

## Porous crystals of cubic metal oxides templated by cage-containing mesoporous silica

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### Electronic Supplementary Information

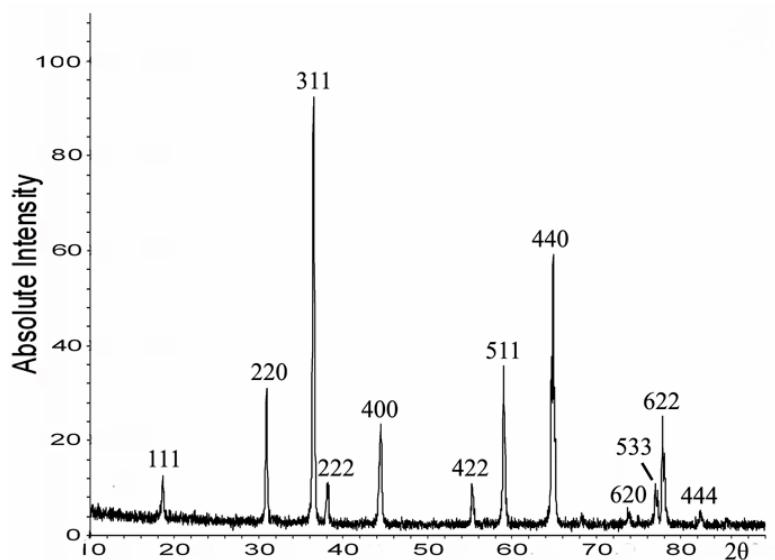


Fig. S1. XRD pattern of FDU-12 templated mesoporous crystals of  $\text{Co}_3\text{O}_4$ .

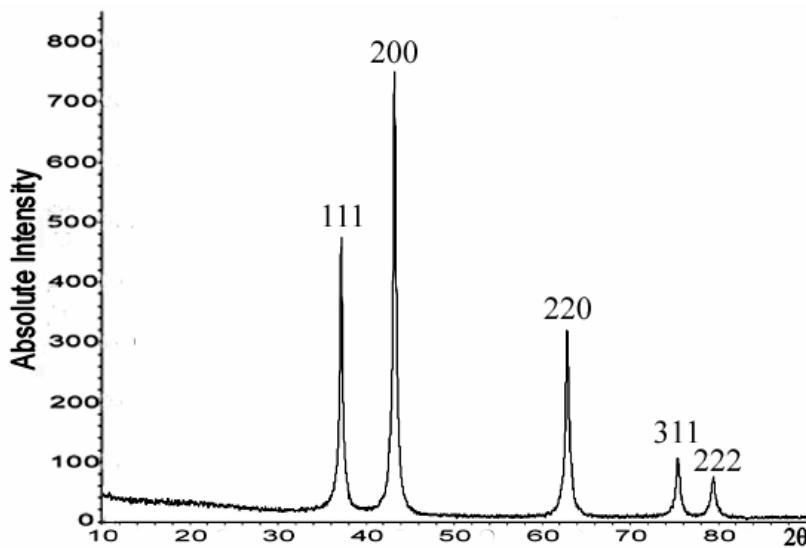


Fig. S2. XRD pattern of FDU-12 templated mesoporous crystals of  $\text{NiO}$ .

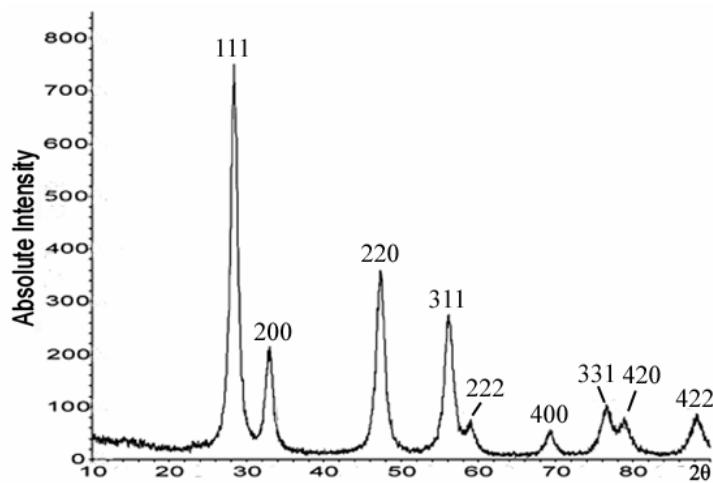


Fig. S3. XRD pattern of FDU-12 templated mesoporous crystals of  $\text{CeO}_2$ .

