

Program

MONDAY

9:00	OPENING CEREMONY		
	OPENING REMARKS		
	PLENARY SESSION (CHAIR)		
9:45 10:30	Prof. Dr. Y. GRIN Max Planck Institute for Chemical Physics of Solids, Dresden, Germany "Interplay of crystal structure, chemical bonding and thermoelectric behavior"		
10:30 11:15	Dr. J-P. FLEURIAL Jet Propulsion Laboratory - Thermal Energy Conversion Research & Advancement Group, Pasadena, California, United States of America "A 50 Year-Long Breakthrough in the Making: Radioisotope Thermoelectric Generators with New Materials"		
11:15 12:00	Prof. Dr. T. MORI NIMS, Tsukuba, Japan "Utilization of Magnetism and Other Novel Principles for Thermoelectric Enhancement and Recent Activities in Asia"		
	Track 1 (Ballroom A)	Track 2 (Ballroom B)	Track 3 (Ballroom C)
	Zintl Phases	Applications	Chalcogenides (S, Se, Te) (Modelization)
14:00 14:15	INVITED Crystal Chemistry of New (and some old) Zintl Phases Svilen Bobev <i>University of Delaware (US)</i>	Measurement and analysis of thermal conductivity, thermal diffusivity and interfacial thermal resistance of thermoelectric thin films Takahiro Baba <i>PicoTherm Corporation (Japan)</i>	Electronic structure of $\text{Sn}_{1-x}\text{In}_x\text{Te}$ containing defects from KKR-CPA calculations Janusz Tobola <i>AGH University of Science and Technology, Faculty of Physics and Applied Computer Science (Poland)</i>
14:15 14:30		Heat pipes thermal performance for a reversible thermoelectric cooler-heat pump system Aranguren Patricia <i>Smart Cities Institute (Spain)</i>	Modeling Dopability in Diamond-like Semiconductors Using Machine Learning for High-throughput Predictions Samuel Miller <i>Northwestern University (US)</i>

14:30 14:45	Zintl ions within framework channels: the complex structure and low-temperature transport properties of Na₄Ge₁₃ Stefan Stefanoski <i>Benedictine University (US)</i>	INVITED Development of integrated micro-thermoelectric sensors for IC applications Guillaume Savelli <i>Université Grenoble Alpes, CEA-Liten (France)</i>	Negative Thermal Expansion of GeTe near the Ferroelectric Phase Transition from First Principles Djordje Dangic <i>University College Cork (Ireland)</i>
14:45 15:00	Experimental Investigation of Thermoelectric Properties of K_{Sb}_{2-x}Sn_x Hyungyu Jin <i>Pohang University of Science and Technology (POSTECH) (South Korea)</i>		Engineering thermal conductivity through microstructural lattice softening Riley Hanus <i>Department of Materials Science and Engineering, Northwestern University (US)</i>
15:00 15:15	The A₁₄MPn₁₁: good thermoelectric materials with low valley degeneracy. Geoffroy Hautier <i>Institute of Condensed Matter and Nanosciences (IMCN), Université Catholique de Louvain (Belgium)</i>	New prototype of a thermoelectric heat pump with heat pipes for the air condition of a Nearly Zero Energy Building Sergio Diaz De Garayo <i>CENER (Spain)</i>	INVITED Acoustically mismatched nano-inclusions Raphael Hermann <i>Oak Ridge National Laboratory - MSTD (United States)</i>
15:15 15:30	Thermoelectric properties of a new Zintl phase NaZn₄As₃ with ultralow thermal conductivity Aichi Yamashita <i>University of Tsukuba (Japan), - WPI-MANA, NIMS - AIST (Japan)</i>	Small size thermoelectric power supply for battery backup Hossein Abedi <i>CNR-Institute of Condensed Matter Chemistry and Technologies for Energy, Lecco (Italy)</i>	
15:30 15:45	INVITED Thermoelectric Behavior of Silver-Cluster Phosphides: Origin and Optimization Juergen Nuss <i>Max Planck Institute for Solid State Research, Stuttgart (Germany)</i>	On the progress in some actual trends in application of thermoelectricity in the Institute of Thermoelectricity (Ukraine) Valentin Lysko <i>Institute of Thermoelectricity NAS and MES of Ukraine, Chernivtsi (Ukraine)</i>	Phonon dispersion and scattering considerations for thermoelectrics Yanzhong Pei <i>School of Materials Science and Engineering, Tongji University (China)</i>

