Supporting Information:

High thermoelectric performance in Cu_2Se superionic conductor with enhanced liquid-like behaviour by dispersing SiC

Jingdan Lei[a], Zheng Ma[a], De Zhang[a], Yanqun Chen[a], Chao Wang*[a], Xiaoyun Yang[c], Zhenxiang Cheng*[a,b], and Yuanxu Wang*[a]

[a] *Institute for Computational Materials Science, School of Physics and Electronics, Henan University, Kaifeng, 475004, China*

[b] *Institute for Superconducting and Electronic Materials, University of Wollongong, Squires Way, North Wollongong 2522, Australia*

[c] *Business School, Zhengzhou Technology and Business University, Zhengzhou, 451400, China*

*Corresponding authors: wangchao@vip.henu.edu.cn; cheng@uow.edu.au; wangyx@henu.edu.cn

Results and Discussion:

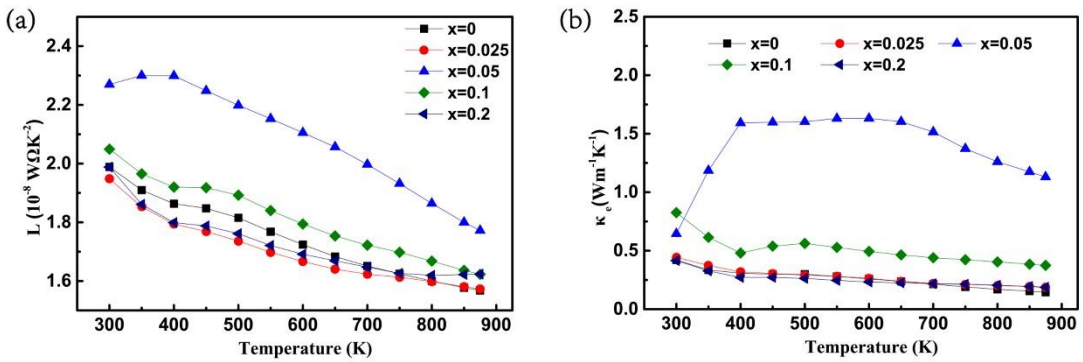

Fig. S1. (a) The temperature dependence of Lorentz number and (b) calculated carrier thermal conductivity for Cu_2Se/x wt% SiC (x=0, 0.025, 0.05, 0.1 and 0.2) samples.

Fig. S1. shows temperature dependence of Lorentz number and calculated carrier thermal conductivity for Cu_2Se/x wt% SiC (x=0, 0.025, 0.05, 0.1 and 0.2) samples. Similar phenomenon happened to Zhu et al.'s report [1] and $Cu_{1.8}S$ system [2, 3] and so on.

References

[1] Y. B. Zhu, B. P. Zhang and Y. Liu, Phys. Chem. Chem. Phys.,2017, 19, 27664–27669.

[2] P. Qin, Z.-H. Ge and J. Feng, J. Alloys Compd., 2017, 696,782–787.

[3] Z. H. Ge, X. Liu, D. Feng, J. Lin and J. He, Adv. Energy Mater., 2016, 6, 1600607.