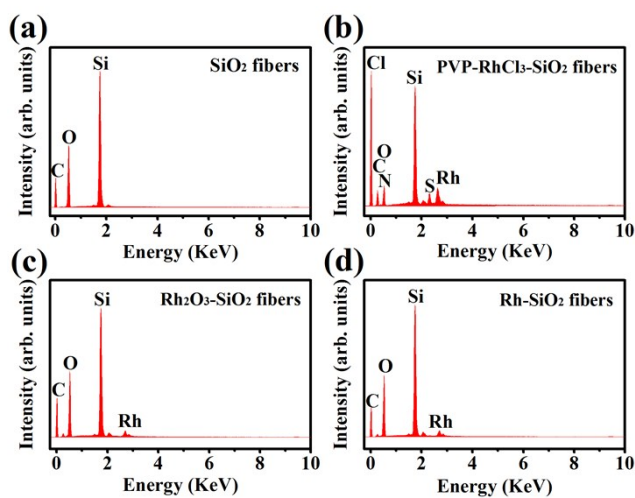


Figure S2. EDS spectra of (a) SiO₂ fibers, (b) PVP-RhCl₃-SiO₂ fibers, (c) Rh₂O₃-SiO₂ fibers, and (d) Rh-SiO₂ fibers.

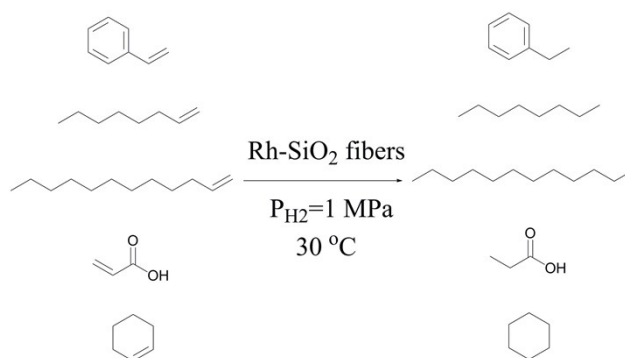


Figure S3. Hydrogenation of alkenes with different structures by Rh-SiO₂ fibers.

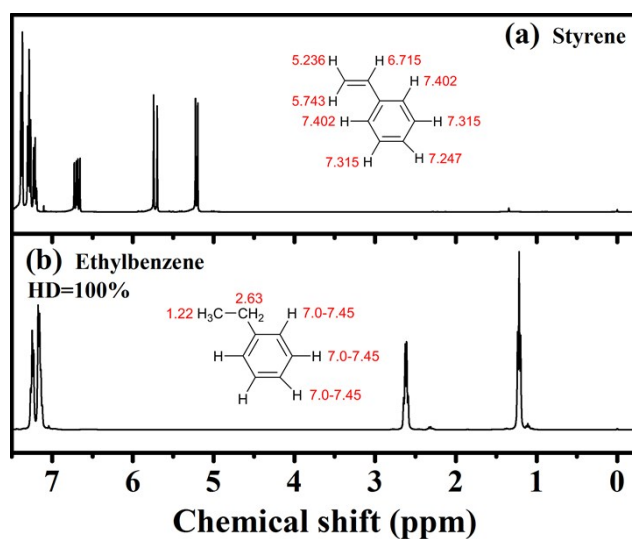


Figure S4. ¹H-NMR spectra of (a) styrene and (b) hydrogenation product of styrene.

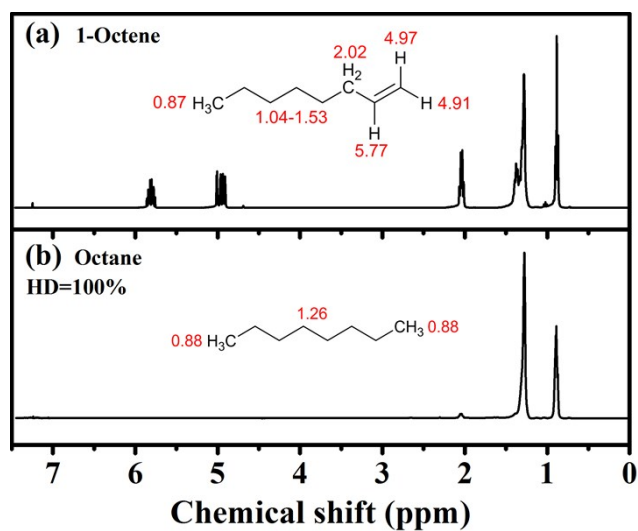


Figure S5. ^1H -NMR spectra of (a) 1-octene and (b) hydrogenation product of 1-octene.

