

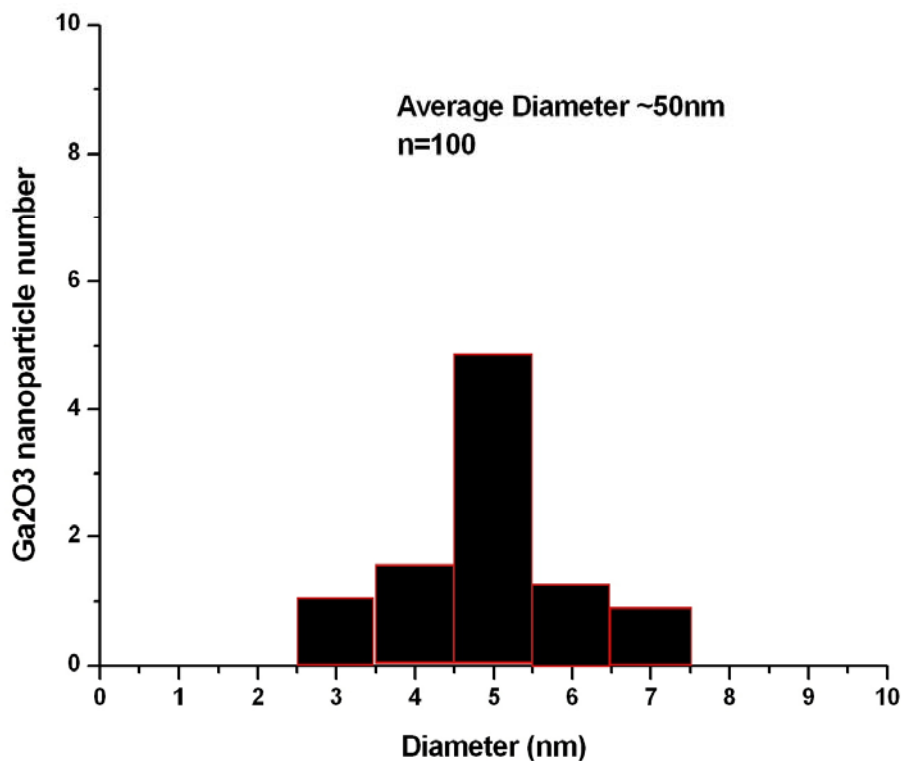
**SUPPORTING INFORMATION****Biomimetic and Aggregation-Driven Crystallization Route for Room-Temperature Material Synthesis: Growth of  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> Nanoparticles Using Peptide Assemblies as Nanoreactors**

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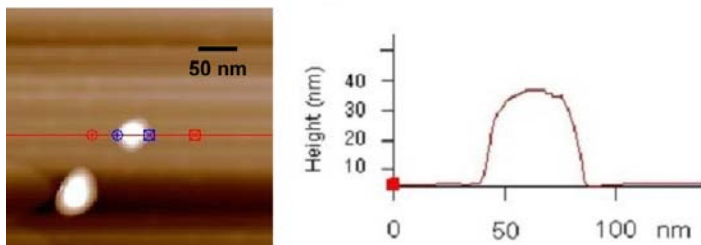
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S-1. The size distribution of  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> nanoparticles. *The diameters of one hundred Ga<sub>2</sub>O<sub>3</sub> nanoparticles were measured in TEM images and their size distribution is shown below.*



S-2 AFM image of  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> nanoparticles. *Height profile of the  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> nanoparticle was shown in AFM image.*



S-3 PL spectrum of  $\beta$ -Ga<sub>2</sub>O<sub>3</sub>. *This  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> nanoparticle had an emission at 389 nm, matching with photoluminescent (PL) of  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> nanowires.*