15:45 16:00		Modeling and Simulation of a Thermoelectric Generator Using Bismuth Telluride for Waste Heat Recovery in Automotive Diesel Engine Ali Nour Eddine <i>École Centrale de Nantes (France)</i>	Rattling dynamics under a planar coordination in tetrahedrites Chul-Ho Lee <i>National Institute of Advanced Industrial Science and Technology (AIST) (Japan)</i>
16:00 16:30	COFFEE BREAK		
	Modules Development and Technology	Modelling	Chalcogenides (S, Se, Te)
16:30 16:45	Concept of a Thermoelectric Module and Generator for Automotive Applications Based on an Integrated Functional Design Lars Heber <i>Institute of Vehicle Concepts, DLR, Stuttgart (Germany)</i>	INVITED On the Search of Novel Compounds Featuring Thermoelectric Properties. Some Suggestions Based on Theoretical Considerations Jean-Francois Halet <i>Institut des Sciences Chimiques de Rennes (France)</i>	Improved Thermoelectric Performance in Non-stoichiometric Quaternary $Cu_{2+\gamma}Mn_{1-\gamma}SnSe_4$ Diamond-like Compounds Qingfeng Song <i>Shanghai Institute of Ceramics, Chinese Academy of Science, University of Chinese Academy of Sciences (China)</i>
16:45 17:00	Demonstrated High-Performance, High-Power Skutterudite Thermoelectric Modules for Space and Terrestrial Applications Terry Hendricks <i>NASA Jet Propulsion Laboratory (US)</i>		Rhombohedral to Cubic Conversion of GeTe via MnTe alloying Leads to Ultralow Thermal Conductivity, Electronic Band Convergence and High Thermoelectric Performance Zheng Zheng <i>Wuhan University of Technology (China)</i>
17:00 17:15	Development of High Efficiency Segmented Thermoelectric Couples for Space Applications Fivos Drymiotis <i>NASA Jet Propulsion Laboratory (US)</i>	Minimum thermal conductivity in the context of diffusion-mediated thermal transport Matthias Agne <i>Northwestern University (US)</i>	Thermoelectric features of the $Cu_7P(Se_{1-x}S_x)_6$ with high copper ionic mobility Michal Piasecki <i>Institute of Physics J.Dlugosz University, Czestochowa (Poland)</i>
17:15 17:30	Silicides thermoelectric modules: performances and challenges Krunoslav Romanjek	Effects of Grain Size and Grain Boundary Nanostructures on Lattice Thermal Conductivity of MgO	Compatibility investigation between cobalt metallized tellurides-based

	<i>Université de Grenoble-Alpes (France)</i>	Susumu Fujii <i>Department of Adaptive Machine Systems, Osaka University (Japan)</i>	Thermoelectric legs and an Ag–Cu–In-based brazing alloy Dana Ben-Ayoun <i>Department of Materials Engineering, Ben-Gurion University of the Negev, Beer Sheva 84105 (Israel)</i>
17.30 17.45	Economic profitability of hybrid photovoltaic-thermoelectric solar harvesters Dario Narducci <i>Dept. of Materials Science, University of Milano Bicocca (Italy)</i>	Investigation of phonon states in a poor thermal crystalline conductor by means of inelastic scattering spectroscopy Stéphane Pailhès <i>Institut Lumière Matière (France)</i>	Native Defects in SnSe and their Temperature Dependence Katerina Sraitrova <i>University of Pardubice, Faculty of Chemical Technology (Czech Republic)</i>
17.45 18.00	Efficiency of an automated dissipation system applied to Bi₂Te₃ and multi-stage modules Fabio Puglia <i>ISC - Ballistic (Italy)</i>	Three dimensional finite element simulation of a flexible μ-TEG based on bismuth telluride Soufiane Eloulid <i>Institut Jean Lamour (France)</i>	Harnessing thermoelectric effects in vertical phase change memory cells Jyotsna Bahl <i>Center for Research in Nano Technology and Sciences (CRNTS), IIT Bombay (India)</i>

