Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Successful CO_2 reduction under visible light photocatalysis using porous NiO nanoparticles, an atypical metal oxide

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Supporting information SI-1

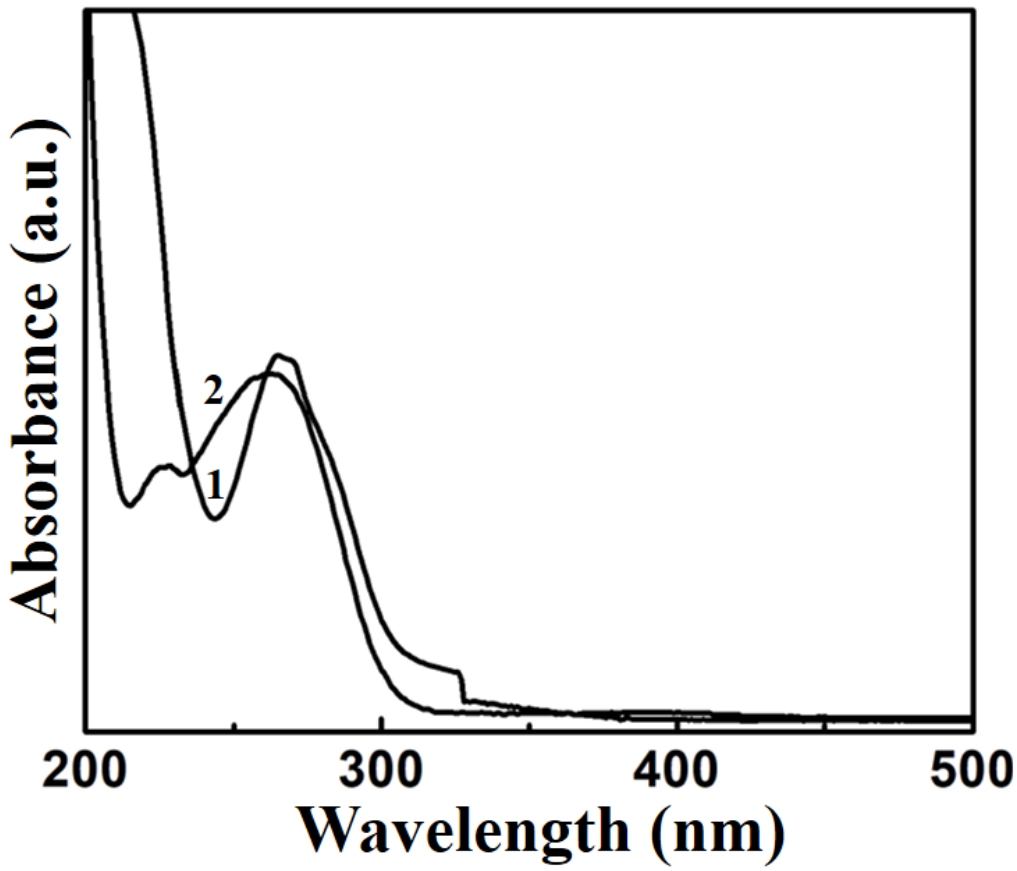

Figure SI-1. Curve 1) UV-Vis spectrum of formaldehyde. Curve 2) UV- Vis spectrum of the product.

