## **Supplemental Figure 1**

PLE spectra of prepared in Ar from  $Zn_2P_2O_7$ ,  $P_2O_5$ ,  $(NH_4)_2HPO_4$ , and 0.1mol% C-added  $(NH_4)_2HPO_4$  starting materials. The starting material did not affect the oxidation of  $Sn^{2+}$  during the melting process in inert atmosphere. Inset shows energy level diagram of  $Sn^{2+}$  center in the glasses

