

SUNDAY, JUNE 30, 2024

SUMMER THERMOELECTRIC SCHOOL

VENUE: AGH UNIVERSITY OF KRAKOW
BUILDING B8, ROOM 010
AKADEMICKA 4, KRAKÓW

8:30 - 9:00	TE School REGISTRATION
9:00 - 13:00	Session 1 Chairmen: Krzysztof WOJCIECHOWSKI & Janusz TOBOLA
13:00 - 14:30	Lunch
14:30 - 17:30	Session 2 Chairmen: Taras PARASHCHUK & Bartłomiej WIENDLOCHA

ICT/ECT 2024 CONFERENCE

VENUE: AUDITORIUM MAXIMUM
KRUPNICZA 33, KRAKÓW

16:00 - 18:00	REGISTRATION
18:00 - 20:00	WELCOME PARTY

MONDAY, JULY 1, 2024

8:00-8:45	REGISTRATION
8:45-9:30	OPENING
	Large Hall (A & B) Chairman: Takao MORI
9:30-10:10	Franck GASCOIN <i>Zintl phases: 1929-2024, from crystal chemistry to thermoelectric properties</i>
10:10-10:50	Lidong CHEN <i>Recent progress on thermoelectrics in China</i>
10:50-11:30	Coffee break

	Large Hall A Session: <i>Thin layers I</i> Chairman: Marisol MARTIN GONZALEZ	Large Hall B Session: <i>Heuslers I</i> Chairman: Yoichi NISHINO	Medium Hall Session: <i>Electronic and phonon structure I</i> Chairman: Holger KLEINKE
11:30-11:45	Joseph P. HEREMANS , B. He, Y. Pan, D. Chen, F. Serrano-Sanchez, C. Felser	Hidetoshi MIYAZAKI , T. Fujimoto, M. Mikami, Y. Nishino <i>Thermoelectric properties of Heusler-type Ru₂TiSi Compounds</i>	Ø. A. Grimenes, O. M. Løvvik, G. J. Snyder, Kristian BERLAND <i>Electron scattering in materials with extended Fermi surfaces</i>
11:45-12:00	<i>One-dimensional quantization gives experimental $zT > 2.5$</i>	Rajeev DUTT , B. Sahni, Zhen Li, P. Graziosi, N. Neophytou <i>The importance of polar optical phonon scattering in the thermoelectric properties of half-Heuslers</i>	H. Maebashi, K. Takahashi, H. Matsuura, Masao OGATA <i>Lorenz Ratio in Strongly Correlated Electron Systems: Effects of Umklapp Scattering</i>
12:00-12:15	Peter P. MURMU , J. Kennedy, M. Markwitz, T. Mori <i>Defect and dopant complex mediated high power factor in transparent selenium doped copper iodide thin films</i>	Yuzuru MIYAZAKI , Y. Huang, N. S. Chauhan, X. Nan, Z. C. Huang, K. Hayashi <i>Bond-engineering to Develop High-performance Fe-based Half-Heusler Alloys</i>	L. Liu, M. Yao, Y. Wang, Y. Jin, J. Ji, H. Luo, Y. Cao, Y. Xiong, Y. Sheng, X. Li, D. Qiu, L. Xi, J. Xi, W. Zhang, L. Chen, Jiong YANG <i>The MatHub-3d First-Principles Repository and the Applications on Thermoelectrics</i>
12:15-12:30	Jiří BULÍŘ , J. M. Chevalier, P. Hubík, E. de Prado, L. Volfová, L. Fekete, J. Lančok <i>Optical and electrical properties of p-type doped CrN films for thermoelectric devices</i>	Kazuki IMASATO , P. Sauerschnig, K.K. Johari, H. Miyazaki, T. Ishida, A. Yamamoto, M. Ohta <i>p-type to n-type Transition in Triple Half-Heuslers composition Mg_{1-x}V_xNiSb</i>	B. Agrawal, J. de Boor, Titas DASGUPTA <i>A Multi-Band Refinement Technique (MBRT) for Analyzing Electronic Band Structure of Thermoelectric Materials</i>
12:30-12:45	C. V. MANZANO , B. Abad-Mayor, O. Caballero-Calero, M. Martín-González <i>Exploring the thermoelectric properties of electrodeposited films: Bi₂Te₃, CuNi, and Ag₂Se</i>	M. Ozen, S. S. Shahgoli, G. Aliyeva, A. B. Burçak, Umut AYDEMIR <i>Optimizing α-MgAgSb as a Te-free Alternative for Room Temperature Thermoelectric Applications</i>	Laurent CHAPUT <i>Ab initio calculations of the thermoelectric figure of merit</i>
12:45-13:00	T. Choi, Tae Young KIM <i>Thermal Design of Thermoelectric-Based Engineering Prototypes: Thermoelectric Generator, Personal Ventilator, and Scalp Cooler</i>		
13:00-14:30	Lunch		