TUESDAY

Track 1 (Ballroom A)		Track 2 (Ballroom B)	Track 3 (Ballroom C)
Zintl Phases {Mg ₃ Sb ₂ }		Chalcogenides (S, Se, Te)	Modules Development and Technology
08:30-08:45		<p>Donor-type doping in BiCuSeO: from high ZT values in p-type materials towards p-to-n type switching</p> <p>David Berardan <i>Univ. Paris-Sud (France)</i></p>	<p>μTEGs for Self-Powered Sensor Nodes: Device Optimization and System Integration</p> <p>Jane Cornett <i>Analog Devices (US)</i></p>
08:45-09:00	<p>INVITED Phase boundary mapping for the discovery and optimization of thermoelectric materials</p> <p>Jeff Snyder <i>Northwestern University (US)</i></p>	<p>Thermoelectric properties of oxysulfide Bi_{1-x}Pb_xCuOS compounds</p> <p>Jean-Baptiste Labégorre <i>Laboratoire CRISMAT (France)</i></p>	<p>Human body-heat energy harvesters based on transverse thermoelectric effects</p> <p>Je-Hyeong Bahk <i>EECS Dept, University of Cincinnati (US)</i></p>
09:00-09:15		<p>Data-driven Discovery of Cu-S based Thermoelectric Materials</p> <p>Ruizhi Zhang <i>School of Engineering and Material Science, Queen Mary University of London (UK)</i></p>	<p>Characterization of micro thermoelectric coolers with high packing density</p> <p>Heiko Reith <i>Leibniz Institute for Solid State and Materials Research - IFW Dresden (Dresden, Germany) (Germany)</i></p>
09:15-09:30	<p>Enhancement of average ZT of n-type Mg₃(Sb,Bi)₂ by increasing grain size</p> <p>Hiromasa Tamaki <i>Panasonic Corporation (Japan)</i></p>	<p>INVITED Interplay between the structural and thermoelectric properties in Cu-S based synthetic minerals</p> <p>Koichiro Suekuni <i>Department of Applied Science for Electronics and Materials, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University (Japan)</i></p>	<p>Thermoelectric nanogenerator array: a viable source of power for the autonomy of wireless sensors networks?</p> <p>Dimitri Tainoff <i>Institut Néel (France)</i></p>
09:30-09:45	<p>Probing the Thermal Stability Te-doped Mg₃Sb_{1.5}Bi_{0.5} via Combined Total Scattering and Powder Diffraction</p> <p>Lasse Rabøl Jørgensen <i>Center for Materials Crystallography, Department of Chemistry, Aarhus University (Denmark)</i></p>		<p>A High Efficient Thermoelectric Module with Heat Storage utilizing Sensible Heat for IoT Power Supply</p> <p>Kanae Nakagawa <i>FUJITSU LABORATORIES LTD. (Japan)</i></p>

