Electronic Supplementary Material (ESI) for Catalysis Science & Technology.

Electronic supporting information

Influence of Acid-Base Properties on the Lebedev Ethanol-to-Butadiene Process Catalyzed by SiO_2-MgO Materials

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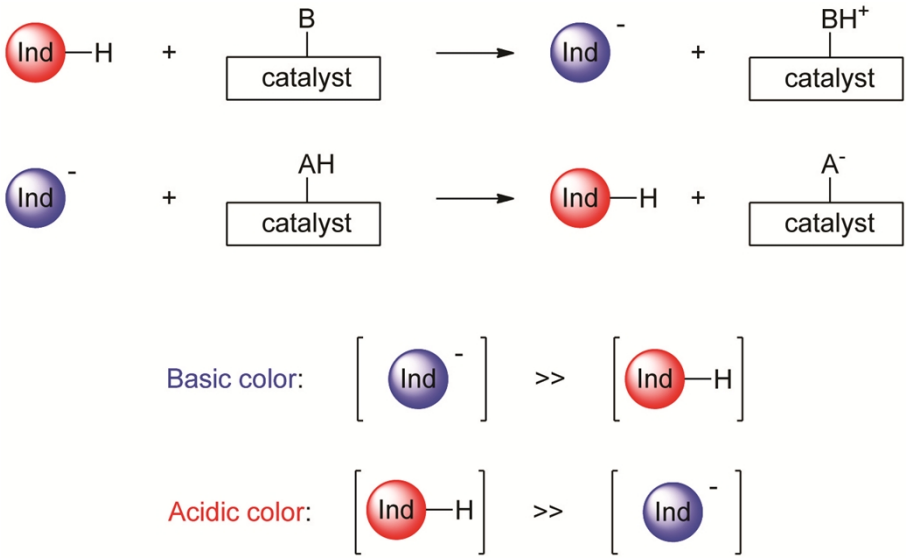

Scheme S1 Interaction of the protonated indicator form with a basic site of the catalyst gives the deprotonated form causing a color change (top). The deprotonated form of the indicator can then interact with an acidic site present on the catalyst thus reverting back to the neutral form of the catalyst. The observed color depends on the relative amounts of the protonated and deprotonated indicator forms.

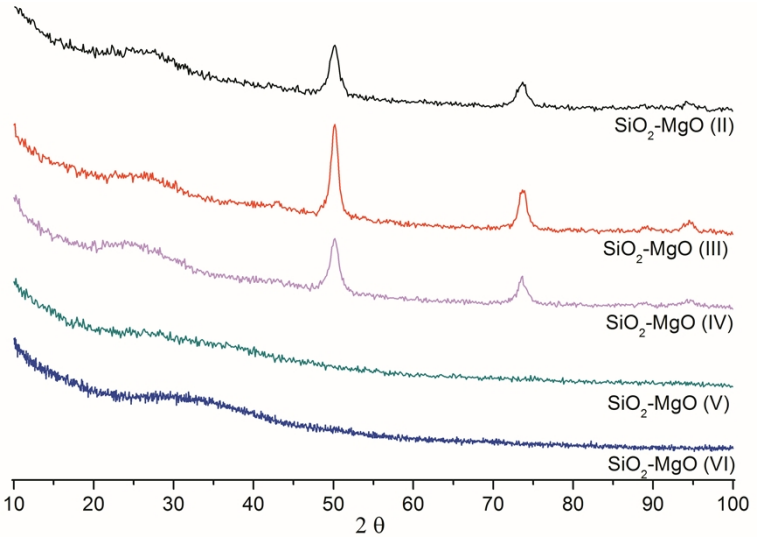

Figure S1 XRD diffractograms of the various SiO_2-MgO catalysts.