Supporting Information SI-2

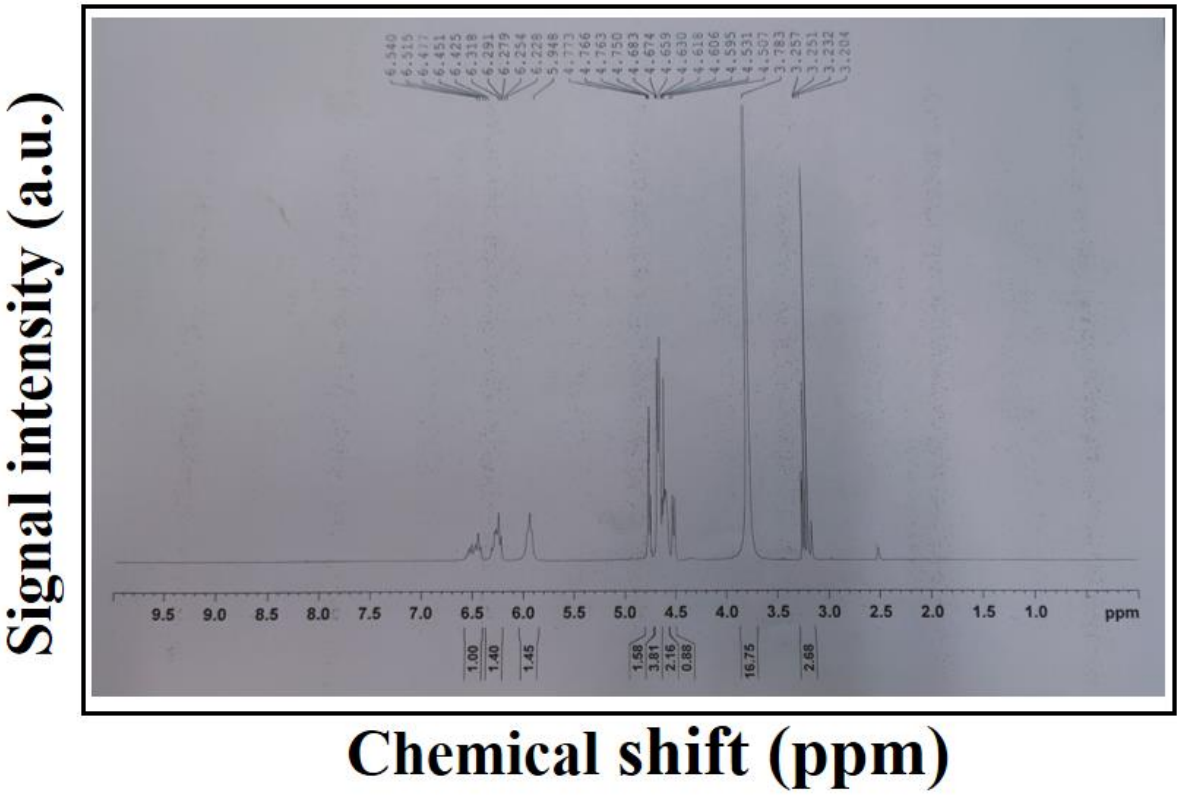

Figure SI-2. ^{1}H NMR spectrum of the product.

