

Supplementary Information

Synthesis of zinc oxide nanoparticles with strong, tunable and stable visible light emission by solid-state transformation of Zn(II)-organic coordination polymers

Hong-Yan Shi, Bin Deng,* Sheng-Liang Zhong,* Lei Wang, An-Wu Xu*

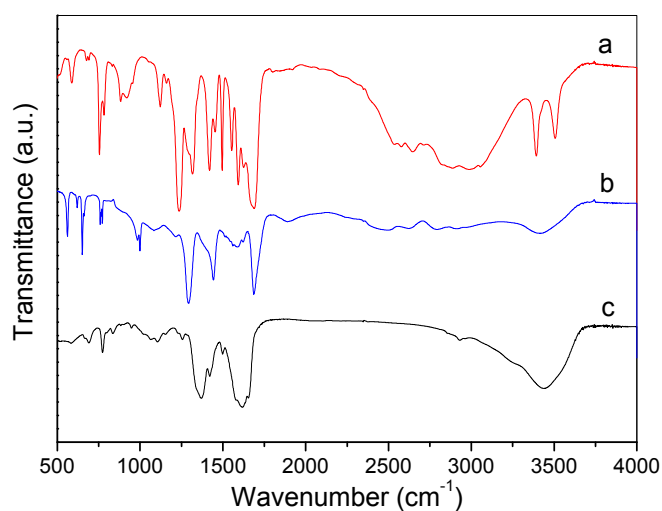


Fig. S1 IR spectra of ligand A (a), ligand B (b) and precursor-1 (c).

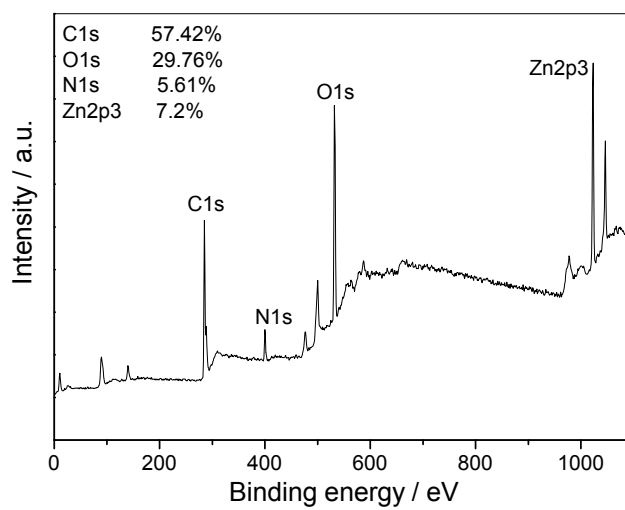


Fig. S2 XPS spectrum of precursor-1.

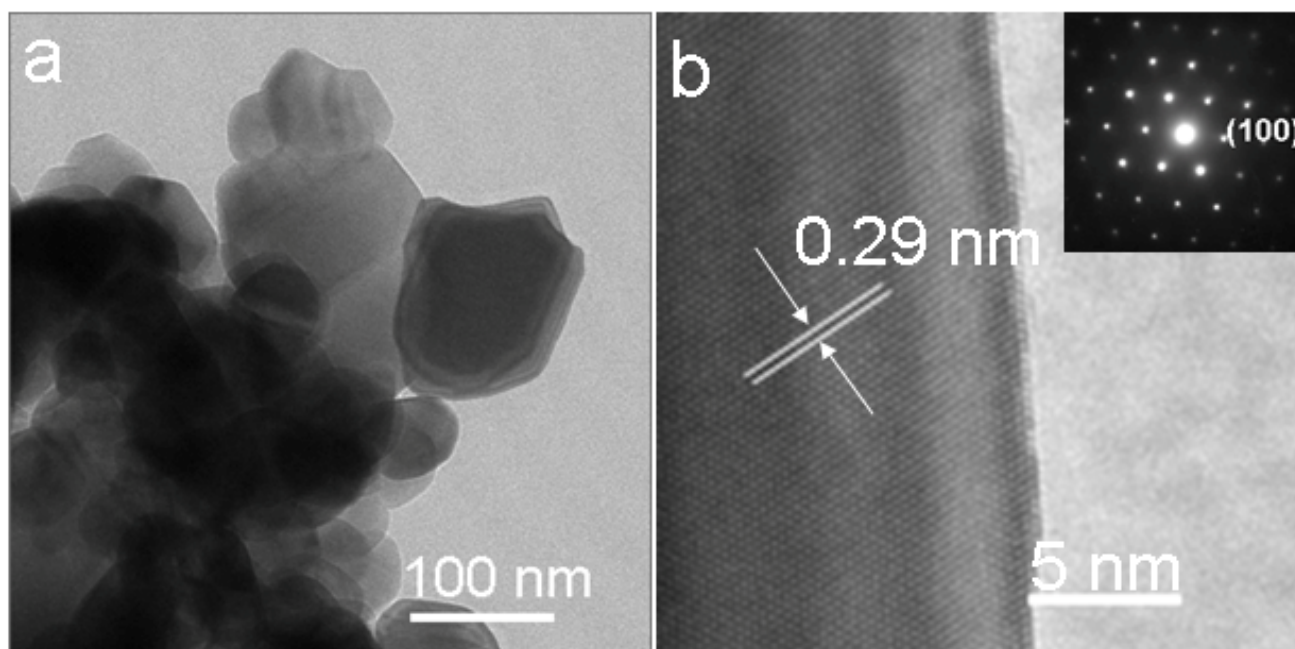


Fig. S3 (a) TEM and (b) HRTEM image of ZnO-1 nanoparticles. The inset is the corresponding SAED pattern.

