

Supporting Information

SI1: N₂ adsorption – desorption isotherms of NC-MgO synthesized in batch process

The adsorption – desorption isotherm of the NC-MgO synthesized using batch process shows H1 type isotherm, which is due to the slit like pores in the sample. The BET surface area of the batch sample is $\sim 191 \text{ m}^2/\text{g}$.

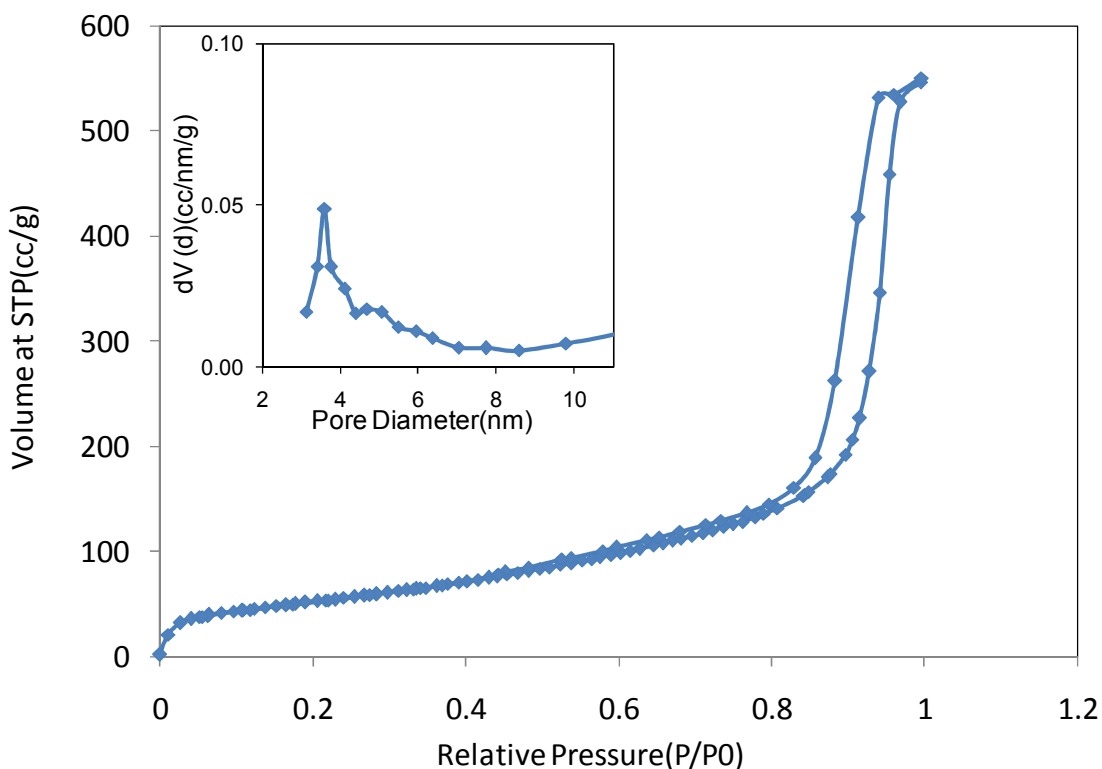


Figure SI-1: N₂ sorption isotherms of the NC-MgO sample and inset of (B) shows the pore size distribution of the samples which were synthesized in batch process.

SI-2: PXRD of the NC-MgO synthesized using microjet micromixer and in batch process:

Formation of MgO was confirmed by comparing the experimental data with standard JCPDS – PDF file no 45-0946