Supporting information SI-3

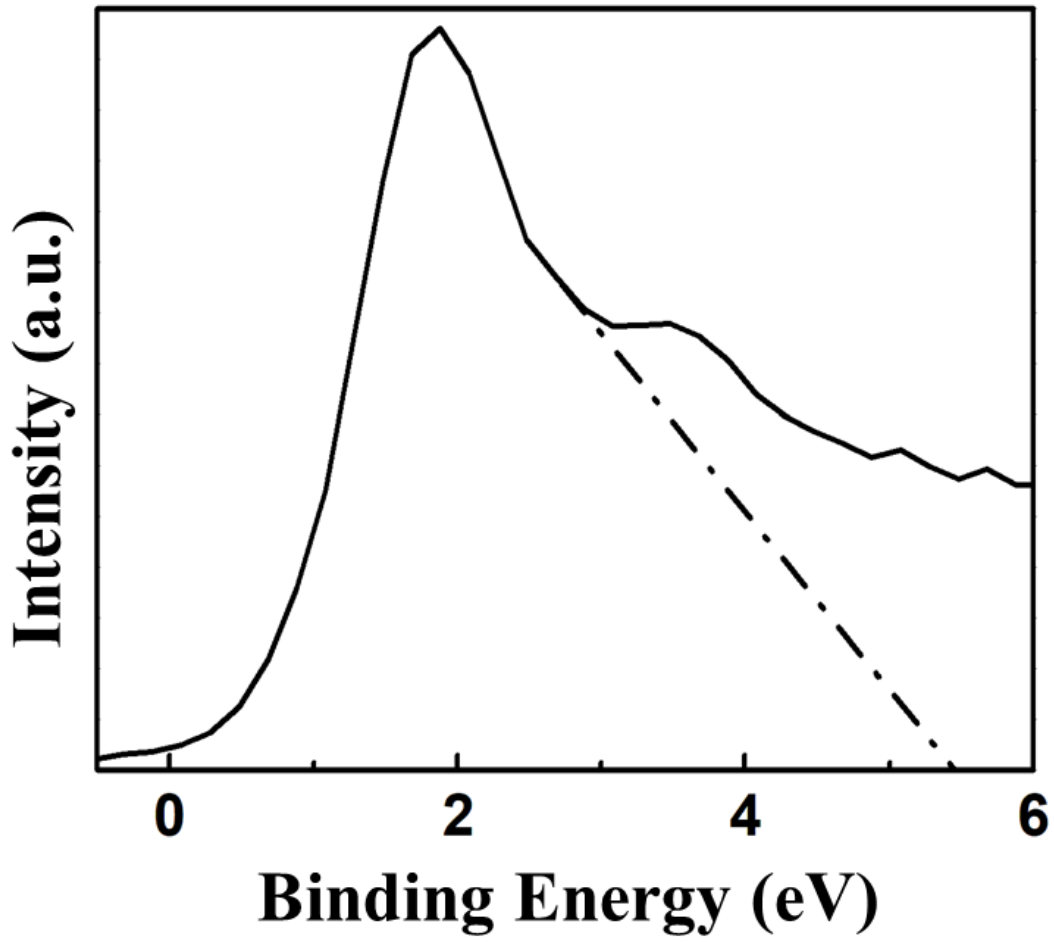

Figure SI-3. Valance band xps spectra of NiO nanoparticle.