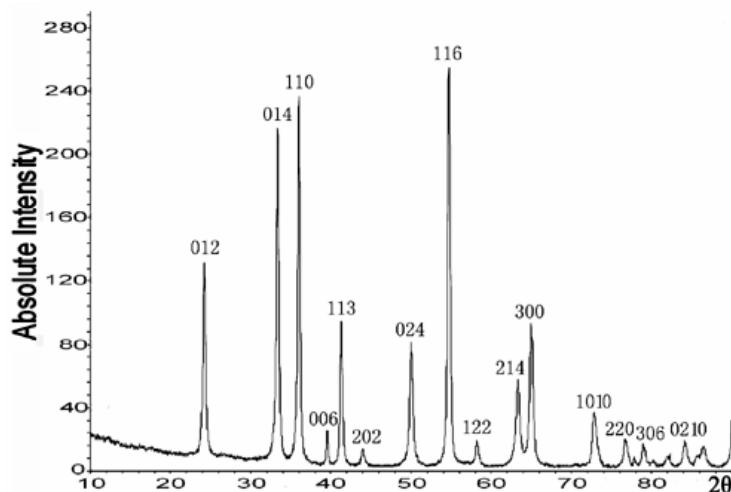


Fig. S4. XRD pattern of FDU-12 templated mesoporous crystals of  $\text{Cr}_2\text{O}_3$ .

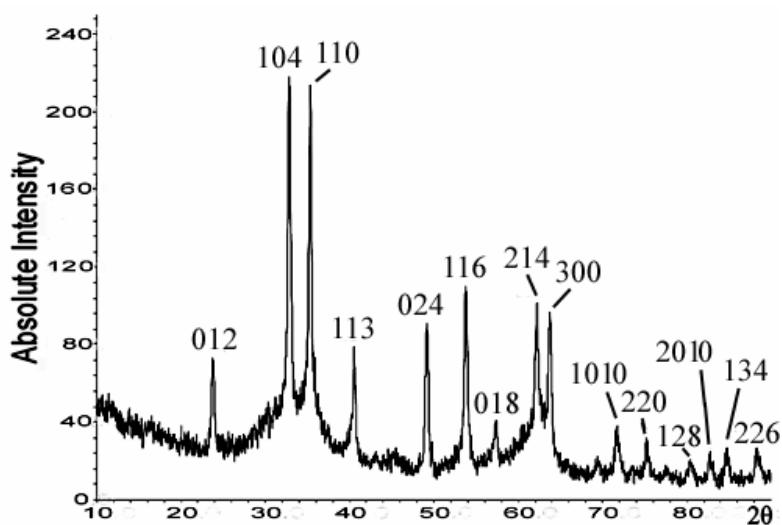


Fig. S5. XRD pattern of FDU-12 templated mesoporous crystals of  $\text{Fe}_2\text{O}_3$ .