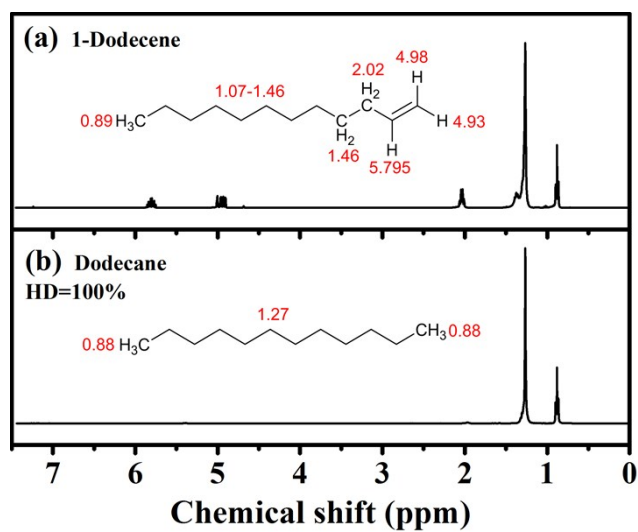


Figure S6. ^1H -NMR spectra of (a) 1-dodecene and (b) hydrogenation product of 1-dodecene.

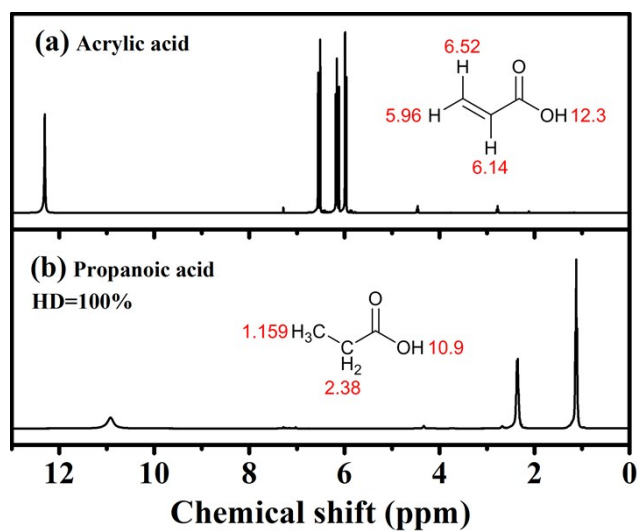


Figure S7. ^1H -NMR spectra of (a) acrylic acid and (b) hydrogenation product of acrylic acid.

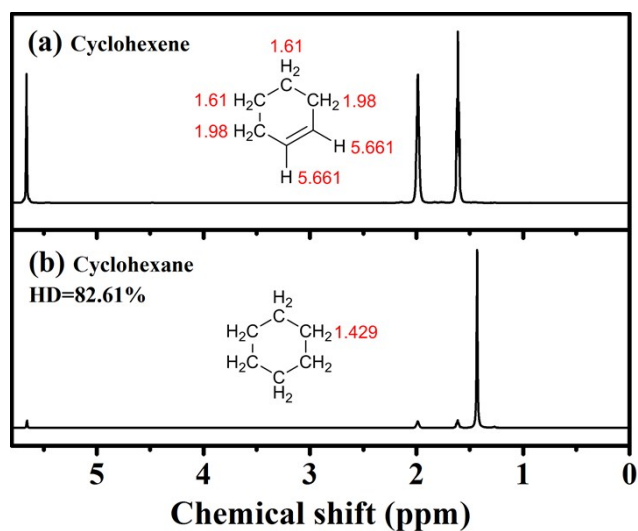


Figure S8. ^1H -NMR spectra of (a) cyclohexene and (b) hydrogenation product of cyclohexene.