

## Supporting Information Available

# $\text{Zn}_x\text{Ga}_2\text{O}_{3+x}$ ( $0 \leq x \leq 1$ ) Solid Solution Nanocrystals: Tunable Composition and Optical Properties

Yanping Yuan,<sup>a</sup> Weimin Du,<sup>b</sup> and Xuefeng Qian<sup>a\*</sup>

<sup>a</sup>*School of Chemistry and Chemical Technology, State Key Laboratory of Metal Matrix Composites, Shanghai Jiao Tong University, Shanghai, 200240, P. R. China,*

<sup>b</sup>*College of Chemistry and Chemical Engineering, Anyang Normal University, Henan, 455002, P. R. China,*

Corresponding authors: Tel: +86-21-54743262, Fax: +86-21-54741297, E-mail address: xfqian@sjtu.edu.cn.

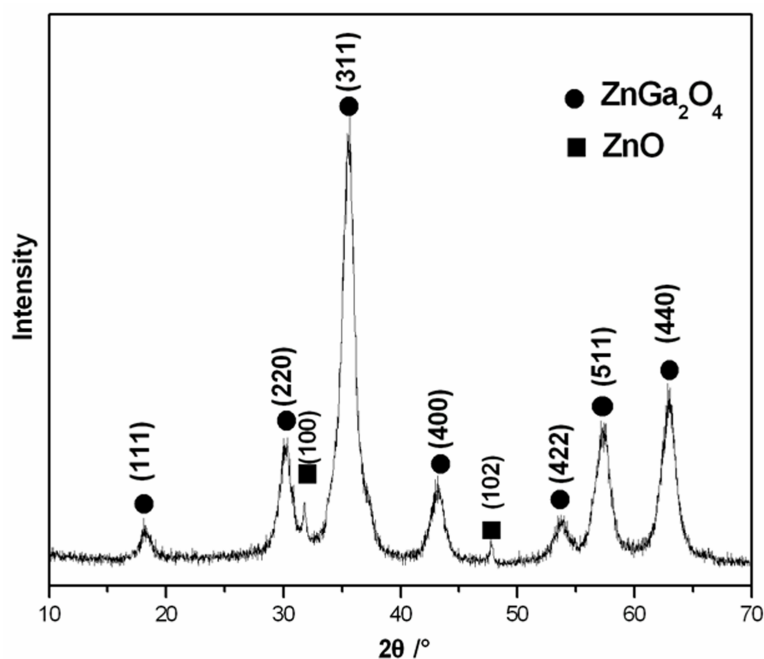


Fig. S1 XRD patterns of  $\text{ZnGa}_2\text{O}_4$  nanocrystals with some ZnO impurity in products.