Supporting Information SI-4

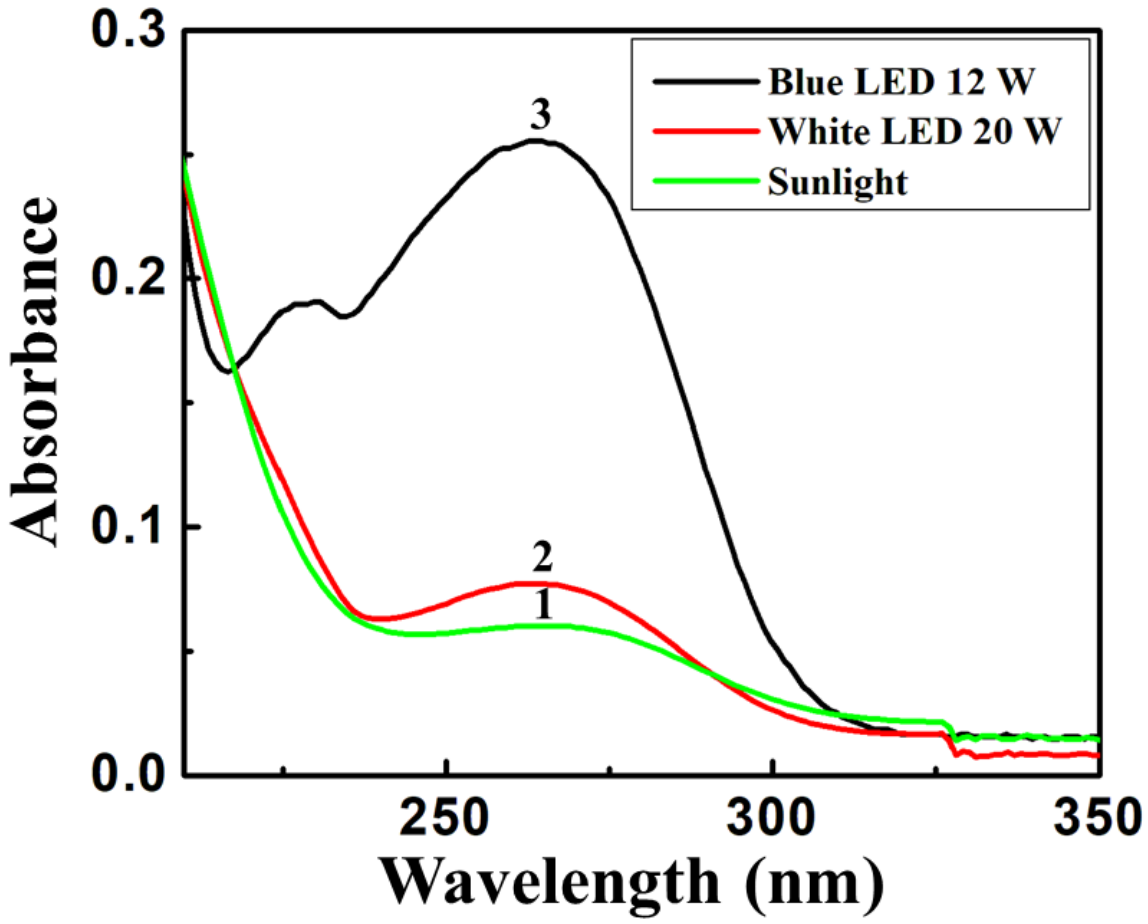

Figure SI-4. UV-Vis spectrum of HCHO in H_2O with variable light sources. Curve 1) Irradiation by sunlight. Curve 