

Mechanistic Insights in the Olefin Epoxidation with Cyclohexyl Hydroperoxide

Bart P. C. Hereijgers^a, Rudy F. Parton^b and Bert M. Weckhuysen^{a*}

^a*Inorganic Chemistry and Catalysis group, Debye Institute for NanoMaterials Science, Utrecht University, Universiteitsweg 99, 3584 CG Utrecht, The Netherlands. Email: b.m.weckhuysen@uu.nl; Fax: +31-(0)30-2511027; Tel: +31-(0)30 2537400

^bDSM Research Industrial Chemicals, P.O. Box 18, 6160 MD Geleen, The Netherlands

Supporting Information – Detail on Catalyst Characterization

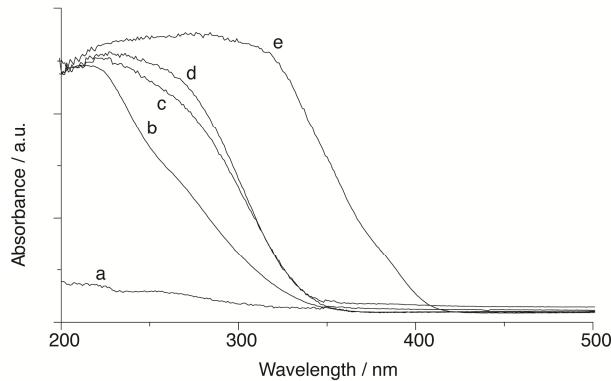


Figure S1. Diffuse reflectance UV-Vis spectra of SBA-15 (a), Ti-BEA (b), Ti-G40-SBA (c), Ti-G80-SBA (d) and bulk TiO₂ P25 (e). Ti-BEA contains Ti⁴⁺-ion exclusively in isolated tetrahedral coordination, whereas in TiO₂ P25 all Ti⁴⁺-ions are located in octahedral sites.

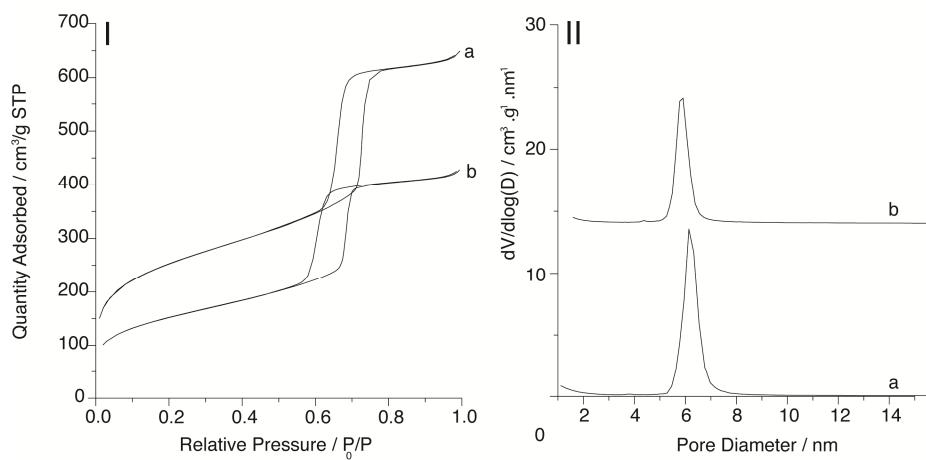


Figure S2. N₂-physisorption isotherms (I) and pore size distributions (II) of SBA-15 (a) and Ti-G40-SBA (b) confirming the SBA-15 structure of the catalyst materials.

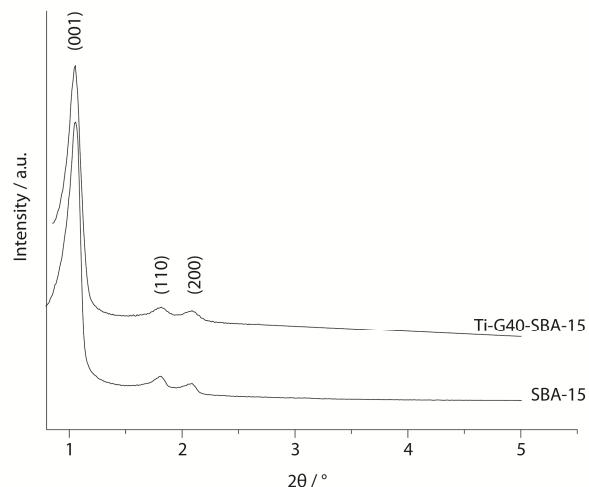


Figure S3. Small angle powder XRD patterns of SBA-15 and Ti-G40-SBA, illustrating that the SBA-15 structure remains preserved after Ti grafting.