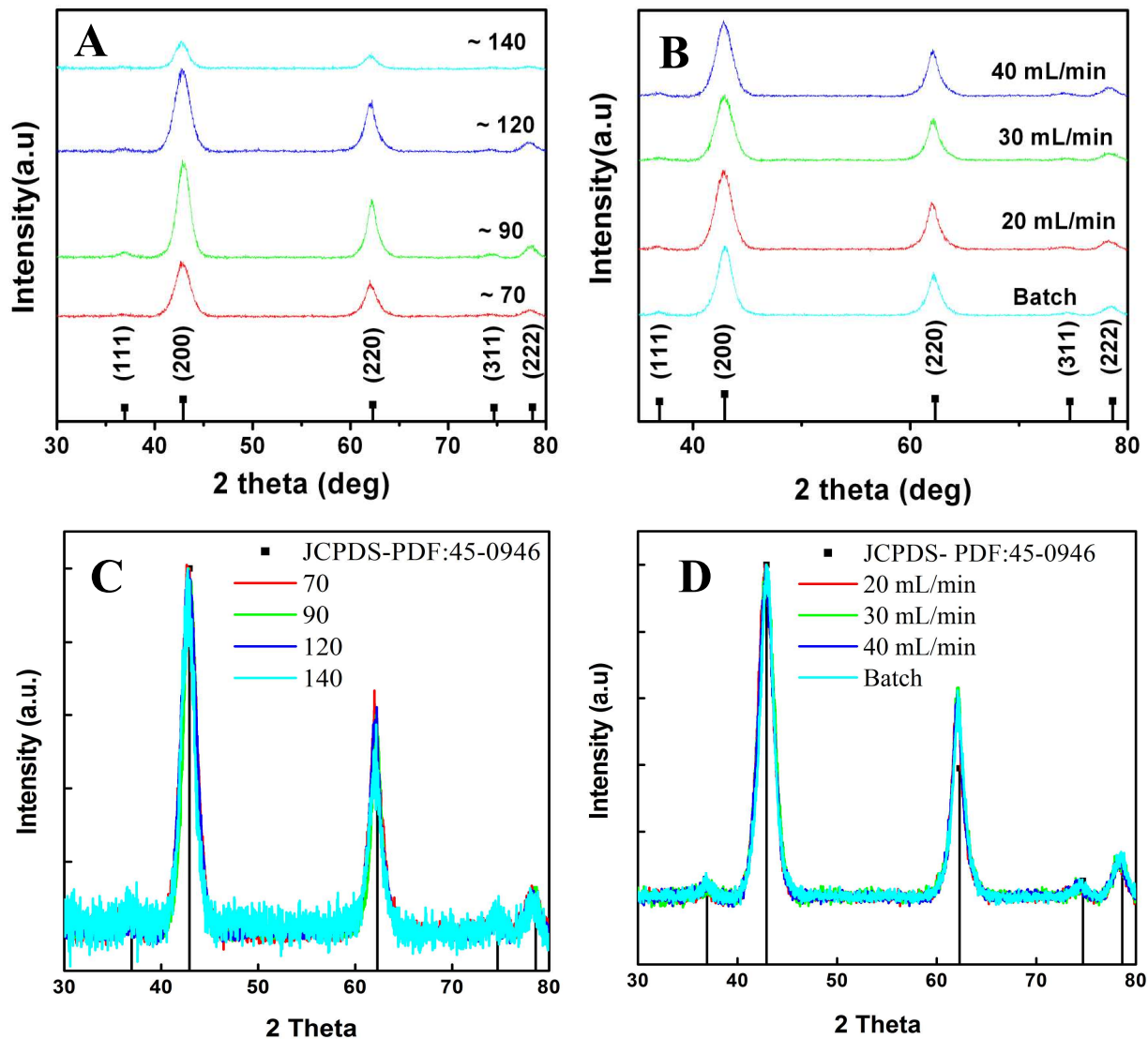


Figure SI-2: (A) PXRD of NC-MgO synthesized at different impingement angles between the jets (B) at different flow rates when the impingement angle between the jets is 120. (C) and (D) are corresponding normalized plots. PXRD data of NC-MgO synthesized in batch is also shown in the figure B and D.

SI-3: FT-IR spectra of the NC-MgO

Appearance of Mg-O bond at 540 cm^{-1} confirms the formation of MgO. Peak around 3000 cm^{-1} to 3500 cm^{-1} due to OH groups indicating the moisture absorbing nature of the sample.

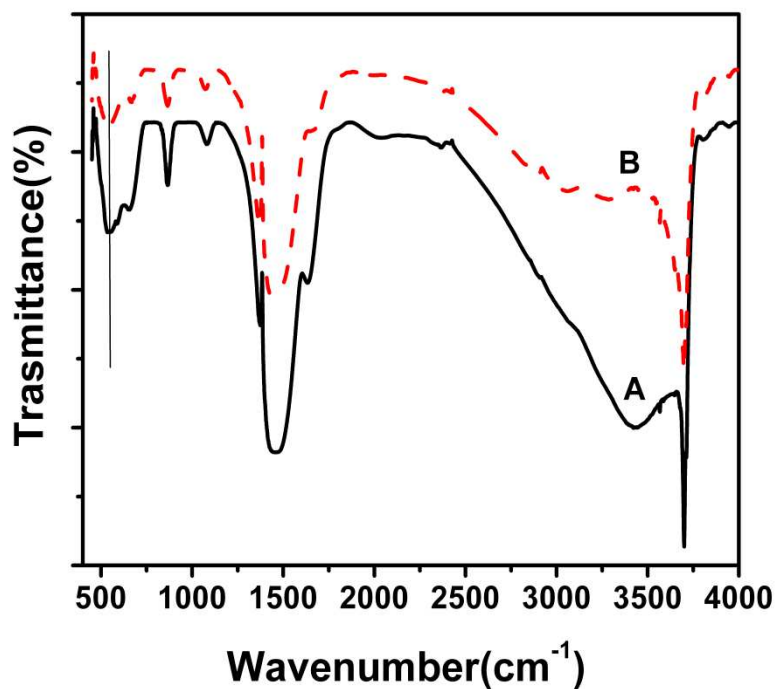


Figure SI-3: FT-IR spectra of NC-MgO synthesized in (A) continuous flow (B) batch methods.