Electronic Supplementary Information (ESI) for

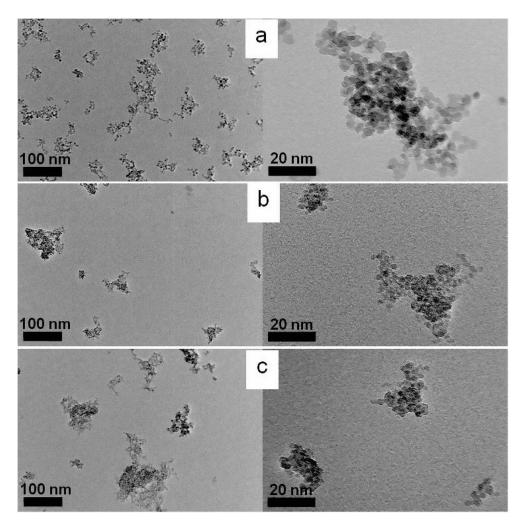
Lactam-Mediated Synthesis of Inorganic Nanoparticles and Their

Size-Dependent Properties: A Case Study on Zinc Oxide

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 $\textbf{Figure S1.} \ Low \ (left) \ and \ high \ (right) \ magnified \ TEM \ images \ of \ Fe_3O_4 \ NPs \ synthesized \ in \ a)$

 γ -butyrolactam, b) δ-valeroalctam and c) ε-caprolactam.

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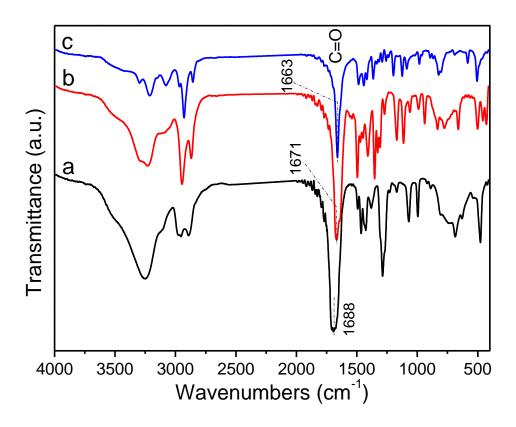


Figure S2. FT-IR spectra of pure lactams: a) γ -butyrolactam, b) δ -valeroalctam and c) ϵ -caprolactam.

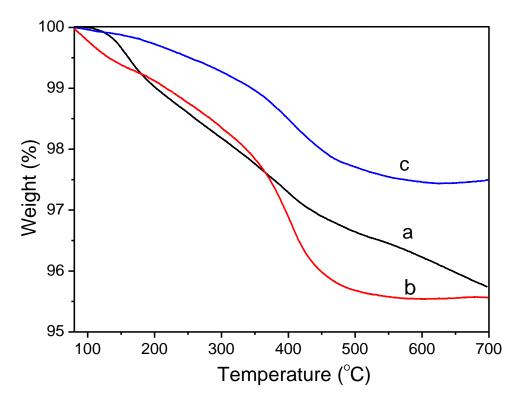


Figure S3. TGA curves of a) ZnO-BL, b) ZnO-VL and c) ZnO-CL NPs.