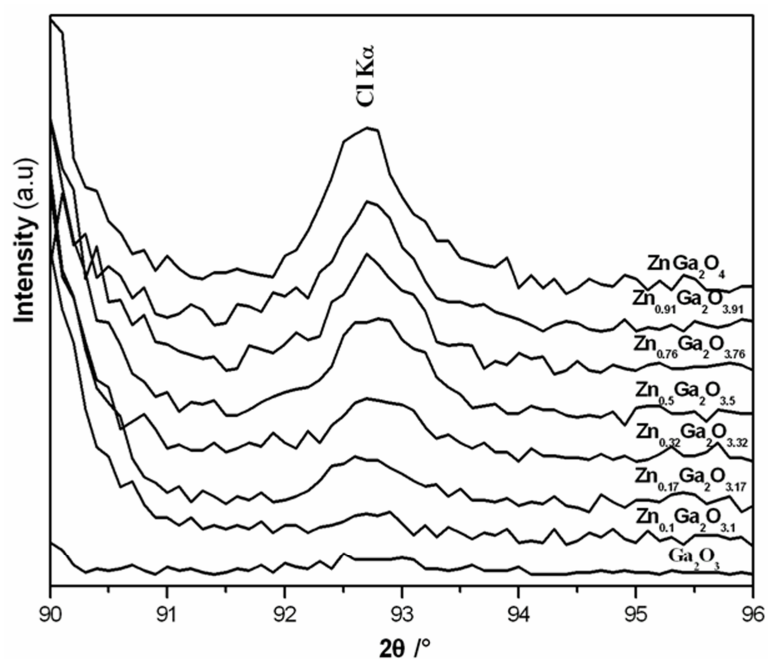


Fig. S2 XRF spectra of Cl K $\alpha$  in Zn $_x$ Ga $_2$ O $_{3+x}$  ( $0 \leq x \leq 1$ ) solid solution nanocrystals

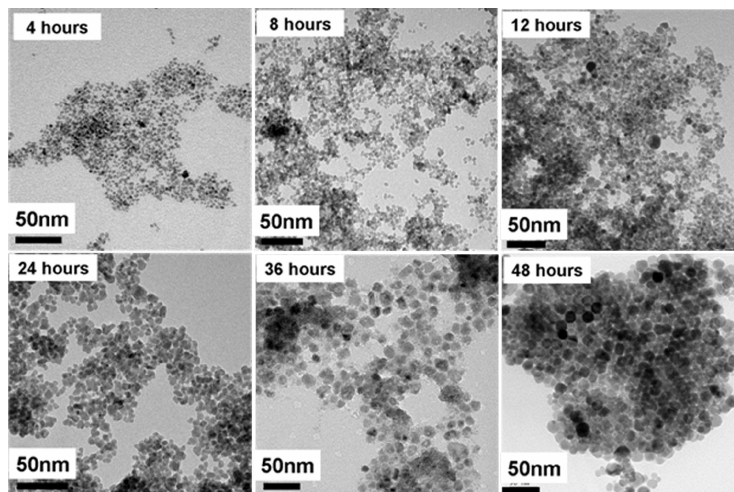


Fig. S3 TEM images of Zn $_x$ Ga $_2$ O $_{3+x}$  ( $0 \leq x \leq 1$ ) solid solution synthesized at 180 °C for different reaction time

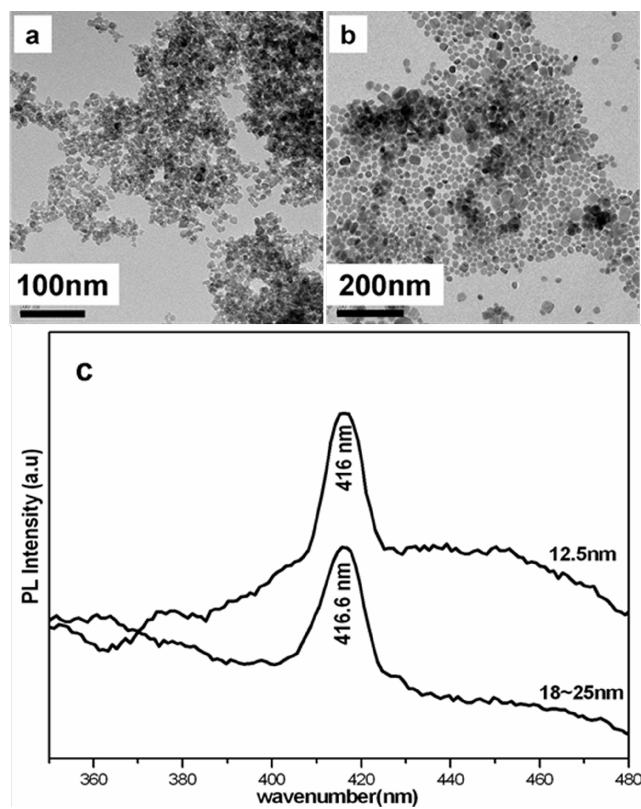


Fig. S4 TEM images of Zn<sub>0.5</sub>Ga<sub>2</sub>O<sub>3.5</sub> nanocrystals with the size of 12.5 nm (a), ~20 nm (b) and their PL emission spectra (c).