Electronic Supplementary Material (ESI) for New Journal of Chemistry.
This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2014

New Journal of Chemistry

Electronic Supplementary Information

Effect of pretreatment temperature on photo catalytic activity of microwave irradiated porous nanocrystalline ZnO

Tarek T. Ali[a,b*], Katabathini Narasimharao[a*], Ivan P. Parkin[c], Claire J. Carmalt[c], Sanjayan Sathasivam[c],Sulaiman N. Basahel[a] , Salem M. Bawaked[a], Shaeel A. Al-Thabiti[a]

[a] Department of Chemistry, Faculty of Science, King Abdulaziz University, P. O. Box 80203, Jeddah 21589, Kingdom of Saudi Arabia
[b] Department of Chemistry, Faculty of Science, Sohag University, P. O. Box 82524, Egypt
[c] Materials Chemistry Centre, Department of Chemistry, University College London, 20 Gordon Street, London WC1H 0AJ, UK

Table S1: Mass percentage of surface oxygen species (XPS analysis) presented in the samples

Catalyst	Mass percentage of O*1s* components		
	O_i	O_{ii}	O_{iii}
As synthesized	14.48	8.54	0.93
150 °C	16.25	8.55	5.00
200 °C	17.25	10.55	6.00
250 °C	16.11	8.15	5.86
300 °C	16.37	6.99	4.73

Date: 1st October 1, 2014

Table S2: Textural properties of samples from N_2 adsorption and crystallite size from XRD measurements

Catalyst	S_{BET} (m^2 g^{-1})	V_p (cm^3 g^{-1})	Av. pore diameter (nm)	Crystallite size (nm)
As-synthesized	8.0	0.046	20.0	45.4
150 °C	12.0	0.054	16.0	35.0
200 °C	16.0	0.096	29.0	26.0
250 °C	12.0	0.093	26.0	37.4
300 °C	12.0	0.086	22.0	42.4

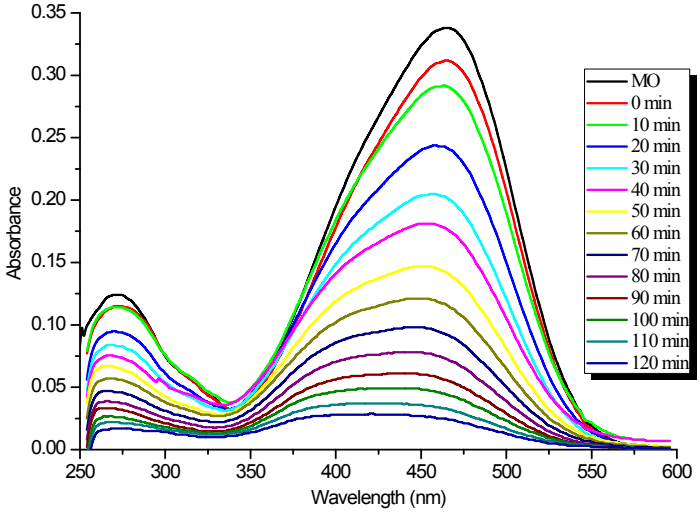

Fig. S1: Adsorption changes of methyl orange aqueous solution at 25 °C in the presence of 50 mg ZnO nanoparticles treated at 200 °C.

Date: 1st October 1, 2014