	Large Hall A Session: <i>Ductile Chalcogenides</i> Chairman: Lidong CHEN	Large Hall B Session: <i>Chalcogenides I</i> Chairman: Michael M. KOZA	Medium Hall Session: <i>Electronic and phonon structure II</i> Chairman: Laurent CHAPUT
14:30-14:45	Xun SHI, P. Qiu, T.-R. Wei, L. Chen <i>Thermoelectric materials and devices based on ductile semiconductors</i>	Taras PARASHCHUK, B. Wiendlocha, O. Chemiushok, K. Pryga, K. Ciesielski, E. Toberer, K. T. Wojciechowski <i>Highly efficient GeTe developed by multiple defect states engineering</i>	Nirpendra SINGH <i>2D Materials for Converting Heat to Energy: A Theoretical Perspective</i>
14:45-15:00		Yu-Ke ZHU, Z. Liu, J. Sui <i>Design of N-Type Textured Bi₂Te₃ with Robust Mechanical Properties for Thermoelectric Micro-Refrigeration Application</i>	Frank F. YUN, T. Aizawa, S. Suehara, S. Otani, T. Mori <i>Electronic properties and surface phonons for (0001) CrB₂</i>
15:00-15:15	Shiqi YANG, Q. Yang, P. Qiu, X. Shi, L. Chen <i>Flexible thermoelectrics based on ductile semiconductors</i>	Zhifeng REN <i>Thermoelectric Cooling and Power Generation below 250 Degree Celsius</i>	Shengnan DAI, J. Xia, J. Yang <i>The role of lattice thermal conductivity suppression by dopants from a holistic perspective</i>
15:15-15:30	N. Jakhar, Surjeet SINGH <i>High-performance, predictability and excellent reproducibility in 'ductile' superionic thermoelectrics Ag₂X (X = Se, and Te)</i>		Q. Shao, J. Li, X. Yan, B. Cui, X. Li, C. J. Zeman IV, M. A. Mosquera, L. O. Jones, G. C. Schatz, J. Yang, Matthew A. GRAYSON <i>Temperature Dependence of Band Gaps in Transverse Thermoelectrics: Partial Gap Analysis of Re₄Si₇</i>
15:30-15:45	Yuechu WANG, A. Li, H. Hu, C. Fu, T. Zhu <i>Reversible Room Temperature Brittle-Plastic Transition in Ag₂Te_{1-x}S_x Inorganic Thermoelectric Semiconductors</i>		Ilayda TERZI, K. Pryga, B. Wiendlocha, S. El Oualid, P. Masschelein, C. Candolfi, B. Lenoir <i>Unlocking N-Type Conduction and Resonant Level Formation Through Zn Substitution in SnTe</i>
15:45-16:00	J. Liang, Jin LIU, P. Qiu, C. Ming, Z. Zhou, Z. Gao, K. Zhao, L. Chen, X. Shi <i>Modulation of the morphotropic phase boundary for high-performance ductile thermoelectric materials</i>	De-Zhuang WANG, W.-D. Liu, Q. Liu, Z.-G. Chen <i>Decoupling carrier-phonon scattering boosts thermoelectric performance of n-type GeTe-based materials</i>	
16:00-16:15	Hao WU, X. L. Shi, Q. F. Liu, Z. G. Chen <i>Optimized Thermoelectric Performance and Plasticity of Ductile Semiconductor Ag₂S_{0.5}Se_{0.5} Via Dual-Phase Engineering</i>	Liang-Cao YIN, W.-D. Liu, Q.-F. Liu, Z.-G. Chen <i>Minority carrier filtering for high performance n-type GeTe-based thermoelectrics</i>	Byungki RYU, S. Park, J. Jang, J. Park, J.-H. Son, J. Chung, S. Ayachi, A. Duparchy, E. Mueller, J. de Boor, S.D. Park <i>Thermoelectric Instability in Mg-based Thermoelectric Alloys</i>
16:15-16:30	Liming PENG, T. Xing, P. Qiu, S. Zhen, S. Yang, X. Shi <i>Research on Ag₂S-based thermoelectric materials and devices</i>	Juliusz LESZCZYNSKI, P. Laskosz, C. Candolfi, B. Lenoir, P. Nieroda, A. Kolezynski <i>Thermoelectric properties of Cu_{12-2x}Fe_xMn_xSb_{4-y}Te_yS₁₃ tetrahedrites</i>	Kunpeng ZHAO, Z. Yue, H. Chen, L. Chen, X. Shi <i>Modeling Critical Thermoelectric Transports Driven by Band Broadening and Phonon Softening</i>

16:30-18:30	POSTER SESSION I
-------------	------------------

18:30-20:00	CITY TOUR
-------------	-----------

20:15-21:30	ITS and ETS Boards meeting
-------------	----------------------------

