Electronic Supplementary Material (ESI) for CrystEngComm

SUPPORTING INFORMATION

$Cu_2HgSnSe_4$ Nanoparticles: Synthesis and Thermoelectric Properties

Wenhua Li,[a] Maria Ibáñez,[a] Reza Zamani,[a,b] Nuria García-Castelló,[c] Stephane Gorsse,[d] Doris Cadavid,[a] Joan Daniel Prades,[c] Jordi Arbiol[b,e] and Andreu Cabot[a,e*]

a Catalonia Institute for Energy Research, IREC, 08930 Sant Adria del Besos (Barcelona), Spain;
b Institut de Ciència de Materials de Barcelona, ICMAB-CSIC, Campus de la UAB, Bellaterra, 08193, Spain.
c Departament d'Electrònica, Universitat de Barcelona, 08028 Barcelona, Spain
d CNRS, Université de Bordeaux, ICMCB, 87 avenue du Docteur Albert Schweitzer, 33608 Pessac Cedex, France
e Institució Catalana de Recerca i Estudis Avançats (ICREA), 08010 Barcelona, Spain
*E-mail: acabot@irec.cat

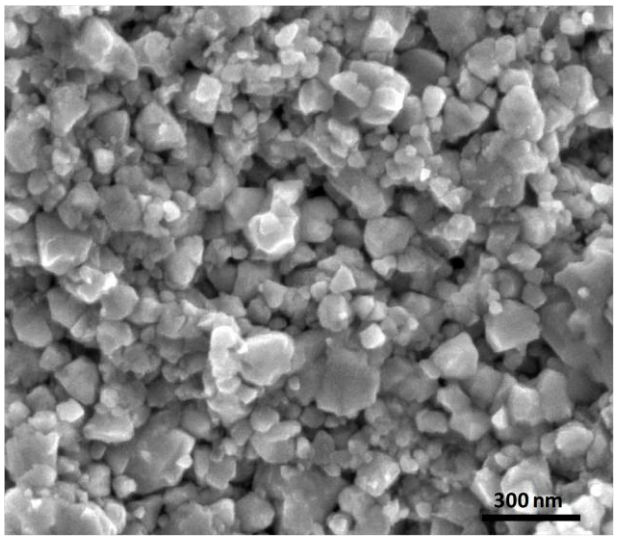

Figure S1. Representative SEM image of the annealed CHTSe bulk nanostructured nanomaterials.

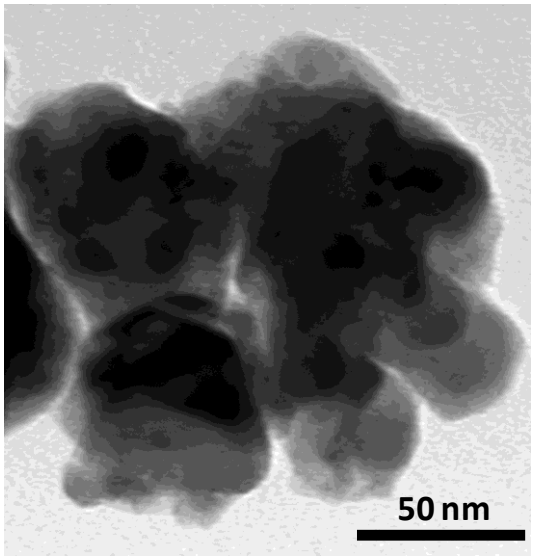

Figure S2. Representative TEM image of the annealed CHTSe bulk nanostructured nanomaterials. For TEM characterization of the bulk nanomaterial, the nanocrystalline pellet was manually milled, the obtained powder was suspended in acetone and the suspension was deposited on a TEM grid.

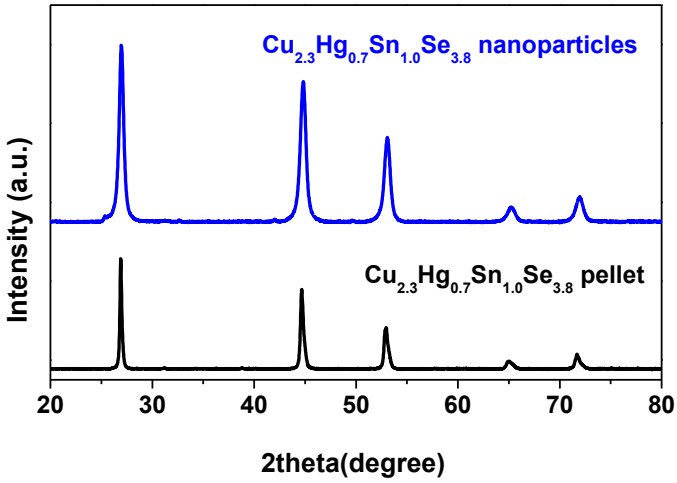

Figure S3. XRD pattern of $Cu_{2.3}Hg_{0.7}SnSe_{3.8}$ nanoparticles and the corresponding bulk nanomaterials after annealing at 500 ºC for 2 h. A slight shift of the peaks towards higher angles is observed compared with the stoichiometric compound. This shift is associated with the replacement of Hg by smaller Cu ions