2) Irradiation by 20 W white LED and Curve 3) Irradiation by 12 W blue LED

Supporting information SI-5

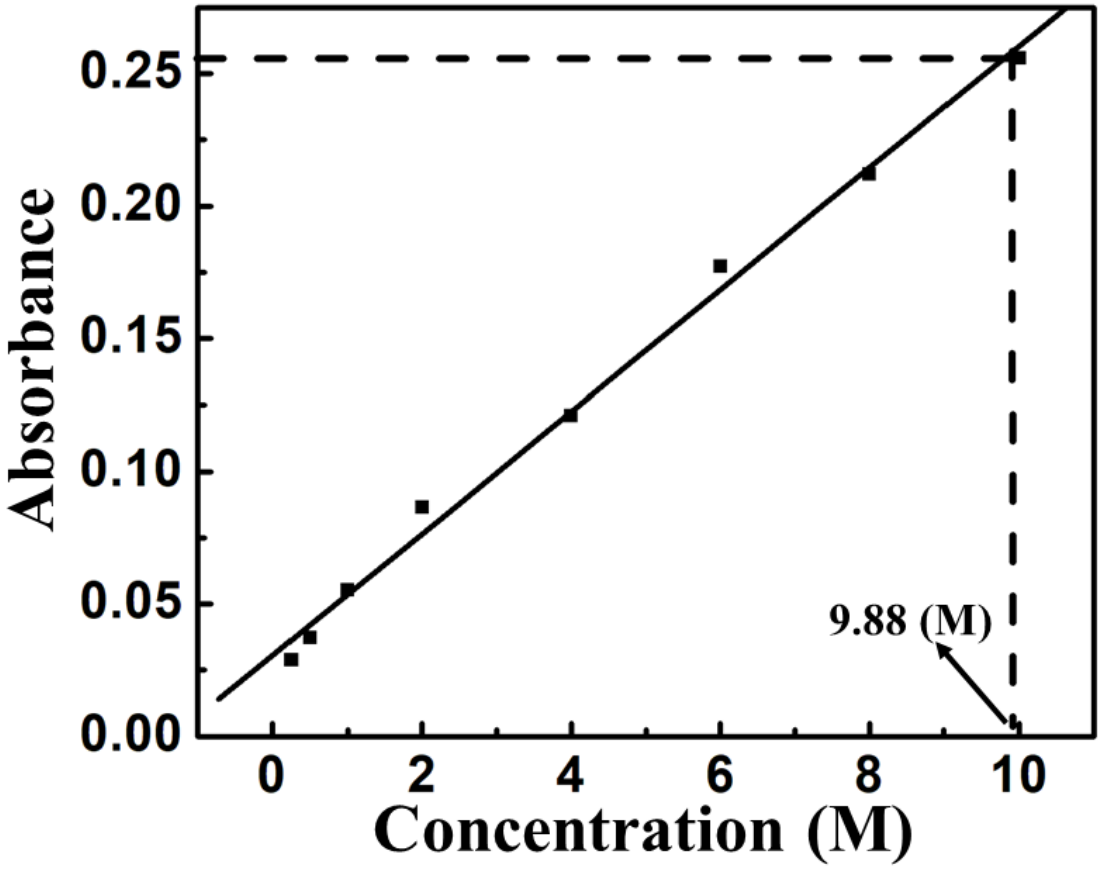

Figure SI-5. Calibration curve of formaldehyde.