TUESDAY, JULY 2, 2024

	Large Hall A Session: <i>TE modules I</i> Chairman: Ryoji FUNAHASHI	Large Hall B Session: <i>Cu-based chalcogenides I</i> Chairman: Xun SHI	Medium Hall Session: <i>Machine-learning</i> Chairman: Neophytos NEOPHYTOU
9:00-9:15	Yanliang ZHANG <i>High-throughput Printing of High-Performance and Flexible Thermoelectric Devices and Their Applications</i>	I. Terzi, K. Pryga, P. Levinský, S. El Oualid, S. Migot, J. Ghanbaja, C. Gendarme, T. Schweitzer, B. Malaman, G. Le Caër, B. Lenoir, C. Candolfi, Bartłomiej WIENDLOCHA <i>Influence of anisotropy and defects on the electronic structure and transport properties of SnBi₂Te₄</i>	Eric TOBERER , A. Novick, C. Gerber, R. Orenstein, H. Chaffee, C. Porter, K. Ciesielski <i>Exploring high entropy chalcogenide alloys with machine-learned interatomic potentials and convex-hull aware active learning</i>
9:15-9:30		H. Hu, Jing-Feng LI <i>Highly stabilized and efficient thermoelectric copper selenide</i>	E. R. Remesal, V. Postigua, A. M. Márquez, José J. PLATA <i>High-throughput screening of the thermoelectric performance of inorganic materials: balancing accuracy, complexity and computational cost</i>
9:30-9:45	Mofasser MALLICK , L. Franke, A. Rösch, Q. Zhang, M.I. Khan, I. Brunetti, U. Lemmer <i>Ag₂Se/Sb_{1.5}Bi_{0.5}Te₃-based fully printed origami thermoelectric module for lowgrade thermal energy harvesting</i>	Paz VAQUEIRO <i>Copper-containing sulfides as thermoelectric materials with low lattice thermal conductivities</i>	Yukari KATSURA , T. Mato, Y. Takada, E. Fujita, E. Koyama, A. Tanaka, F. Hosono, S. Kohri, D. Yana, M. Fujimoto, N. Saito, T. N. T. Phoung, Y. Sakamoto, K. Kimura, K. Tsuda, M. Kumagai <i>Starrydata web system with experimental transport properties of 50,000+ samples from literature</i>
9:45-10:00	Ana L. PIRES , A. M. Pereira <i>Exploring Novel Pathways for Energy Harvesting: The Synergy of Thermoelectric and Magnetocaloric Systems</i>		S. Athar, N. Ramsahye, Philippe JUND <i>Accelerated discovery of efficient thermoelectric materials using a novel machine learning approach</i>
10:00-10:15	Carlotta R. CAPELLO , A. Masci, E. Dimaggio, G. Pennelli <i>Exploitation of Silicon CMOS-compatible techniques for the manipulation of phonons</i>	Haihua HU , J. Yu, J.-F. Li <i>Chemical bond engineering towards extraordinary power factor and service stability in thermoelectric copper selenide</i>	N. K. Barua, Holger KLEINKE <i>Machine Learning Predictions of Thermoelectric Properties with Experimental Validation</i>
10:15-10:30	Junghwan LEE , T.Y. Kim <i>Numerical study of waste heat recovery performance of a thermoelectric generator according to the porosity and location of the perforated plate in the exhaust gas channel</i>	Oleksandr CHERNIUSHOK , T. Parashchuk, K.T. Wojciechowski <i>Discovery of a new Cu-based thermoelectric material with high ZT near room temperature</i>	
10:30-10:45	Zihang LIU <i>Developing Thermoelectric Interface Materials for Power Generation</i>	Koichiro SUEKUNI , M. Yamamoto, P. Sauerschnig, M. Ohta, P. Lemoine, E. Guilmeau, M. Ohtaki <i>Boosting the thermoelectric performance of Ge-substituted Cu₂₆Ti₂Sb₆S₃₂ colusite via introduction of sulfur vacancies</i>	I. Caro, M. M. González Barrios, O. J. Dura, E. Fransson, J. J. Plata, D. Ávila-Brande, J. Prado-Gonjal, Antonio M. MÁRQUEZ <i>Challenges reconciling theory and experiments in the prediction of lattice thermal conductivity: the Cu-based sulvanites</i>
10:45-11:00	Shengqiang BAI <i>Interface design enhanced performance of thermoelectric devices</i>	Sahil TIPPIREDDY , P. Vaqueiro, R. Smith, A. V. Powell <i>The Impact of Selenium Substitution on the Structural and Thermoelectric Properties of Cation-Deficient Bornites</i>	Michael PARZER , A. Riss, F. Garmroudi, J. de Boor, M. Reticcioli, T. Mori, E. Bauer <i>Software tool for comprehensive transport data analysis: Introduction and practical use cases</i>
11:00-11:30	Coffee break		

	Large Hall A Session: <i>Thin layers II</i> Chairman: Dario NARDUCCI	Large Hall B Session: <i>Oxides I</i> Chairman: Tanmoy MAITI	Medium Hall Session: <i>Topological insulators</i> Chairman: Joseph HEREMANS
11:30-11:45	Tsunehiro TAKEUCHI, R. Ishihara, I. Masaoka, M. Omprakash, K. Delime-Codrin, S. Ghodke, K. Hirata, and M. Matsunami <i>High performance nano-bulk Si-Ge thermoelectric materials</i>	A. Azulay, Yaron AMOUYAL <i>On the correlation between charge transport and lattice dynamics in calcium-manganate oxides</i>	Michael Y. TORIYAMA, G. J. Snyder <i>Are Topological Insulators Promising Thermoelectrics?</i>
11:45-12:00		Antonín SOJKA, J. Zich, T. Plecháček, J. Navrátil, P. Ruleová, K. Knížek, Č. Drašar <i>Transition metal doping effects in polycrystalline Bi₂O₂Se</i>	W. Zhou, T. Sasaki, K. Uchida, Y. Sakuraba <i>Large transverse thermopower achieved in direct-contact magnetic / thermoelectric bilayers</i>
12:00-12:15	Bejan HAMAWANDI, I. Pudza, K. Pudzs, A. Kuzmin, P. Genc, S. Ballikaya, M. S. Toprak <i>Green Chemical Synthesis and Characterization of n-type Thermoelectric Ag₂Se</i>	J. Zich, T. Plecháček, A. Sojka, J. Navrátil, P. Ruleová, P. Kutálek, K. Knížek, Čestmír DRAŠAR	A. Laha, O. Deluca, Qiang LI <i>Topological Quantum Materials and Thermoelectric Applications</i>
12:15-12:30	M. MARTIN-GONZALEZ, A. Ruiz-Clavijo, N. Pérez, G. Armelles, A. Beardo, FX. Alvarez, K. Nielsch, O. Caballero-Calero <i>Advancements in Thermoelectric 3D Nanowire Networks</i>	<i>Revision of the preparation method and properties of polycrystalline Bi₂O₂Se – pitfalls and difficulties with reproducibility</i>	MengZhao CHEN, J. L. Wang, K. Liu, W. S. Fan, Y. Sun, C. Felser, T. J. Zhu, C. G. Fu <i>Topological Heusler magnets-driven high-performance transverse Nernst thermoelectric generators</i>
12:30-12:45	Federico GIULIO, A. Mazzacua, L. Calciati, D. Narducci <i>Structural and Electrical Characterization of Encapsulated Aligned Si Nanowires Obtained by Metal-Assisted Chemical Etching</i>	Anuradha M. ASHOK, A. R. Nithya Davis <i>Enhanced thermoelectric properties in oxide ceramics through doping and grain boundary engineering</i>	Tomasz STORY <i>Band inversion in topological IV-VI thermoelectric materials with Mn</i>
12:45-13:00	Vanira TRIFILETTI, M. Massetti, A. Calloni, S. Luong, A. Pianetti, S. Milita, B. C. Schroeder, G. Bussetti, S. Binetti, S. Fabiano, O. Fenwick <i>Quasi-0D bismuth-based perovskite-derivates with thermal voltage exceeding 40 mV/K</i>	Michitaka OHTAKI, L. Aoki, K. Suekuni <i>Chemical manipulation of electrical conductivity and thermopower of Ni-doped SrTiO₃ via hydrogen reduction</i>	