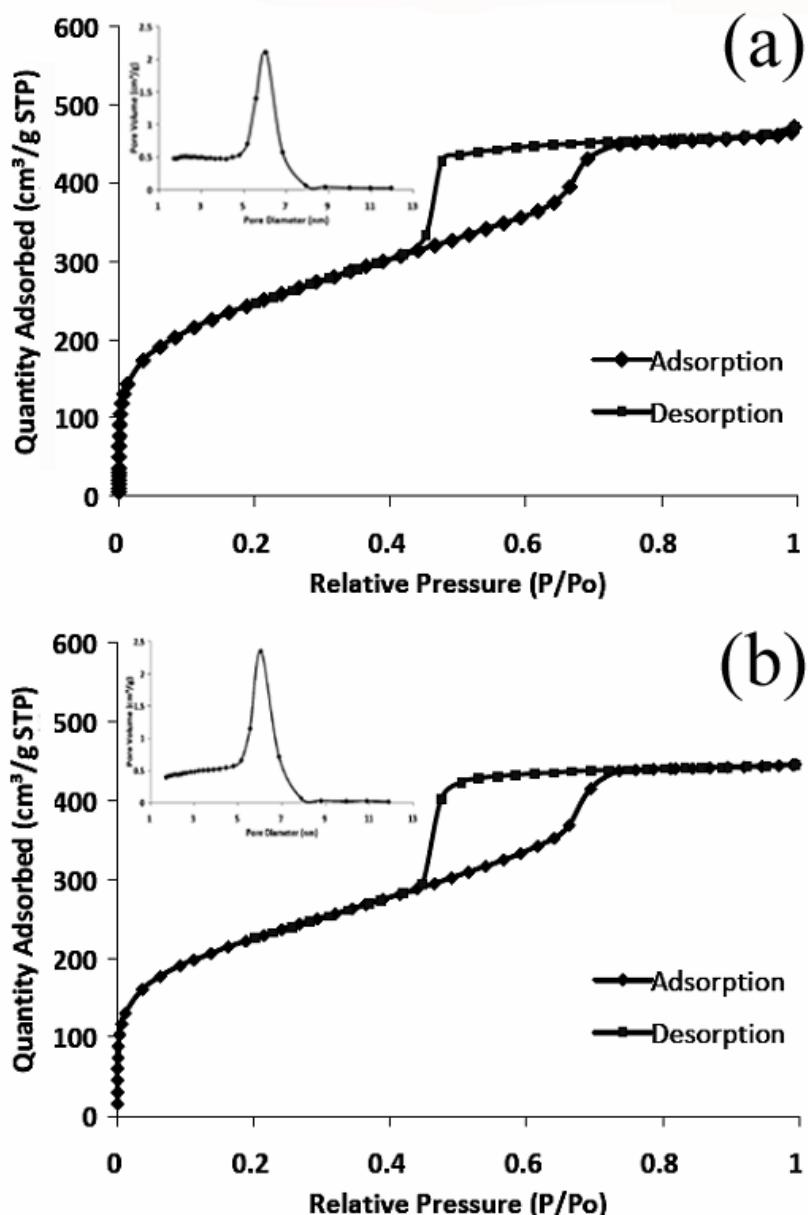
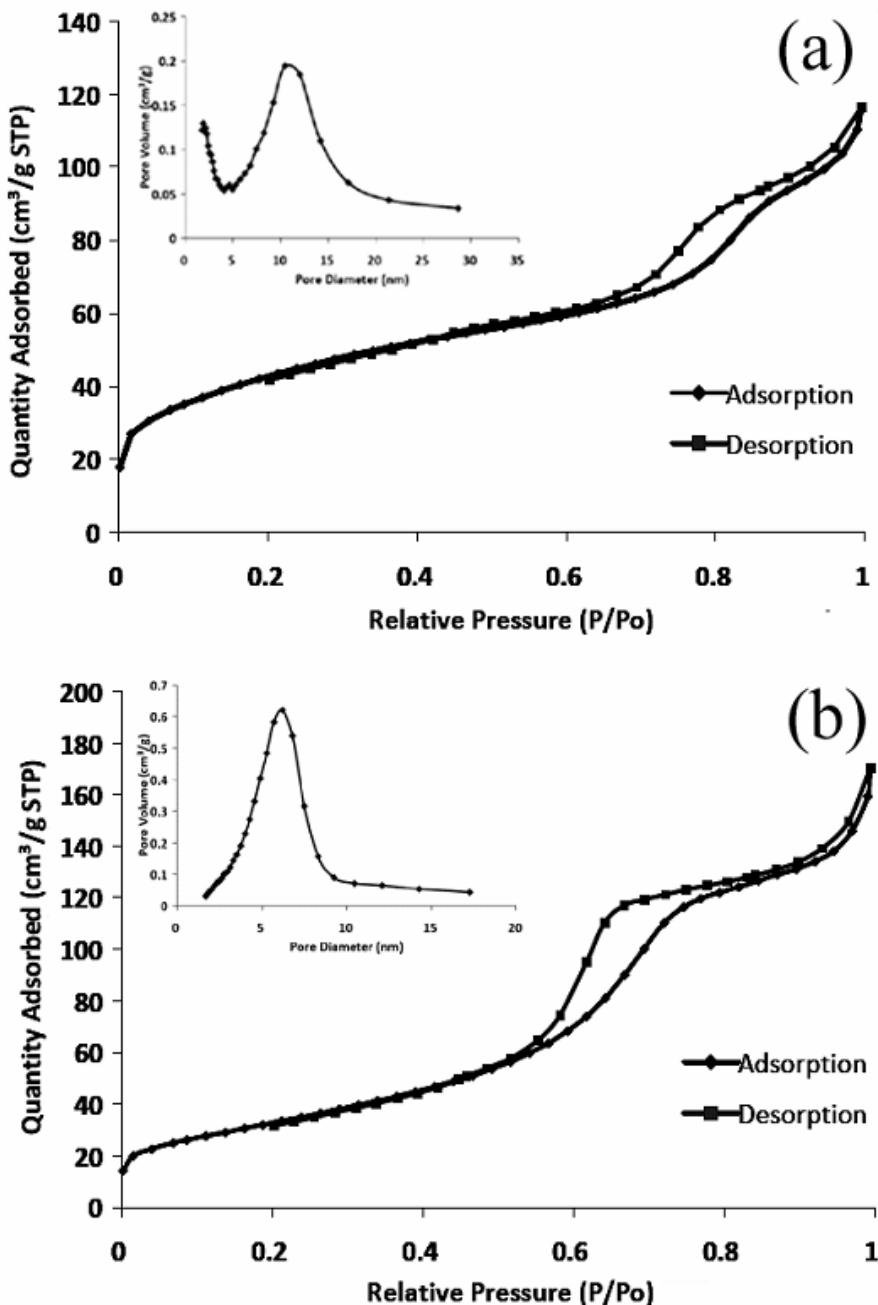


Fig. S6. Nitrogen adsorption/desorption isotherms measured at 77 K from (a) FDU-12 and (b) SBA-16. Insets: pore size distributions of the corresponding materials.



**Fig. S7.** Nitrogen adsorption/desorption isotherms measured at 77 K from porous crystals of  $\text{Co}_3\text{O}_4$  templated by (a) FDU-12 and (b) SBA-16. Insets: pore size distributions of the corresponding crystals.