Supporting information SI-6

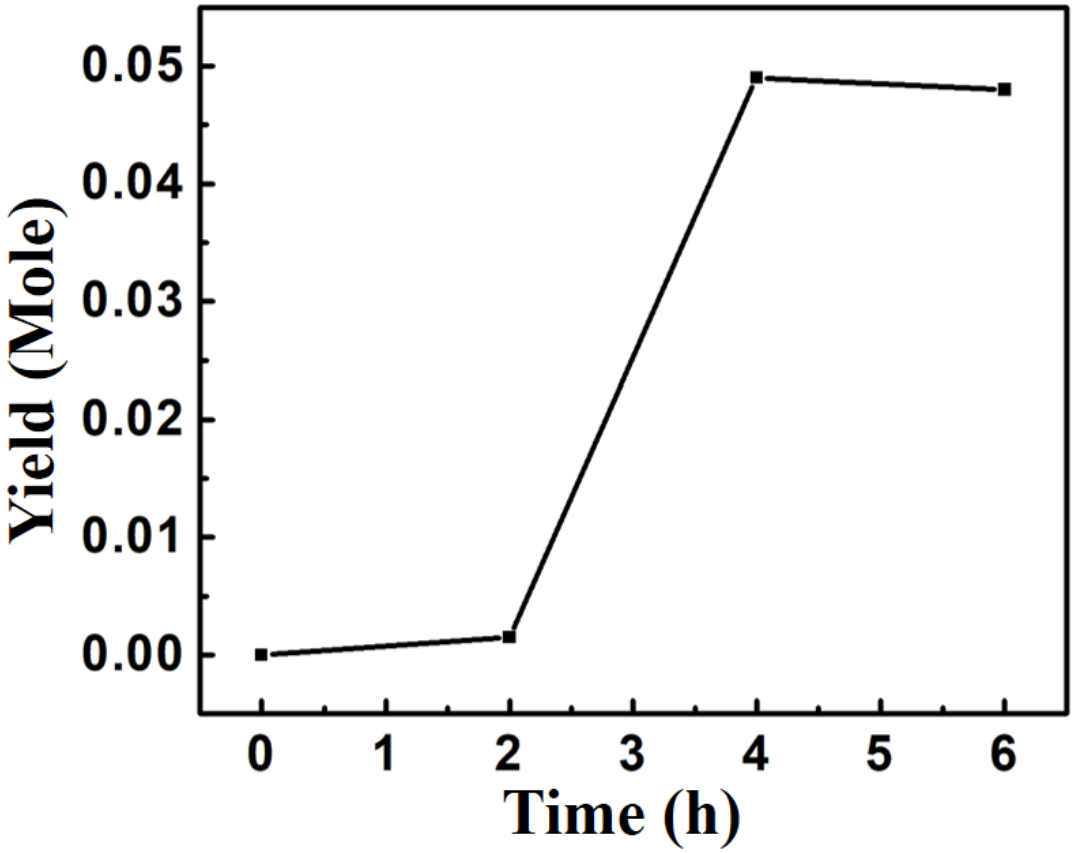

Figure SI-6. Kinetics plot of the product

Supporting information SI-7

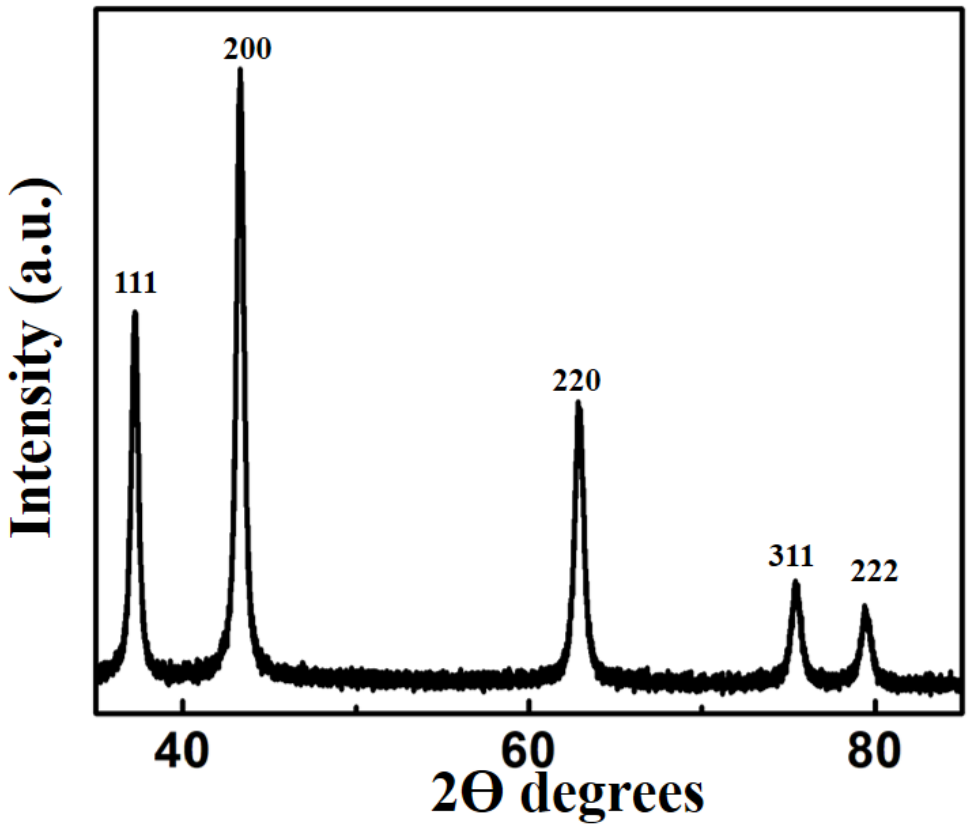

Figure SI-7. PXRD of the used catalyst.

