	Relative Atomic Concentrations			
	(%)			
Materials	Ni 2p	O 1s	Si 2p	Ni 2p/ O 1s
NiO	51.2	48.8	0	1.049
Ni-MCM-48-1%	0.2	67.6	32.2	0.003
Ni-MCM-48-2.5%	0.7	67.3	32.0	0.010
Ni-MCM-48-5%	1.7	67.2	31.1	0.025
Ni-MCM-48-10%	4.9	65.6	29.6	0.075

Table S1. Elemental quantification of NiO, NiO-MCM-48-1%, NiO-MCM-48-2.5%, NiO-MCM-48-5% and NiO-MCM-48-10% obtained from XPS analysis.



Figure S1. Representative TEM figure of Ni-MCM-48-1%. The bar scale is 50 nm.



Figure S2. Photoluminescence of Ni-MCM-48 materials.