Supplementary Information

Temperature sensitive optical properties of exciton and room-temperature visible light emission from disordered Cu$_2$O Nanowires

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Fig. S1 (a) PL decay of the Cu$_2$O nanowires (NWs) in semi-log y scale recorded at the emission of 2.33 eV at room temperature. (b) PL decays of Cu$_2$O NWs with the emission of 2.36, 2.33, and 1.965 eV (i.e., 520, 532, 631 nm) in semi-log y scale at the temperature of 77 K, $\tau_s$, $\tau_{L1}$, and $\tau_{L2}$ characterize the three lifetime components of the Cu$_2$O NWs.

Fig. S2 A high-resolution Transmission electron microscope (HRTEM) image of the same Cu$_2$O NW.
Fig. S3 A diameter distribution diagram of the prepared Cu$_2$O NWs.