Supporting information SI-8

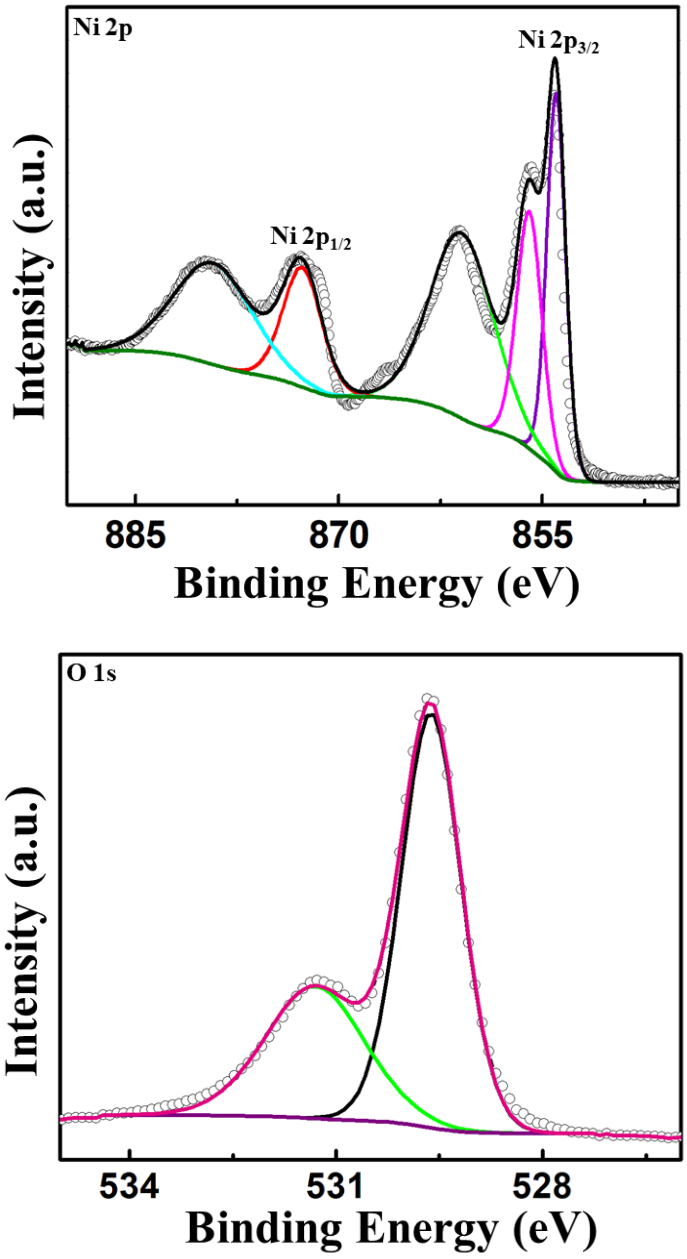

Figure SI-8. XPS of Ni 2p and O1s from the used catalyst.

Supporting information SI-9

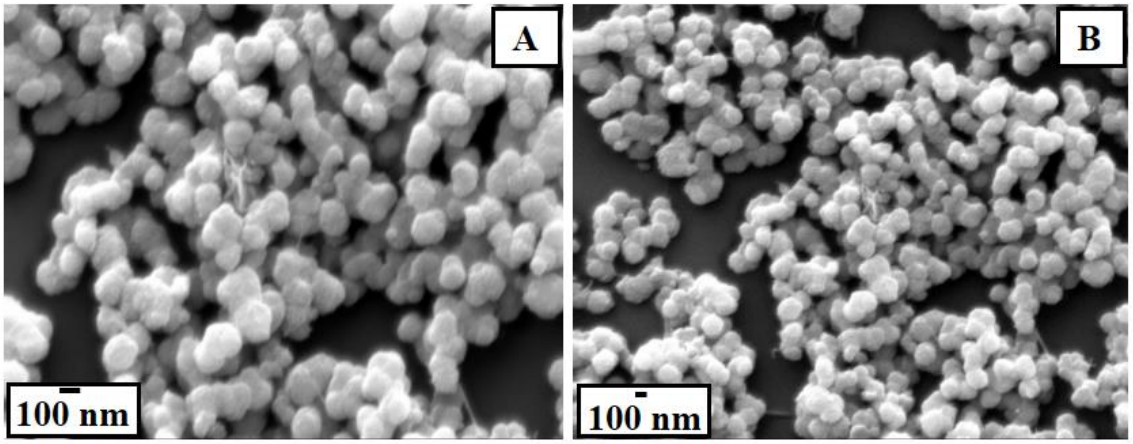

Figure SI-9. SEM images of the used catalyst.

Supporting in formation SI-10

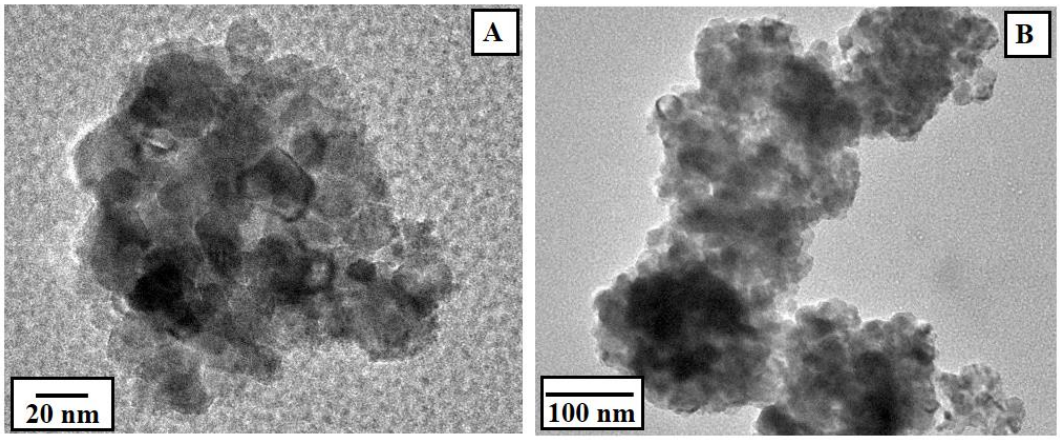

Figure SI-10. TEM images of the used catalyst.