Supplementary Information

Sol-gel Nanocasting Synthesis of Kesterite Cu₂ZnSnS₄ Nanorods

Jing Wang, Peng Zhang*, Xuefeng Song, and Lian Gao*

State Key Laboratory for Metallic Matrix Composite Materials,

School of Materials Science and Engineering,

Shanghai Jiao Tong University, Shanghai, 200240, China.

*E-mail address: liangao@mail.sic.ac.cn (L. Gao); pengzhang2010@sjtu.edu.cn (P. Zhang)

Tel: +86-12-52412718. Fax: +86-21-52413122



Fig. S1 Small-angle XRD patterns. (a) Parent SBA-15. Well-resolved diffraction peaks at (100), (110) and (200) display a well-ordered structure. (b) SBA-15 containing CZTS.



Fig. S2 (a) TEM image of parent SBA-15, (b) TEM image of SBA-15 containing CZTS, (c) TEM image of CZTS with SBA-15 template removed.



Fig. S3 The tyndall effect observed in the precursor solution.



Fig. S4 TEM image of sample prepared by adding dry silica template into the precursor solution.



Fig. S5 Absorbance spectrum of CZTS nanorods from 300 nm to 2000 nm. The spike at \sim 850 nm is a noise from the instrument.



Fig. S6 TEM image of sample prepared with the use of solution A.



Fig. S7 Wide-angle XRD of the sample prepared using solution A in Table 2.