13:00-14:30 Lunch

	Large Hall A Session: <i>Chemistry</i> Chairman: G. Jeffrey SNYDER	Large Hall B Session: <i>Zintl phases I</i> Chairman: Alexandra ZEVALKINK	Medium Hall C Session: <i>TE modules II</i> Chairman: Carlo FANCIULLI
14:30-14:45	Yuri GRIN, L. I. Anatyshuk, P. Gille, M. Havrylyuk, M. Krnel <i>Chemical Bonding and Transverse Seebeck Effect in o-Al₁₃Co₄</i>	B. Aguiar Santos, J. de Boor, António PEREIRA GONÇALVES <i>Magnesium-based TE devices: from material studies to legs assemble</i>	Raju CHETTY, B. Jayachandran, T. Mori <i>Development of a novel interface contact layer for the Mg₃(Sb, Bi)₂-based TE material</i>
14:45-15:00		R. Bhardwaj, A. Hodroj, M. Pasturel, O. Rouleau, Eric ALLENO <i>Reduction of the Cost in n-type In-filled Co₄Sb₁₂ skutterudites by Using Low Purity reactants</i>	Pingjun YING, H. Reith, K. Nielsch, R. He <i>Thermal Stability Study of Mg-Based Thermoelectric Generators in Air Atmospheres</i>
15:00-15:15	Yao ABUSA, K. Kovnir <i>Benchtop synthesis of Zn-doped Ag₂Se materials with outstanding performance near room temperature</i>	Takao MORI <i>Recent advancements on the high performing thermoelectric magnesium antimonides</i>	Antonella MASCI, C. Capello, E. Dimaggio, G. Pennelli <i>Thermal-to-electric conversion: maximizing the thermoelectric effect through on-chip silicon devices</i>
15:15-15:30	Yuan YU, D. An, M. Wuttig <i>Metavalently bonded tellurides: the essence of improved thermoelectric performance in elemental Te</i>		L. Xie, C. Ming, Qingfeng SONG, C. Wang, J. Liao, L. Wang, C. Zhu, F. Xu, Y.-Y. Sun, S. Bai, L. Chen <i>Lead-free and scalable GeTe-based thermoelectric module with an efficiency of 12%</i>
15:30-15:45	Christine FIEDLER, M. Ibáñez <i>Revealing Key Chemical Insights in Solution-Based Thermoelectric Material Synthesis</i>	Gerda ROGL, V. Bursikova, K. Yubuta, A. Yasuhara, P. Rogl <i>In-situ observation of temperature dependent microstructural changes in HPT-processed high ZT p-type skutterudite DD_{0.7}Fe₃CoSb₁₂</i>	Mykola MAKSYMUK, T. Parashchuk, A. Burbelko, K. T. Wojciechowski <i>High energy conversion efficiency realized by the thermoelectric converter with stepwise legs</i>
15:45-16:00	Yutaka IWASAKI, K. Kimura, T. Mori <i>Defect engineering and enhanced thermoelectric performance on a semiconducting quasicrystalline approximant</i>	Yosuke GOTO, H. Usui, M. Murata, C. H. Lee <i>Axis-dependent conduction polarity of Mg₃Sb₂ and Mg₃Bi₂ for transverse thermoelectric devices</i>	Jorge GARCÍA-CAÑADAS, F. Vidan, B. Beltrán-Pitarch <i>Impedance spectroscopy analysis of the thermal contact resistance between thermoelectric modules and heat exchangers</i>
16:00-16:15	Naoki SATO, T. Mori <i>Extremely low thermal conductivity in mixed-anion materials with heteroleptic coordination</i>	Fa-Zhu DING, H.-J. Shang, H.-W. Gu <i>Improved thermal stability in n-type Mg₃(Sb, Bi)₂ for practical thermoelectric applications</i>	Anup V. SANCHELA, A. Pandya, D. Anadkat, S. Dunganani <i>Low cost graphite paint based flexible thermal sensor and thermoelectric generator on paper</i>
16:15-16:30	Xingchen SHEN, Z. Zeng, Y. Chen, E. Guilmeau <i>Pushing thermal conductivity to its lower limit in crystals with simple structures</i>	Hong-Jing SHANG, H.-W. Gu, F.-Z. Ding <i>Realizing ultrahigh zT values in Mg₃(Sb, Bi)₂ for superior thermoelectric power-generation</i>	Seungik SHIN, D.-H. Kim, S.-J. Jeon, S. Han <i>Shear and thermal fatigue tests for bonding parts of Thermoelectric devices</i>

