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### 2022

**Synthesis and thermoelectric properties of high-entropy half-Heusler  $M\text{Fe}_{1-x}\text{Co}_x\text{Sb}$  ( $M = \text{equimolar Ti, Zr, Hf, V, Nb, Ta}$ ).**

Chen K, Zhang R, Bos JWG and Reece MJ. *Journal of Alloys and Compounds* vol. 892,.

### 2021

**Polymer-derived silicon nitride aerogels as shape stabilizers for low and high-temperature thermal energy storage.**

Zambotti A, Caldesi E, Pellizzari M, Valentini F, Pegoretti A, Dorigato A, Speranza G, Chen K, Bortolotti M, Sorar<sup>1</sup> GD and Biesuz M. *Journal of The European Ceramic Society* vol. 41, (11) 5484-5494.

**Scalable and environmentally friendly mechanochemical synthesis of nanocrystalline rhodostannite ( $\text{Cu}_2\text{FeSn}_3\text{S}_8$ ).**

Balá<sup>3/4</sup> M, Dobrozhan O, Tešinsk<sup>1/2</sup> M, Zhang RZ, D<sup>3/4</sup>unda R, Dutková E, Raj<sup>^</sup>ák M, Chen K, Reece MJ and Balá<sup>3/4</sup> P. *Powder Technology* vol. 388, 192-200.

**Thermoelectric Cu-S-Based Materials Synthesized via a Scalable Mechanochemical Process.**

Balá<sup>3/4</sup> P, Achimovi<sup>•</sup>ová M, Balá<sup>3/4</sup> M, Chen K, Dobrozhan O, Guilmeau E, Hejtmánek J, Kn<sup>~</sup>Á<sup>3/4</sup>ek K, Kub<sup>~</sup>Á<sup>•</sup>ková L, Levinsk<sup>1/2</sup> P, Puch<sup>1/2</sup> V, Reece MJ, Varga P and Zhang R. *Acs Sustainable Chemistry and Engineering* vol. 9, (5) 2003-2016.

**Fast synthesis of n-type half-Heusler  $\text{TiNiSn}$  thermoelectric material.**

Chen K, Nuttall C, Stefanaki E, Placha K, Tuley R, Simpson K, Bos JWG and Reece MJ. *Scripta Materialia* vol. 191, 71-75.

### 2020

**Enhancing the thermoelectric performance of calcium cobaltite ceramics by tuning composition and processing.**

Yu J, Chen K, Azough F, Alvarez-Ruiz DT, Reece MJ and Freer R. *Acs Applied Materials and Interfaces* vol. 12, (42) 47634-47646.

**Oxidation protective glass coating for magnesium silicide based thermoelectrics.**

D'Isanto F, Smeacetto F, Reece MJ, Chen K and Salvo M. *Ceramics International* vol. 46, (15) 24312-24317.

**Structural and electronic evolution in the  $\text{Cu}_3\text{SbS}_4$ - $\text{Cu}_3\text{SnS}_4$  solid solution.**

Chen K, Di Paola C, Laricchia S, Reece MJ, Weber C, McCabe E, Abrahams I and Bonini N. *Journal of Materials Chemistry C* vol. 8, (33) 11508-11516. *Royal Society of Chemistry*.

**Interfacial reaction between  $\text{ZrNbHfTa}$  foil and graphite: Formation of high-entropy carbide and the effect of heating rate on its microstructure.**

Biesuz M, Saunders TG, Chen K, Bortolotti M, Salvo M, Grasso S and Reece MJ. *Journal of The European Ceramic Society* vol. 40, (7) 2699-2708.

### **Substitutional doping of hybrid organic-inorganic perovskite crystals for thermoelectrics.**

TANG W, Zhang J, RATNASINGHAM SR, Liscio F, CHEN K, Liu T, Wan K, Suena Galindez E, Bilotti E, Reece M, Baxendale M, Milita S, McLachlan M, Su L and Fenwick O. *Journal of Materials Chemistry A. Royal Society of Chemistry (Rsc)*.

## 2019

### **European Radioisotope Thermoelectric Generators (RTGs) and Radioisotope Heater Units (RHUs) for Space Science and Exploration.**

Ambrosi RM, Williams H, Watkinson EJ, Barco A, Mesalam R, Crawford T, Bicknell C, Samara-Ratna P, Vernon D, Bannister N, Ross D, Sykes J, Perkinson MC, Burgess C, Stroud C, Gibson S, Godfrey A, Slater RG, Reece MJ, Chen K, Simpson K, Tuley R, Sarsfield M, Tinsley TP, Stephenson K, Freis D, Vigier JF, Konings RJM, Fongarland C and Libessart M. *Space Science Reviews* vol. 215, (8).