09:45-10:00	<p>Observation of Valence band crossing: The Thermoelectric Properties of the CaZn₂Sb₂-CaMg₂Sb₂ Solid Solution</p> <p>Max Wood <i>Northwestern University (US)</i></p>	<p>A structural and thermoelectric study of a Cu-rich sulfide family: the germanite Cu_{26-x}Fe_{4+x}Ge₄S₃₂</p> <p>Laura Paradis-Fortin <i>Laboratoire CRISMAT - Institut des Sciences Chimiques de Rennes (France)</i></p>	<p>Fabrication and characterization of thermoelectric generators based on silicon nanowire forests</p> <p>Giovanni Pennelli <i>Dipartimento di Ingegneria dell'Innovazione, University of Pisa (Italy)</i></p>
10:00-10:15	<p>INVITED</p> <p>Chemical bonding In layered thermoelectric materials</p> <p>Bo Iversen <i>Center for Materials Crystallography, Department of Chemistry, Aarhus University (Denmark)</i></p>	<p>High-performance thermoelectric bulk colusite by process controlled structural disordering</p> <p>Cédric Bourges <i>Department of Applied Physics, Graduate School of Engineering, Tohoku University (Japan)</i></p>	<p>Development of high durability substrate for thermoelectric module</p> <p>Koya Arai <i>Central Research institute, Mitsubichi materials corporation (Japan)</i></p>
10:15-10:30		<p>Effect of composition on thermoelectric properties of as-cast materials: the Cu_{12-x}Co_xSb₄S_{13-y}Se_y case</p> <p>Antonio Pereira Goncalves <i>C²TN (Portugal), Institut für Mineralogie (Germany)</i></p>	<p>Experimental evidence for separation of thermally generated bipolar charge carriers within a p-i-n-junction</p> <p>Franziska Maculewicz <i>University of Duisburg-Essen, Institute of Technology for Nanostructurs & CENIDE (Germany)</i></p>
10:30-11:00	COFFEE BREAK		
	Applications	Chalcogenides (S, Se, Te)	Other materials
11:00-11:15	<p>Very long lifetime terrestrial RTG with Americium heat power source</p> <p>Joël Dufourcq <i>HotBlock OnBoard (France)</i></p>	<p>Pulsed Hybrid Reactive Magnetron Sputtering as a new technique to obtain high quality selenides</p> <p>Marisol Martin Gonzalez <i>Instituto Micro y Nanotecnología IMN-CNM-CSIC (Spain)</i></p>	<p>Electron-poor Al-Ge narrow gap semiconductors: comparison with thermoelectric Zn-Sb compounds</p> <p>Mickael Beaudhuin <i>Institut Charles Gerhardt Montpellier - Institut de Chimie Moléculaire et des Matériaux de Montpellier (France)</i></p>
11:15-11:30	<p>Benefits of integrating vehicular thermoelectric generators with exhaust heat recovery apparatus</p> <p>Byung-Wook Kim <i>Corporate R&D Division for Hyundai Motor Company & Kia Motors Corporation (South Korea)</i></p>	<p>Improved electrical transport properties and optimized thermoelectric figure of merit in lithium-doped copper sulfides</p> <p>Mengjia Guan <i>Shanghai Institute of Ceramics, Chinese Academy of Science (China)</i></p>	<p>Structural analysis of beta- and gamma-phases of Zn₄Sb₃ thermoelectrics</p> <p>Kei Hayashi <i>Department of Applied Physics, Graduate School of Engineering, Tohoku University (Japan)</i></p>

11:30- 11:45	RTGs: the enduring and the future David Woerner <i>Jet Propulsion Laboratory (United States)</i>	Suppressing Intervalley scattering for p-type InTe by nanoprecipitates Xu Lu <i>Chongqing University (China)</i>	Kondo-like phonon scattering in thermoelectric clathrates Silke Paschen <i>Institute of Solid State Physics, Vienna University of Technology (Austria)</i>
11:45- 12:00	Power Enhancement of Si Membrane-based Thermoelectric Generator by Aluminium Ultrathin Layer Deposition Ryoto Yanagisawa <i>IIS, The University of Tokyo (Japan)</i>	Unconventional Heat Transport Induced by Phase Transition in Cu_{2-x}Se Dimitri Vasilevskiy <i>Ecole Polytechnique de Montreal - TEMTE Inc (Canada)</i>	Looking for stable thermoelectric materials Karl Frederik Færch Fischer <i>Department of Chemistry, Aarhus University (Denmark)</i>
12:00- 12:15	Holistic Optimization of Thermoelectric Generators for Automotive Applications Reaching a Cost Benefit Ratio of 81 €/g/km Martin Kober <i>Deutsches Zentrum für Luft- und Raumfahrt [Stuttgart] (Germany)</i>	INVITED Intrinsically low thermal conductivity in metal chalcogenides for high performance thermoelectric energy conversion Kanishka Biswas <i>Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), (India)</i>	Thermoelectric Properties and Search for condition of insulator transition in Al-Ir based quasicrystalline approximants Yutaka Iwasaki <i>Department of Advanced Materials Science, The University of Tokyo (Japan)</i>
12:15- 12:30	A versatile system for Hall effect measurements at high temperature Murat Gunes <i>Univ Paris Sud, Univ Paris Saclay (France)</i>		Suppression of vacancies boosts thermoelectric performance in type-I clathrate Xinlin Yan <i>Institute of Solid State Physics, Vienna University of Technology (Austria)</i>
12:30- 14:00	LUNCH		
Other materials {Heusler}		Silicides	Chalcogenides (S, Se, Te) {Telluride}
14:00- 14:15	INVITED Understanding and tuning full-Heusler thermoelectric materials based on Fe₂VAI Ernst Bauer	Rapid oxidation in Mg₂(Si-Sn) alloys; optimization via tin reduction and nanostructuring approach Christelle Navone <i>Univ. Grenoble Alpes, CEA-LITEN (France)</i>	Thermoelectric Performance of Bi₂Te₃ by Acceptor Type Germanium Doping Niraj Singh <i>School of Basic Sciences, Indian Institute of Technology Mandi, (India)</i>

