

Virtual Conference on Thermoelectrics (VCT2022): US Program

All times listed in Pacific Standard Time (PST), UTC	
PST - DAY1 July 20, 2022	US Session A1
10:00-10:10	Setting up and welcoming
10:10-10:40	US-A1.01 Eric Toberer, Colorado School of Mines
10:40-10:45	5 minute break to switch Zoom rooms
10:45-11:00	US-O1.01 Band Inversion-Driven High Valley Degeneracy, Michael Toriyama (Snyder)
11:00-11:15	US-O1.02 Calculation of Thermomagnetic properties Using First-principles Density Functional Theory, Emad Rezaei (Zebarjadi)
11:15-11:30	US-O1.03 Doping Response of Thermopower and Magnetic Anisotropy in MnTe, Duncan H. Moseley (Hermann)
11:30-11:45	Break/Discussion
11:45-12:00	US-O1.04 Role of phase-transition and topology in $\text{Mo}_{(1-x)}\text{W}_x\text{Te}_2$ for thermal to electrical energy conversion, Md Sabbir Akhanda (Zebarjadi)
12:00-12:15	US-O1.05 Influence of composition and crystal structure on the thermal properties of GeSe-AgBiSe ₂ alloys, Mario Calderon (Zevalkink)
12:15-12:30	US-O1.06 Mapping the structural phase transition and transport measurements in polycrystalline GeTe-SnTe solid solutions, Corey Cooling (Morelli)
12:30-12:45	Break/Discussion
12:45-13:30	Break
13:30-13:45	US-O1.07 Origin of suppressed phonon transport in BiSb alloys, Kamil Ciesielski (Toberer)
13:45-14:00	US-O1.08 Control Over Thermal Conductivity via Host Sublattice Disorder in Single Crystals of Ba ₈ Cu ₁₆ P ₃₀ Clathrate, Arka Sarkar (Kovnir)

14:00-14:15	US-O1.09 Synthesis and Temperature Dependent Structural Properties of Phase Pure Clathrate-II $\text{Rb}_{12.9}\text{Si}_{136}$, Wilarachchige D C, Bhagya Gunatilleke (Nolas)
14:15-14:30	Break/Discussion
14:30-14:45	US-O1.10 Concluding Maximum Solubility Using Impurity Phase Stoichiometry, Shashwat Anand (Snyder)
14:45-15:00	US-O1.11 Effect of grain boundary oxidation on thermal transport in SnSe, Eleonora Isotta, (Zevalkink)
15:00-15:15	US-O1.12 Investigating the oxidation of $\text{Yb}_{14}\text{MSb}_{11}$ ($M = \text{Mn, Mg, Zn}$), Andrew P. Justl (Kauzlarich)
15:15-15:30	US-O1.13 Mechanical behavior of thermoelectric materials, another perspective, Muath Al Malki (Snyder)
15:30-15:45	Break/discussion
15:45-17:00	Poster session

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PST-Day 2 July 21, 2022	US Session A2
10:00-10:10	setting up and welcoming
10:10-10:40	US-A2.01 Chris Wolverton, Northwestern University
10:40-10:45	Break to switch rooms
10:45-11:00	US-O2.01 Predicting the Free Energy of Mixing and Local Structure of Alloys Below the High-temperature Limit, Drew Novick (Stevanovic)

11:00-11:15	US-O2.02 Increased zT and Investigations of Defect Behavior in (Ag/Cu)(In/Ga)Te ₂ Alloys, Vanessa Meschke (Toberer)
11:15-11:30	US-O2.03 Investigating the role of vacancies on the structure, bonding, and thermoelectric properties of EuCu _{1-x} Zn _x Sb, Sevan Chanakian (Zevalkink)
11:30-11:45	Break/Discussion
PST-Day 2	US Session A2
11:45-12:00	US-O2.04 Uncovering the Remarkable Thermoelectric Properties of Na-doped Eu ₁₁ Zn ₄ Sn ₂ As ₁₂ : A Novel Layered Zintl Phase, Ashlee Hauble (Kauzlarich)
12:00-12:15	US-O2.05 Thermoelectric Properties of Semimetal ZrTiSe ₄ with a Layered van der Waals Structure, Xu Youming (Chen)
12:15-12:30	US-O2.06 A New Quaternary Chalcogenide Material System: Sphalerites, Ojo Oluwagbemiga (Nolas)
12:30-12:45	Break/Discussion
12:45-13:30	Break
13:30-13:45	US-O2.07 Accelerated Discovery and Design of Ultralow Lattice Thermal Conductivity Materials Using Chemical Bonding Principles, Yi Xia (Wolverton)
13:45-14:00	US-O2.08 Monte Carlo simulation of power generation using non-equilibrium electron gas thermodynamic cycle, Farjana Ferdous Tonni (Zebarjadi)
14:00-14:15	US-O2.09 Globally Optimal Band Structure for Thermoelectrics in Realistic Systems, Junsoo Park (Lawson)
14:15-14:30	Break/Discussion
14:30-14:45	US-O2.10 Optimization of Segmented Thermoelectric Generators with Section-Search Methods, Shane Riley (Barry)
14:45-15:00	US-O2.11 Laser Additive Manufacturing of Bismuth Telluride (Bi ₂ Te ₃), Cagri Oztan, (LeBlanc)

15:00-15:15	US-O2.12 Design of High Thermoelectric Performance through Compositing 2D Sb ₂ Te ₃ and Bi ₂ Te ₃ Nanoplates, Tanner Kimberly (Kauzlarich)
15:15-15:30	Break/discussion
15:30-15:45	Closing ceremony
15:30-17:00	Poster session