### **The structure and thermoelectric properties of tungsten bronze Ba<sub>6</sub>Ti<sub>2</sub>Nb<sub>8</sub>O<sub>30</sub>.**

Jiang D, Ekren D, Azough F, Day SJ, Chen K, Mahajan A, Kepaptsoglou DM, Ramasse QM, Reece MJ and Freer R. *Journal of Applied Physics* vol. 126, (12).

### **Crystal structure and improved thermoelectric performance of iron stabilized cubic Cu<sub>3</sub>SbS<sub>3</sub> compound.**

Du B, Zhang R, Liu M, Chen K, Zhang H and Reece MJ. *Journal of Materials Chemistry C* vol. 7, (2) 394-404.

### **Enhanced thermoelectric performance of higher manganese silicides by shock-induced high-density dislocations.**

Gao Z, Xiong Z, Li J, Lu C, Zhang G, Zeng T, Ma Y, Ma G, Zhang R, Chen K, Zhang T, Liu Y, Yang J, Cao L and Jin K. *Journal of Materials Chemistry A* vol. 7, (7) 3384-3390.

### **Anisotropy and enhancement of thermoelectric performance of Sr<sub>0.8</sub>La<sub>0.067</sub>Ti<sub>0.8</sub>Nb<sub>0.2</sub>O<sub>3</sub>-? ceramics by graphene additions.**

Srivastava D, Norman C, Azough F, Ekren D, Chen K, Reece MJ, Kinloch IA and Freer R. *Journal of Materials Chemistry A* vol. 7, (42) 24602-24613.

## 2018

### **Data-Driven Design of Ecofriendly Thermoelectric High-Entropy Sulfides.**

Zhang R-Z, Gucci F, Zhu H, Chen K and Reece MJ. *Inorg Chem* vol. 57, (20) 13027-13033.

### **Enhanced thermoelectric performance of Sn-doped Cu<sub>3</sub>SbS<sub>4</sub>.**

Chen K, Di Paola C, Du B, Zhang R, Laricchia S, Bonini N, Weber C, Abrahams I, Yan H and Reece M. *Journal of Materials Chemistry C* vol. 6, (31) 8546-8552.

### **Enhanced thermoelectric performance of Cs doped BiCuSeO prepared through eco-friendly flux synthesis.**

Achour A, Chen K, Reece MJ and Huang Z. *Journal of Alloys and Compounds* vol. 735, 861-869.

### **Tuning of Catalytic Activity by Thermoelectric Materials for Carbon Dioxide Hydrogenation.**

Achour A, Chen K, Reece MJ and Huang Z. *Advanced Energy Materials* vol. 8, (5).

## 2017

### **Sintering trials of analogues of americium oxides for radioisotope power systems.**

Watkinson EJ, Ambrosi RM, Kramer DP, Williams HR, Reece MJ, Chen K, Sarsfield MJ, Barklay CD, Fenwick H, Weston DP and Stephenson K. *Journal of Nuclear Materials* vol. 491, 18-30.

### **Screening for Cu-S based 1 thermoelectric materials using crystal structure features.**

Zhang R, Chen K, Du B and REECE MJ. *Journal of Materials Chemistry A. Royal Society of Chemistry*.

### **The impact of lone-pair electrons on the lattice thermal conductivity of the thermoelectric compound CuSbS<sub>2</sub>.**

Du B, Zhang R, Chen K, Mahajan A and Reece MJ. *Journal of Materials Chemistry A* vol. 5, (7) 3249-3259.

## 2016

### **Theory-Guided Synthesis of an Eco-Friendly and Low-Cost Copper Based Sulfide Thermoelectric Material.**

Chen K, Du B, Bonini N, Weber C, Yan H and Reece MJ. *Journal of Physical Chemistry C* vol. 120, (48) 27135-27140.

**Efficacy of lone-pair electrons to engender ultralow thermal conductivity.**

Du B, Chen K, Yan H and Reece MJ. *Scripta Materialia* vol. 111, 49-53.

2015

**Comprehensive study of tellurium based glass ceramics for thermoelectric application.**

Cui S, Boussard-Piédrel C, Calvez L, Rojas F, Chen K, Ning H, Reece MJ, Guizouarn T and Bureau B. *Advances in Applied Ceramics* vol. 114, S42-S47.

**Spark plasma sintered bismuth telluride-based thermoelectric materials incorporating dispersed boron carbide.**

Williams HR, Ambrosi RM, Chen K, Friedman U, Ning H, Reece MJ, Robbins MC, Simpson K and Stephenson K. *Journal of Alloys and Compounds* vol. 626, 368-374.

**Reduced thermal conductivity by nanoscale intergrowths in perovskite like layered structure La<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub>.**

Khaliq J, Li C, Chen K, Shi B, Ye H, Grande AM, Yan H and Reece MJ. *Journal of Applied Physics* vol. 117, (7).