Supplementary Material (ESI) for Journal of Materials Chemistry

Electronic Supplementary Information

Synthesis and characterization of zirconia-grafted SBA-15 nanocomposites

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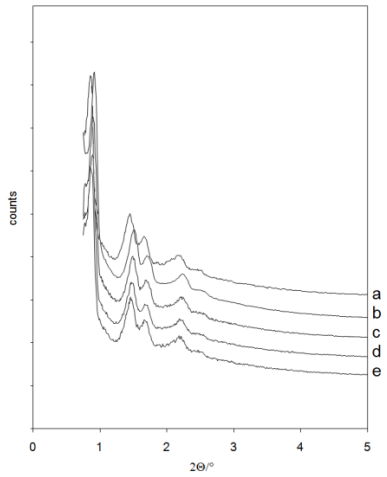

Figure S1: Low angle XRD for SBA-15 silica host supports with pore size of 9 nm (a); 8 nm (b), 6 nm (c); 5 nm (d) and 4 nm (e).

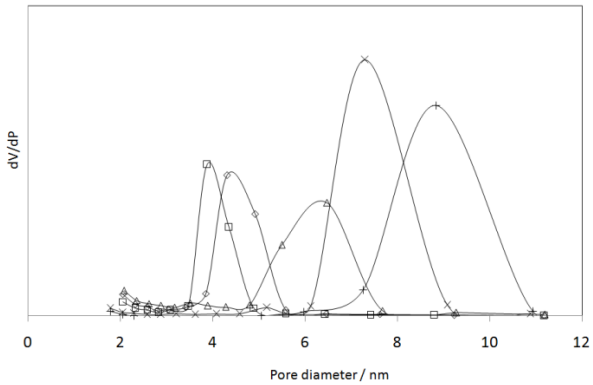

Figure S2: Distribution of the pore diameter of the SBA-15 supports with a pore size of 4 nm (☐), 5 nm (◇), 6 nm (Δ), 8 nm (x) and 9 nm (+).

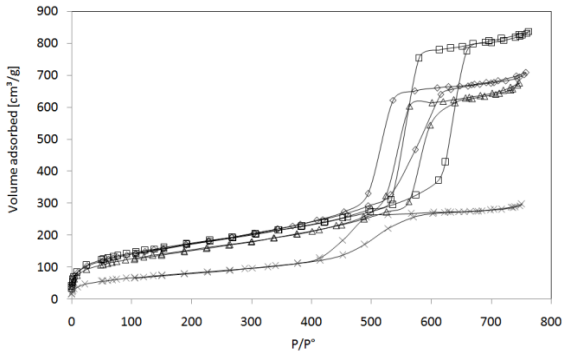

Figure S3: Nitrogen adsorption-desorption isotherm hysteresis loops for the initial SBA-15 (☐), 20Zr-SBA8nm-c400 (◇), 20Zr-SBA8nm-c650 (Δ), 20Zr-SBA8nm-c950 (x) samples.

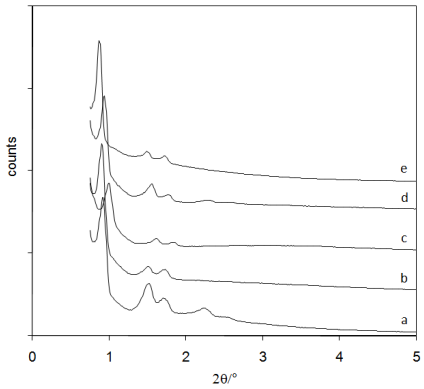

Figure S4: Low angle XRD patterns for different calcination temperatures; 0Zr-SBA8nm-c25 (a), 20Zr-SBA8nm-c400 (b), 20Zr-SBA8nm-c650 (c), 20Zr-SBA8nm-c950 (d) and 0Zr-SBA8nm-c950 (e).

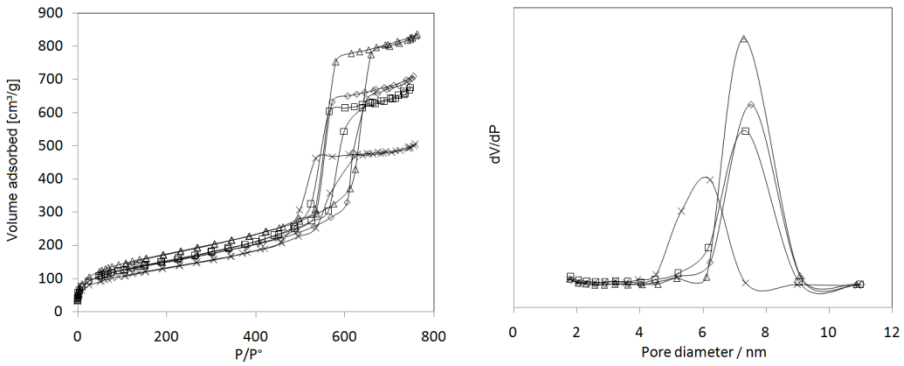

Figure S5: Nitrogen adsorption isotherms and BJH pore distribution for initial 0Zr-SBA8nm-c25 (Δ), 10Zr-SBA8nm-c650 (☐), 20Zr-SBA8nm-c650 (◇) and 40Zr-SBA8nm-c650 (x) samples.

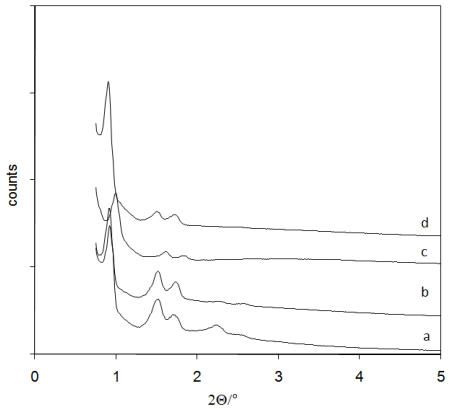

Figure S6: Low angle XRD patterns for different zirconia amounts; 0Zr-SBA8nm-c25 (a), 10Zr-SBA8nm-c650 (b), 20Zr-SBA8nm-c650 (c) and 40Zr-SBA8nm-c650 (d).

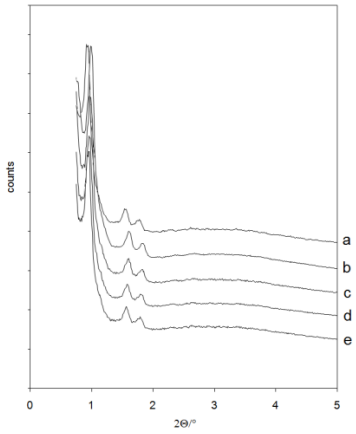

Figure S7: Low angle XRD of 20Zr-SBA9nm-c650 (a); 20Zr-SBA8nm-c650 (b), 20Zr-SBA6nm-c650 (c); 20Zr-SBA5nm-c650 (d) and 20Zr-SBA4nm-c650 (e).