16:30-18:30

POSTER SESSION II

20:30-21:30

CONCERT IN THE ST. ANNE UNIVERSITY COLLEGIATE CHURCH

WEDNESDAY, JULY 3, 2024

	Large Hall A Session: <i>TE modules and sensors</i> Chairman: David ASTRAIN	Large Hall B Session: <i>Chalcogenides II</i> Chairman: Jing-Feng LI	Medium Hall Session: <i>Modelling</i> Chairman: Phillippe JUND
9:00-9:15	Jae Sung SON , S. Choo, J. Lee, S. E. Yang, K. Kim <i>Geometric design and 3D printing of thermoelectric materials and devices</i>	A. Bertrand, Tristan BARBIER , M. Leproult, F. Gascoin <i>Innovative Synthesis Methods to Reach Quaternary Thioantimonate $Ag_4MnSb_2S_6$</i>	Yue CHEN <i>Enhanced lattice thermal transport in argyrodite compounds at elevated temperatures</i>
9:15-9:30		Tong XING , P. Qiu, X. Shi, L. Chen <i>High - Performance GeTe-based Thermoelectric Materials and Modules for Power Generation</i>	Koji MIYAZAKI , K. Kobayashi, K. Watanabe, Q. Wang, S. Iikubo <i>Molecular Dynamics Simulations for Heat Conduction across Bi_2Te_3-$CsSnI_3$ Interface</i>
9:30-9:45	R. Ramanathan, U. Rout, Saagar CD, S. Nagarajan, H. C. Barshilia, Ramesh Chandra MALLIK <i>Design and Demonstration of ATO Thin Film Based Thermoelectric Sensor for CO Gas Sensing Application</i>	Ajay SONI <i>Phonon Engineered Materials for Thermoelectric Energy Harvesting</i>	Xi JINYANG , D. Zirui, G. Menghan, L. Jun, Y. Jiong <i>Screening of half-Heustlers with temperature-induced band convergence and enhanced thermoelectric properties</i>
9:45-10:00	Qun JIN , K. Nielsch, H. Reith <i>On-chip micro thermoelectric temperature controllers for power electronics</i>		Mykola KOROP , V. Lysko, D. Rybchakov <i>Methods and Equipment for the Optimization of Bi-Te Based Thermoelectric Materials Using Artificial Intelligence Approach</i>
10:00-10:15	Ryoto YANAGISAWA , M. Nomura <i>Planar-type Silicon Energy Harvester with Thermal Switch Structure</i>	Min HONG <i>Reinforcing Phonon Scatterings to Enhance zT</i>	Neophytos NEOPHYTOU , Z. Li, R. Dutt, B. Sahni, P. Graziosi <i>Efficient electronic transport simulations with ab initio accuracy</i>
10:15-10:30	Paolo MELE , G. Latronico, C. Piscino, C. Artini, K. Nagai, S. Wang, K. Usami, C. Bourges, T. Mori, A. Darwish <i>Thermoelectric harvesters based on Co-free and Sm-filled skutterudite thin films</i>	Masashi MIKAMI , H. Miyazaki, Y. Nishino <i>Rapid densification of telluride compounds by flash sintering</i>	
10:30-10:45	K. McAfee, P. B. Sunderland, Oded RABIN <i>Characterization of Heat Flux Sensors in Hot Environments: Pushing the Envelope of Operational Temperature with Transverse Seebeck Effect Devices</i>	Akitoshi NAKANO , I. Terasaki <i>Ta_2PdSe_6: A guide towards high performance thermoelectric semimetals</i>	Tianqi DENG <i>Computational Database of Charge Carrier Scattering and Transport in Semiconductors for Thermoelectric Applications</i>
10:45-11:00	Yuya SAKURABA , W. Zhou, Y. Tabata, S. Inamura, K. Taguchi and M. Orito <i>Heat flux sensor with ultra-low thermal resistance and high flexibility using anomalous Nernst effect</i>	Zhen-Hua GE <i>Highly Stabilized Thermoelectric Performance in Natural Minerals</i>	R. Tranås, K. Berland, Ø. A. Grimenes, Ole Martin LØVVIK <i>New materials with very low lattice conductivity from first principles and machine learning</i>
11:00-11:30	Coffee break		

	Large Hall A Session: <i>Intermetallic materials</i> Chairman: Eckhard MUELLER	Large Hall B Session: <i>Heusters II</i> Chairman: Yuzuru MIYAZAKI	Medium Hall C Session: <i>Oxides II</i> Chairman: Theodora KYRATSI
11:30-11:45	Raul CARDOSO-GIL , Mitja Krmel, Frank R. Wagner, Yuri Grin <i>Thermal conductivity and bonding pattern of ht-Ga₃Rh</i>	Blair F. KENNEDY , J. W. G. Bos <i>Zn_{0.5}Tl_{0.5}NiSb – A New Alivalent half-Heuster Alloy with Intrinsic Low Thermal Conductivity</i>	Jiří NAVRÁTIL , J. Zich, P. Ruleová, P. Levinský, J. Mistrik, M. Míšek <i>Transport and optical properties of the quasi 2D Bi₂O₂Se single crystals</i>
11:45-12:00	Fabian GARMROUDI , S. Di Cataldo, M. Parzer, I. Serhienko, M. Grasser, S. Stockinger, A. Riss, S. Khmelevskiy, K. Pryga, B. Wiendlocha, K. Held, T. Mori, E. Bauer, A. Pustogow <i>High thermoelectric performance via electron-phonon interband scattering</i>	Ziheng GAO , K.Y. Xia, X.B. Zhao, C.G. Fu, T.J. Zhu <i>Defective 19-electron half-Heuster compounds with promising thermoelectric performance</i>	S. S. Jana, R. Banerjee, V. Kumar, Tanmoy MAITI <i>High entropy oxides with ultra-low thermal conductivity: emerging class of oxide thermoelectrics</i>
12:00-12:15	Krzysztof GOFRYK , J.-C. Griveau, P.S. Riseborough, T. Durakiewicz, K. A. McEwen, W. J. Nellis, J. L. Smith <i>Thermoelectric properties of correlated actinide materials</i>	Xin AI , Yue Zhang, Nicolás Pérez, Kornelius Nielsch, Yumei Wang, Ran He <i>Plainification strategy promotes thermoelectric properties of p-type HfNiSn</i>	Jesús PRADO-GONJAL , Marina Tabuyo-Martínez, Paz Vaqueiro, Anthony V. Powell, Óscar Juan Durá <i>Decoupling electrical and thermal properties in Ca₁₂Al₁₄O₃₃₋₅ ceramics</i>
12:15-12:30	Norihiko L. OKAMOTO , K. Fujiwara, T. Ichitsubo <i>Anisotropic Thermal Conductivity in an Iron Aluminide Consisting of a Tunnel Framework Structure and Guest Aluminum Atoms</i>	R. Hatami NADERLOO , R. He, K. Nielsch, R. Bueno Villoro, D. A. Mattlat, S. Zhang, C. Scheu, G. J. Snyder, H. Zhu, Sh. Song, Zh. Ren <i>Composite design of half-Heuster compounds to enhance the thermoelectric performance</i>	Daniela SCHÖNAUER-KAMIN , Rebekka Stephan, Daniel Paulus, Ralf Moos <i>Thermoelectric and Morphological Properties of Powder-Aerosol Deposited Textured Calcium Cobaltite Ca₃Co₄O₉ Films</i>
12:30-12:45	F. Garmroudi, M. Parzer, A. Riss, C. Bourgès, S. Khmelevskiy, T. Mori, E. Bauer, Andrej PUSTOGOW <i>Metallic Thermoelectrics: High Performance via Scattering</i>	Piyawat PIYASIN , S. Pinitsoontorn, K. Imasato, M. Ohta <i>Thermoelectric Enhancement through Doping in Ternary Half-Heuster Compounds: A Study on n-type NbCo_{1-x}Ni_xSn and p-type NbFe_{1-x}Mn_xSb Modules</i>	Kei HAYASHI , H. Takeuchi, Z. Huang, N. S. Chauhan, Q. Zhang, X. Nan, H. Li, J. Pei, J. Dong, B.-P. Zhang, J.-F. Li, Y. Miyazaki <i>Enhanced p-type thermo electric properties of Mg₂Ge single crystals via lattice defect engineering</i>
12:45-13:00	Yuui YOKOTA , N. Hayashi, H. Ogino, S. Ishida, H. Sato, H. Okuno, T. Horiai, A. Yoshikawa <i>Control of Microstructure and Thermoelectric Properties of Mg₂Si/Si Crystals with Eutectic Morphology</i>	Ankit KUMAR , S. S. Vishak, D. K. Kedia, P. Ghosh, S. Singh <i>Experimentally realized high entropy alloy with ultra-low thermal conductivity and improved thermoelectric properties</i>	Panagiotis MANGELIS , G. Samourganidis, P. Ioannou, A.-K. Søiland, T. Kyratsi <i>Higher Manganese Silicide Thermoelectrics Developed by the Arc Melting Method using Recycled Si from PV industry</i>