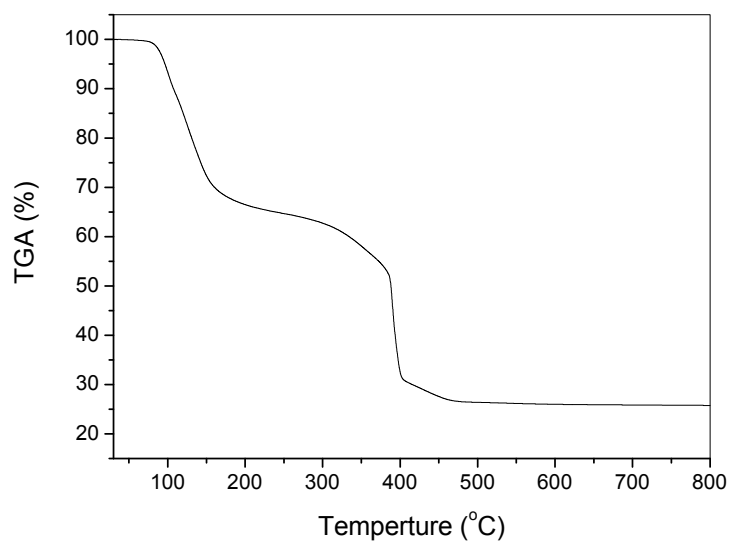


Fig. S4 TGA curve of coordination polymer of precursor-1 showing its decomposition and transformation to zinc oxide at 550 °C.

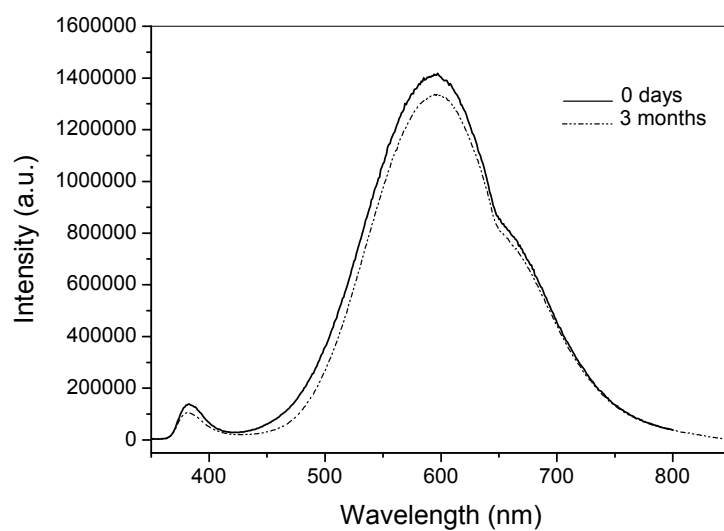


Fig. S5 Room temperature solid-state PL spectra of ZnO-1 nanoparticles under UV excitation at 325 nm after being stored for 0 days (solid curve) and 3 months (dash curve) in air at room temperature.

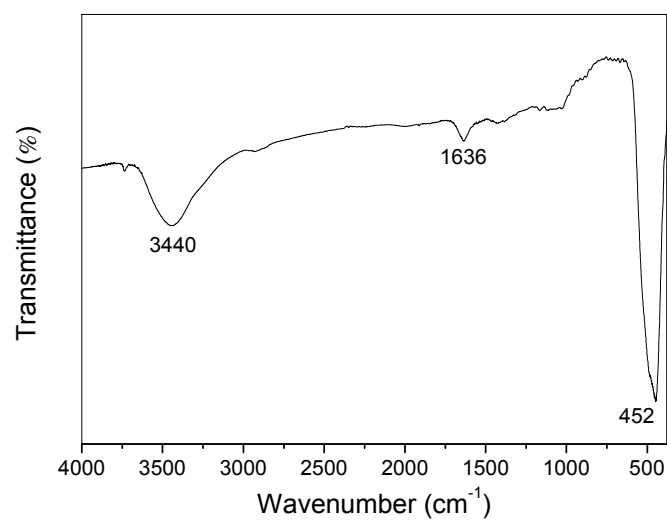


Fig. S6 FTIR spectrum of ZnO-1 nanoparticles.