14:15-14:30	Christian Doppler Laboratory for Thermoelectricity, Institute of Solid State Physics, Technische Universität Wien (Austria)	Exploit Si-kerf from Photovoltaics: A Promising Application on the Thermoelectrics Theodora Kyratsi University of Cyprus (Cyprus)	Increasing of Z factor for Bi ₂ Te ₃ -Sb ₂ Te ₃ Zinovi Dashevsky SCTB NORD Company (Russia)
14:30-14:45	Thermoelectric properties of p- and n-type doped ScNiSb Donald Morelli Michigan State University (US)	Insight on band structure of p-type Mg ₂ Si _{1-x} Sn _x with x=0-1 using a single parabolic band Hasbuna Kamila German Aerospace Center (DLR) (Germany)	INVITED Nano-SiC-dispersed Thermoelectric Composites Jing-Feng Li State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science and Engineering, Tsinghua University (China)
14:45-15:00	Facile Synthesis of FeNbSb based Half-Heusler Thermoelectric Materials Nader Farahi German Aerospace Center (DLR) (Germany)	Contact development for n and p-type Mg ₂ (Si,Sn) Johannes De Boor German Aerospace Center (DLR) (Germany)	
15:00-15:15	Phonon scattering by antiphase boundaries in Fe ₂ VAl Eric Alleno Institut de Chimie et des Matériaux Paris Est (France)	INVITED Recent Progress in Silicide-based Thermoelectric Materials Yuzuru Miyazaki Department of Applied Physics, Graduate School of Engineering, Tohoku University (Japan)	Thermoelectric and transport properties of n-type palladium doped chalcopyrite Cu _{1-x} Pd _x FeS ₂ compounds Jiri Navratil Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic (Czech Republic)
15:15-15:30	Industrialized Half-Heusler material and thermoelectric modules therefrom Daniel Zuckermann Isabellenhütte Heusler GmbH & Co. KG Dillenburg Germany		Effects of defects induced by pressure and temperature on thermoelectric CuGaTe ₂ chalcopyrite structure materials Yosuke Fujii Osaka Prefecture University (Japan)
15:30-15:45	High-Entropy Half-Heusler Thermoelectrics with High ZT~1.5 Peter Franz Rogl Institute of Materials Chemistry, University of Vienna (Austria)	INVITED Mg₂Si_{1-x}Sn_x solid solutions: phase formation and challenges in their electrical contacting Vicente Pacheco	Transition metals in ternary rocksalt-type tellurides? doping vs. precipitates Oliver Oeckler Leipzig University, Faculty of Chemistry and Mineralogy, IMKM (Germany)
15:45-16:00	Half-Heuslers, a compound not as stable as one stipulate.		Chalcogenide-based nanocomposites for thermoelectric applications

	Robin Lefèvre <i>Interdisciplinary Nanoscience Center (iNANO) (Denmark)</i>	<i>Fraunhofer Institute for Manufacturing Technology and Advanced Materials, IFAM (Germany)</i>	Valentina Giordano <i>Institut Lumière Matière (France)</i>
16:00- 16:30	COFFEE		
	New materials and New Materials Discovery	Modelling	Zintl Phases {Other Phases}
16:30- 16:45	INVITED Composite Structures in Thermoelectric Materials Holger Kleinke <i>University of Waterloo (Canada)</i>	Molecular dynamics simulations to understand phonon transport in nanoporous materials Laura De Sousa Oliveira <i>University of Warwick [Coventry] (United Kingdom)</i>	Computational Investigation of n-type Doping of Layered Antimonides: Mg₃Sb₂ and KSnSb Prashun Gorai <i>Colorado School of Mines, National Renewable Energy Laboratory (US)</i>
16:45- 17:00		Thermoelectric properties of TiNiSn and ZrNiSn half-Heusler alloys through ab- initio calculation and experiments Lorenzo Maschio <i>Università degli Studi di Torino (Italy)</i>	New Insight on Tuning Electrical Transport Properties via Chalcogen Doping in n-type Mg₃Sb₂-Based Thermoelectric Materials Jiawei Zhang <i>Center for Materials Crystallography, Department of Chemistry, Aarhus University (Denmark)</i>
17:00- 17:15	High ZT in MnTe via spin physics Joseph Heremans <i>The Ohio State University (United States)</i>	INVITED Defects and their influence on the thermoelectric properties of materials: an ab initio study Philippe Jund <i>Institut Charles Gerhardt - Université de Montpellier (France)</i>	Effect of Ag-doping on the thermoelectric properties of BaCu₂Te₂ Chunhui Yang <i>School of Materials Science and Engineering, Shanghai University, China</i>
17:15- 17:30	Dopant Induced Impurity Bands and Carrier Concentration Control for Thermoelectric Enhancement in p-Type Cr₂Ge₂Te₆ Guoyu Wang <i>College of Physics, Chongqing University (China)</i>		HRPD and HREM study of p- and n-type semiconductor Y_xAl_yB₁₄ Tsuyoshi Kajitani <i>Institute of Multidisciplinary Research for Advanced Materials (IMRAM) Tohoku University (Japan)</i>

