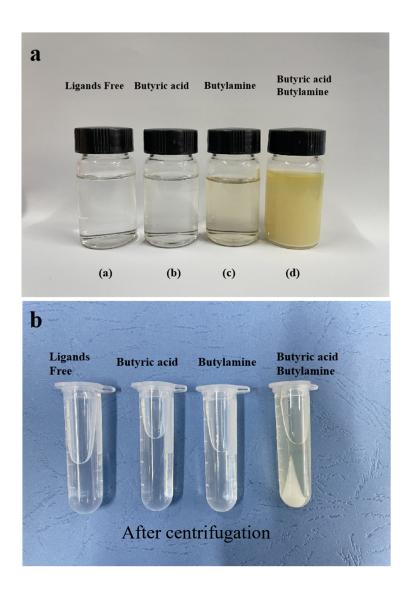
## **Electronic Supplementary Information**

Ligand-assisted solvothermal precipitation synthesis of quantum-sized  $SnO_2$  nanoparticles and their application in quantum dot light emitting diodes

Jiaxin Gao, Mengxin Liu, Xinan Shi\*, and Daocheng Pan\*

State Key Laboratory of Featured Metal Materials and Life-cycle Safety for Composite Structures; Guangxi Key Laboratory of Processing for Non-ferrous Metals and Featured Materials; MOE Key Laboratory of New Processing Technology for Nonferrous Metals and Materials; School of Resources, Environment and Materials, Guangxi University, Nanning 530004, China

<sup>\*</sup>E-mail: xashi@gxu.edu.cn and dcpan@gxu.edu.cn



**Figure S1.** The digital photographs of the crude reaction mixtures *via* ligand-free, butyric acid-, butylamine- and butyric acid/butylamine-assisted synthesis of SnO<sub>2</sub> nanoparticles by a solvothermal precipitation method.

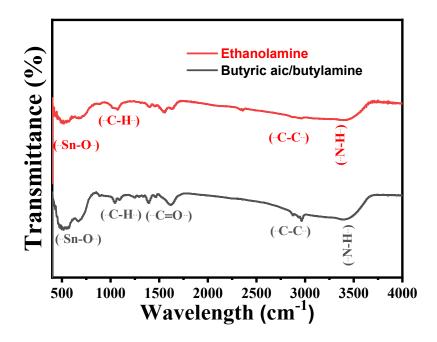


Figure S2. FT-IR spectra of SnO<sub>2</sub> nanoparticles before and after ligand exchange

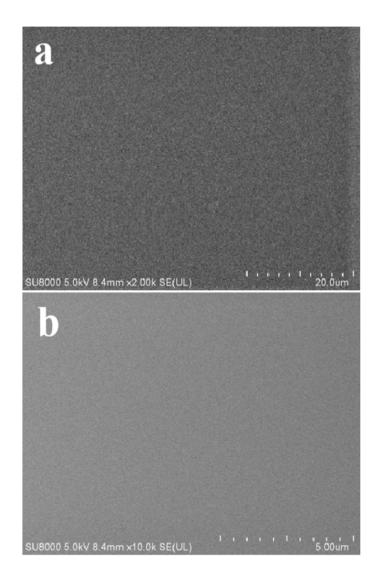


Figure S3. Low-resolution SEM (a) and high-resolution SEM (b) images of  $SnO_2$  nanoparticle thin film.