Supplementary materials

**Figure S1.** TGA curve of freshly prepared Ag\textsubscript{np}-MCM-41 under air at a heating rate of 10 °C/min.

**Figure S2.** Powder X-ray diffraction of recycled Ag\textsubscript{np}-MCM-41 from an H\textsubscript{2}O/BuOH (1:1) solvent mixture containing 3% NaCl and a 1,2-dichloroethane-acetonitrile (10:1) solvent mixtures.

**Figure S3.** Infrared spectra of Ag\textsubscript{np}-MCM-41, recycled Ag\textsubscript{np}-MCM-41 from a 1,2-dichloroethane-acetonitrile (10:1) solvent mixture and recycled Agnp-MCM-41 from an H\textsubscript{2}O/BuOH (1:1) solvent mixture containing 3% NaCl.

**Figure S4.** TGA curve of recycled Agnp-MCM-41 under air at a heating rate of 10 °C/min.

**Figure S5.** Comparison of Ag\textsubscript{np}-MCM-41 catalyzed (Z)-cyclooctene epoxidation rate for the first 5h of reaction conducted under air and under nitrogen.

**Figure S6.** Comparison of (Z)-cyclooctene epoxidation rates for solutions that were hot filtered and cold filtered to remove solid Ag\textsubscript{np}-MCM-41 after 24h of reaction, to the rate for a solution which was not filtered.
**Figure S1.** TGA curve of freshly prepared Ag<sub>np</sub>-MCM-41 under air at a heating rate of 10 °C/min.

**Figure S2.** Powder X-ray diffraction of recycled Ag<sub>np</sub>-MCM-41 from an H<sub>2</sub>O/BuOH (1:1) solvent mixture containing 3% NaCl (top) and a 1,2-dichloroethane-acetonitrile (10:1) solvent mixtures (bottom).
Figure S3. Infrared spectra of Ag$_{\text{np}}$-MCM-41 (top), recycled Ag$_{\text{np}}$-MCM-41 from a 1,2-dichloroethane-acetonitrile (10:1) solvent mixture (middle) and recycled Ag$_{\text{np}}$-MCM-41 from an H$_2$O/tBuOH (1:1) solvent mixture containing 3% NaCl (bottom).

Figure S4. TGA curve of recycled Agnp-MCM-41 under air at a heating rate of 10 °C/min.
Figure S5. Comparison of Ag$_{np}$-MCM-41 catalyzed (Z)-cyclooctene epoxidation rate for the first 5h of reaction conducted under air and under nitrogen.

Figure S6. Comparison of (Z)-cyclooctene epoxidation rates for solutions that were hot filtered ($80^\circ$C) and cold filtered (room temperature) to remove solid Ag$_{np}$-MCM-41 after 24h of reaction, to the rate for a solution which was not filtered.