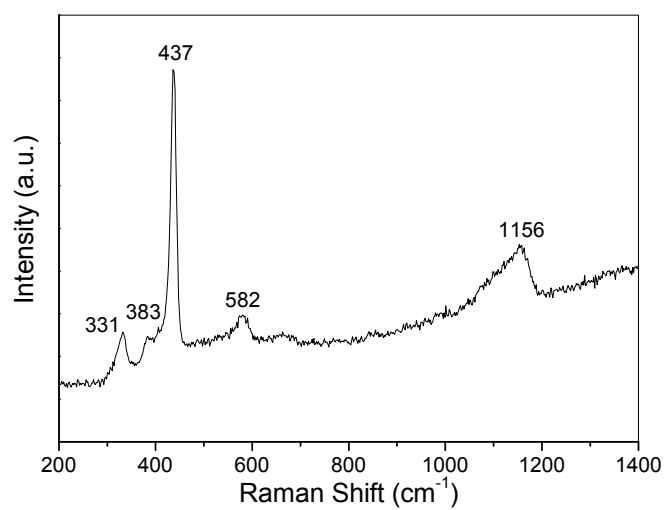


Fig. S7 Raman spectrum of ZnO-1 nanoparticles.

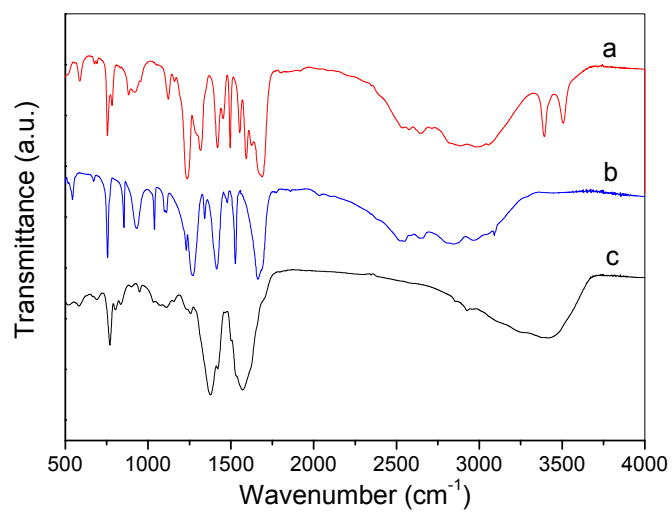


Fig. S8 IR spectra of ligand A (a), ligand C (b) and precursor-2 (c).

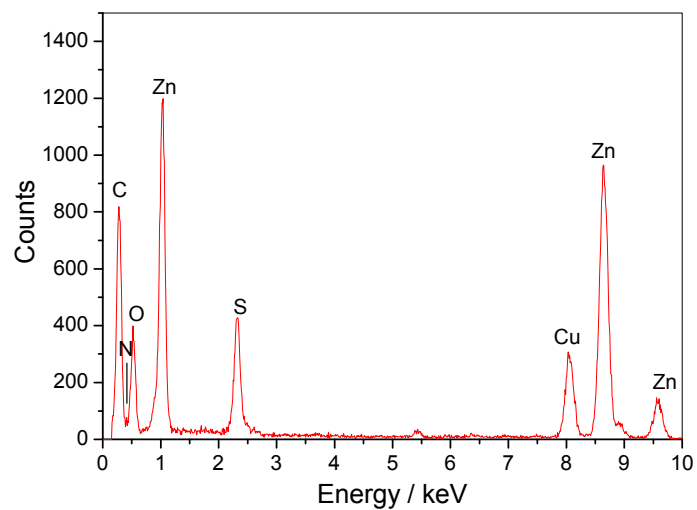


Fig. S9 EDS spectrum of precursor-2. Cu peak came from the TEM grid.

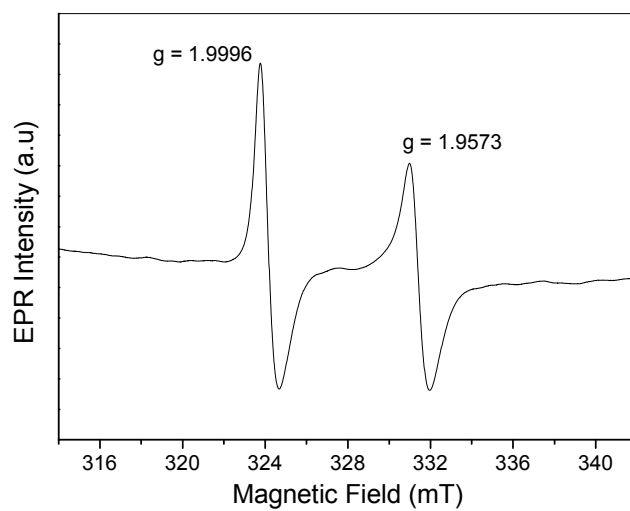


Fig. S10 X-Band EPR spectrum of ZnO-2 nanostructures recorded at room temperature.