13:00-14:30 Lunch

	Large Hall A Session: <i>Characterization methods</i> Chairman: A. Pereira GONCALVES	Large Hall B Session: <i>Chalcogenides III</i> Chairman: Christophe CANDOLFI	Medium Hall Session: <i>Generators and heat pumps</i> Chairman: Zhifeng REN
14:30-14:45	Eckhard MUELLER , J. Ferrer, S. Kopatz, G. Oppitz, P. Ziolkowski <i>Simulation of Transient Thermoelectric Characterization</i>	M. Fejercak, Michael Marek KOZA , K. Saksl <i>Systematic study of silver chalcogenides for wearable thermoelectrics</i>	Ryoji FUNAHASHI , T. Urata, Y. Matsumura, H. Murakami, H. Ikenishi, T. Sekine <i>Practical application of “phase-free” thermoelectric power generators</i>
14:45-15:00	Eleonora ISOTTA , S. Jiang, R. Bueno-Villoro, R. Nagahiro, K. Maeda, D. A. Mattlat, A. R. Odufisan, A. Zevalkink, J. Shiomi, S. Zhang, C. Scheu, G. J. Snyder, O. Balogun <i>Heat transport at silicon grain boundaries</i>	Marcelo MALAGUTTI , K. Lohani, T. Bernard, H. Nautiyal, M. D’Incau, I. C. Prades, A. Navarro, E. Saucedo, N. Ataollahi, P. Scardi <i>CuFeS₂ in-plane Thermoelectric Generators produced by Ball milling, Thermal Evaporation, and Sulfurization</i>	
15:00-15:15	Siyuan ZHANG , Y. Yu, C. Jung, L. Abdellaoui, C. Scheu <i>In situ microstructural observation and electrical transport measurements of PbTe thermoelectrics by transmission electron microscopy</i>	Xiao XU , Kornelius Nielsch, Ran He <i>Achieving Faster Carriers in Promising MnSb₂Te₄ Thermoelectric Materials</i>	Dario NARDUCCI <i>Enhanced Efficiency at Maximum Power of Thermoelectric Generators Operated Under Generalized Dynamic Boundary Conditions</i>
15:15-15:30	Klaus HABICHT , D. Kojda, T. Keller, F. Bourdarot, O. M. Løvvik, E. Fertitta, E. Sagvolden, T. Tadano, P. Roshaninejad, A. B. Kademane, D. Quintero-Castro <i>Probing Phonon Lifetimes in Strongly Anharmonic SrTiO₃</i>	Arthur WIEDER , J. Tobola, P. Masschelein, B. Lenoir, S. El Oualid, C. Candolfi <i>In-depth study of the thermoelectric performance and thermal stability of Cu₂SnSe₃</i>	Zinovi DASHEVSKY , R. Shneck, S. Vitriuk <i>A Novel Solar-TEG System of Electricity and Heat</i>
15:30-15:45	Matt BEEKMAN , D. Dominguez, H. Hewett-Abbott, M. Leibowitz, D. Spencer <i>Experimental measurements of adiabatic and isothermal Nernst coefficients of Bi and Bi₂Te_{3+x}</i>	Q. Chena, C. Yang, J. Yang, Lili XI <i>Defect engineering and alloying strategies for tailoring thermoelectric behavior in GeTe and its alloys</i>	Leyre CATALAN , F. Algarra, B. Manias, L. Cartosena, M. Araiz, J. Ordoñez, S. Diaz de Garayo, D. Astrain, A. Martinez <i>Experimental development of a 4 kW thermoelectric heat pump for domestic use</i>
15:45-16:00	Sanyukta GHOSH , M. Abdelbaky, B. Ryu, W. Mertin, E. Müller, J. de Boor <i>Micro/Nano-Scale Characterization of Magnesium Silicide-based Composites: Correlating Kelvin Probe Force Microscopy with SEM/EDX Analysis</i>	Bushra JABAR , H. Reith, K. Nielsch <i>Thermoelectricity beyond Pb & Te: Unlocking high performance in sustainable Bi₂S₃ based thermoelectric materials</i>	Marcin BORCUC , M. Musiat, K. Wojciechowski <i>The performance study of the gas-liquid thermoelectric generator for waste heat harvesting</i>
16:00-16:15	R. H. Naderloo, R. B. Villoro, J. U. Rahman, D. A. Mattlat, C. Jung, K. Jang, D. Zavanelli, G. J. Snyder, C. Scheu, K. Nielsch, S. Zhang, Ran HE	Jamil Ur RAHMAN , K. Jang, S. Guo, J. van den Brink, C. Jung, S. Zhang, K. Nielsch, R. He	Patricia Aranguren , I. Erro, I. Lerga, A. Casi, A. Rodriguez, A. Martinez

