## KZn<sub>4</sub>SbO<sub>7</sub> and KZn<sub>4</sub>Sb<sub>3</sub>O<sub>12</sub>: Syntheses, Structures and Photophysics of Sb<sup>5+</sup> Control Materials

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## **Supporting Information**



a: KZn<sub>4</sub>SbO<sub>7</sub>



b: KZn<sub>4</sub>Sb<sub>3</sub>O<sub>12</sub>

Figure S1. Simulated and experimental XRD powder patterns for 1 (a) and 2 (b).



Figure S2. The calculated CIE chromaticity coordinates of (0.380, 0.440) and (0.310, 0.450) close to the coordinates of white-light emission for KZn<sub>4</sub>SbO<sub>7</sub> and KZn<sub>4</sub>Sb<sub>3</sub>O<sub>12</sub>.





Figure S3. The band structures of plots. The lowest conduction band is at G-point and the highest valence band at F-point for  $KZn_4Sb_3O_{12}$  crystal; both the lowest conduction band and highest valence band are at G-point for  $KZn_4SbO_7$ , ZnO and  $Sb_2O_5$  crystals.