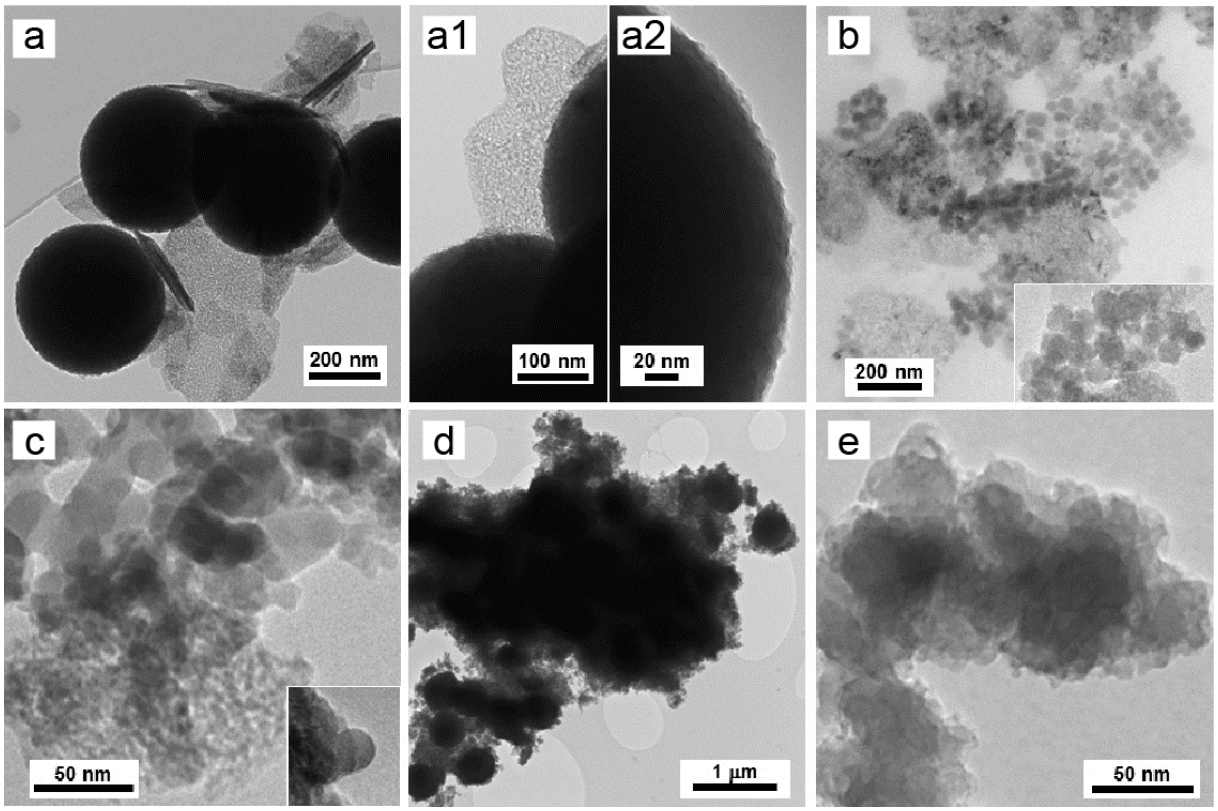

Figure S2 Transmission Electron Microscopy (TEM) pictures of a) SiO_2-MgO (II), b) SiO_2-MgO (III), c) SiO_2-MgO (IV), d) SiO_2-MgO (V), e) SiO_2-MgO (VI).

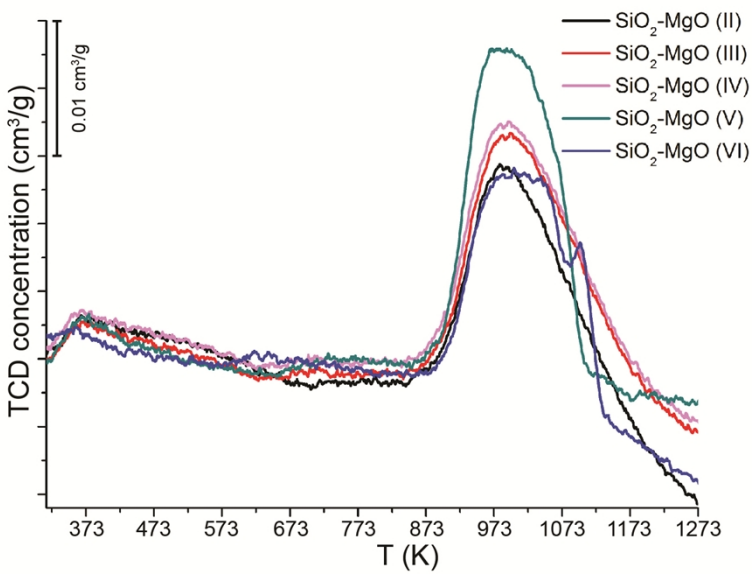

Figure S3 CO_2 desorption for the various SiO_2-MgO catalysts in the range 313-1273 K.