	<i>Unlocking the potential of grain boundary modifications in thermoelectric materials</i>	<i>Unveiling the Synergistic Effect: Y_2Te_3 alloyed with Bi for High-Performance Thermoelectric Applications</i>	<i>Design, optimization and testing of a thermoelectrical heat pump to improve the power-to-heat process of thermal energy storage systems</i>
16:15-16:30	Peter Skjøtt THORUP , R. B. Stubkjær, L. R. Jørgensen, K. A. Borup, M. Roelsgaard, B. B. Iversen <i>Structural investigations of thermoelectric mixed ionic-electronic conductors under operating conditions</i>	V.K. RANGANAYAKULU , T.-H. Wang, C.-L. Chen, A. Huang, M.-N. Ou, H.-T. Jeng, G. J. Snyder, Y.-Y. Chen, <i>Exceptionally high zT achieved through robust electron-phonon interactions and a low-dimensional Fermi surface</i>	Tufan ÖZYILDIZ , Michal Haida, Rafat Fingas, Michal Pendziatek, Jacek Smotka, Daniel Sánchez García-Vacas, Patricia Aranguren <i>Thermoelectric modules applied to the sub-cooler for energy performance improvement of propane heat pump applications</i>

16:30-17:00 Coffee break

17:00-20:00 **SALT MINE WIELICZKA (TRIP & SIGHTSEEING)**

20:00-22:00 **GALA DINNER**

THURSDAY, JULY 4, 2024

	Large Hall A Session: TE Industry Chairman: Jean-Pierre FLEURIAL	Large Hall B Session: Zintl phases II Chairman: Franck GASCOIN	Medium Hall Session: Organic materials Chairman: Yanliang ZHANG
9:00-9:15	Guillaume SAVELLI , P. Faucherand <i>Chips thermal management by micro-thermoelectric sensors</i> (European Thermodynamics Ltd, UK)	Alexandra ZEVALKINK <i>Thermoelectric properties of layered AMX compounds with tunable vacancy concentrations and interlayer bonding</i>	S. Muhammad, D. Motta, M. Bonomo, E. Marchini, S. Carli, S. Caramori, C. Barolo, Andrea REALE <i>Deep eutectic solvents for thermoelectrochemical redox systems for waste-heat recovery applications</i>
9:15-9:30	Uttam GHOSHAL , K. Kolle, A. Stautzenberger, M. Koelzer, J. Jamison <i>Large-Scale Integrated Microcooler Technology</i> (Sheetak Inc., USA)		Konosuke OCHI, Ryota MIYAKE, Yuki HANAMURA, Hirokazu TADA <i>Thermoelectric Properties of Ionic Liquids</i>
9:30-9:45	R. Mohanraman, R. Lydiard, Richard S. TULEY <i>Device substrates: high performance with low thermal conductivity</i> (European Thermodynamics Ltd, UK)	S. Baranets, A. Ovchinnikov, Svilen BOBEV <i>Structural disorder in Zintl phases. The case of Yb₂₁Mn₄Sb₁₈ and Yb₁₀MnSb₉</i>	G. Calabrese, R. Cecchini, M. Ferri, F. Mancarella, D. Gentili, M. Cavallini, V. Morandi, Fabiola LISCIO <i>Enhancing Organic Thermoelectric Materials Through Local Control Wetting</i>
9:45-10:00	Alex GUREVICH , I. Steiner, Z. Dashevsky, S. Vitriuk <i>A High Performance Thermoelectric Modules with Substrates Made by Vapor Chamber Technology</i> (Double Check Ltd, Israel)	Amandine DUPARCHY , F. Kreps, E. Müller, J. de Boor <i>Unlocking the full potential of MgAgSb by unravelling the interrelation of phase constitution and thermoelectric properties</i>	Ting WU , X.-L. Shi, W.-D. Liu, S. Sun, Q. Liu, Z.-G. Chen <i>Dual Post-treatments Boost Thermoelectric Performance of PEDOT:PSS Films and Their Devices</i>
10:00-10:15	Aniruddha RAY , M. D. Heijer <i>Thermoelectric Modules and Applications: An Industrial Perspective</i> (RGS Development, Netherlands)	Longquan WANG , W. Zhang, S. Back, N. Kawamoto, D. H. Nguyen, T. Mori <i>High-performance Mg₃Sb₂-based thermoelectrics with increased structural ordering and microstructure evolution</i>	M. Betty LINCOLN , R. A. Sujatha, P. Veluswamy, H. Ikeda <i>Flexible polymer based textile thermoelectric generator for wearable human body energy harvesting</i>
10:15-10:30	Uttam GHOSHAL , D. Grimm, M. Koelzer, J. Palomino, and J. Jamison <i>Multistage Conjoint Couples for Deep Cooling Applications</i>	Kejia LIU , C. Chen, H. Li, Y. Chen <i>Advancing thermoelectric performance in NaCdSb-based Zintl phase via the synergistic effect of Na deficiency and dynamic doping</i>	Sanyin QU , Q. Xu, C. Ming, P. Qiu, X. Shi, L. Chen <i>High-performance n-type Ta₄SiTe₄/PVDF/graphdiyne organic-inorganic flexible thermoelectric composites</i>
10:30-10:45	Charles BARRAH , A. Kiyabala Lopez, J. Siviter, A. Knox <i>Design of a multi-kW Thermoelectric Heat Pump</i> (Thermoelectric Conversion Systems Ltd, UK)	Santamaria Irene GARCIA , P. Ying, K. Nielsch <i>Improving the Thermoelectric Properties of α-MgAgSb through powder Atomic Layer Deposition</i>	Qihao ZHANG , L. Franke, M. I. Khan, Md. M. Mallick, U. Lemmer <i>3D Printing flexible thermoelectric devices for sustainable power generation and cooling</i>
10:45-11:00	Lech JERZY (Linseis Thermal Analysis Germany)	Miroslaw KRUSZEWSKI , K. Cymerman, J. Flaga, M. Chmielewski, D. Moszczyńska, Ł. Ciupiński <i>Co-based diffusion barrier for n- and p-type skutterudite-based thermoelectric materials obtained via pulse plasma sintering</i>	Szymon GOGOC , P. Data, K. Wojciechowski <i>Influence of acidic p-type dopant on thermoelectric properties of conducting polymers</i>
11:00-11:30	Coffee break		

	Large Hall A Session: TE systems Chairman: Jan KOENIG	Large Hall B Session: Cu-based chalcogenides II Chairman: Paz VAQUEIRO	Medium Hall C Session: Composites Chairman: Xanthippi ZIANNI
11:30-11:45	Daryoosh VASHAEI , P. Bhatnagar, B. Baraieejad, A. R. Vazifeh <i>From Concept to Comfort: Complexities and Trade-offs in the Development of Functional Prototypes for Seamless Integration into Wearable Systems</i>	Filipe NEVES <i>Tetrahedrite-based thermoelectrics: the START project's approach</i>	Peter BALÁŽ , M. Rajňák, M.B.Hudáková, L. Kubíčková, N. Daneu, P.Levinský, K.Knížek, J. Hejtmánek, R. Džunda, M. Achimovičová, M. Baláž <i>Mechanochemistry in Preparation of Chatkalite/Stannite Nanocomposite: Kinetics of Synthesis and Thermoelectricity</i>
11:45-12:00	M. M. Maia, A. L. Pires, Andre M. PEREIRA <i>Wireless Energy Transfer using Photothermoelectric Devices</i>		Abinaya RENGARAJAN , M. Navaneethan, J. Archana <i>Enhanced charge transfer at zero-barrier injection of MoS₂/α-MoO₃ nanocomposites for thermoelectric applications</i>
12:00-12:15	David ASTRAIN , M. Araiz, L. Catalan, N. Pascual, P. Alegria <i>Electric production from fumarles of volcanic origin in Antarctica by passive thermoelectric generators</i>	Xu LU <i>Manipulating Charge Carrier in Thermoelectric Sulfides</i>	Vijay VAIYAPURI , A. Jayaram, N. Mani <i>Boosting the thermoelectric performance of HMS/CNF composites via thermally activated conduction and microstructure engineering</i>
12:15-12:30		Yi-Xin ZHANG , Zhen-Hua Ge <i>Synergistically Optimized Thermoelectric Performance of Copper Sulfides via One-pot Modulation of the Second Phases and Cu Vacancies</i>	Huanfu CAI , R. Shi, J. Gao, L. Miao <i>Simultaneous optimization of power factor and thermal conductivity via charge transfer effect and enhanced scattering of phonons in Si₈₀Ge₂₀P₁/CoSi₂ composites</i>
12:30-12:45	Yi ZHOU , J. He, G. W. Ho <i>Towards sustainable heat harvesting and decarbonization via non-unity thermoelectrics</i>	Tian-Yu YANG , Y.-X. Zhang, Z.-H. Ge <i>Pseudopolymorphic Phase Engineering for Improved Thermoelectric Performance in Copper Sulfides</i>	Andrii BOICHUK , T. Boichuk, M. E. Changarath, M. Krečmarová, J. P. Martinez-Pastor, J. F. Sánchez-Royo <i>Novel 2D materials with tunable properties for thermoelectric application</i>
12:45-13:00	K. Liang, H. Yang, P. Zhao, L. Yin, C. Lin, X. Wu, F. Cao, Q. Zhang, Jun MAO <i>Characterizing the thermoelectric cooling performance across a broad temperature range</i>	Oliver OECKLER , T. K. C. Alves, A. P. Gonçalves, M. Grauer, E. B. Lopes, M. Moslemi <i>Thermoelectric properties and crystal structures of tetrahedrite-type materials alloyed with Fe, Mn and In</i>	Van Quang Nguyen, Thi Huong Nguyen, Cheng Chang, Li-dong Zhao, JongHo Park, Jae Ki Lee, Su-dong Park, Sunglae CHO <i>SnSe-SnSe₂ & Bi₂Se₃-Sb₂Se₃ Misfit Layered Composite Crystal: Growth and Thermoelectric Properties</i>
13:00-14:30	Lunch		
	Large Hall A Session: Outstanding Awards & Plenary Chairman: Yuri GRIN		
14:30-15:00	G. Jeffrey SNYDER <i>Studies of Complex Thermoelectrics Materials</i>		
15:00-15:30	Lykuan I. ANATYCHUK <i>On the scientific, technical and organizational development of the Institute of Thermoelectricity of the National Academy of Sciences of Ukraine</i>		
15:30-16:00	<i>2024 Outstanding Award in Thermoelectrics (t.b.a)</i>		
16:00-16:40	Artur B. CHMIELEWSKI <i>The Next 30 Years of Thermoelectrics in Space Exploration</i>		
16:40-17:00	Coffee break		
17:00-17:30	CLOSING REMARKS		