17:30-17:45	Large Nernst power factor in polycrystalline topological semimetal NbP Chenguang Fu <i>Max Planck Institute for Chemical Physics of Solids (Germany)</i>	Quantum transport simulations of thermoelectric power factor in materials with hierarchical nanostructuring Vassilios Vargiamidis <i>School of Engineering, University of Warwick (UK)</i>	First principles study on the thermoelectric properties of 122 Zintl phase compounds Hidetomo Usui <i>Department of Physics, Osaka University (Japan)</i>
17:45-18:00	Development of high-performance thermoelectric materials guided by large-scale experimental data Takushi Kodani <i>National Institute for Materials Science - The University of Tokyo (Japan)</i>	Defect-induced simultaneous increase of the conductivity and Seebeck coefficient in p-doped polycrystalline materials and enhanced thermoelectric power factor Xanthippi Zianni <i>Dept. of Aircraft Technology, Technological Educational Institution of Sterea Ellada (Greece)</i>	Band engineering of the Mg₃Sb₂-Mg₃Bi₂ alloy composition investigated with transport analysis Kazuki Imasato <i>Northwestern University (US)</i>
18:00-18:15	Experimental force multipliers for accelerating thermoelectric material discovery Eric Toberer <i>Colorado School of Mines (US)</i>	Metamaterials for Harnessing Thermoelectric Flow Lilia Woods <i>University of South Florida (US)</i>	High thermoelectric properties of As-based 122-Zintl compounds Ba_{1-x}K_xCd₂As₂ Haruno Kunioka <i>National Institute of Advanced Industrial Science and Technology (AIST) - Tokyo University of Science (Japan)</i>
18:15-18:30	A Valence Balanced Rule for Discovery of new Dimensions of defective half-Heuslers Anand Shashwat <i>Northwestern University (US)</i>	Detailed Transient Multiphysics Model for Fast and Accurate Design, Simulation and Optimization of a Thermoelectric Generator (TEG) or Thermal Energy Harvesting Device Alfred Piggott <i>Applied Thermoelectric Solutions LLC (US)</i>	

WEDNESDAY

Track 1 (Ballroom A)		Track 2 (Ballroom B)		Track 3 (Ballroom C)	
Chalcogenides (S, Se, Te)		New Materials and New Materials Discovery		Modelling	
08:30- 08:45	Mechanochemistry for Thermoelectrics: Nanobulk Mawsonite $\text{Cu}_6\text{Fe}_2\text{SnS}_8$ Synthesized in an Industrial Mill Peter Balaz <i>Institute of Geotechnics (Slovakia)</i>	INVITED Structure and bonding, and their role in thermal transport of materials for thermoelectrics applications: It's not just about skutterudites and clathrates anymore! Georges Nolas <i>University of South Florida (US)</i>			
08:45- 09:00	Copper rich complex Sulfides for Thermoelectric applications Pavan Kumar Ventrapati <i>Laboratoire CRISMAT (France)</i>			Direct Current Polarity-Reversal Technique to Measure the Thomson Coefficient to Determine the Absolute Seebeck Coefficient Yasutaka Amagai <i>National institute of advanced industrial Technology (Japan)</i>	
09:00- 09:15	Low-temperature structure of tetrahedrite Paz Vaqueiro <i>University of Reading (UK)</i>	Shock-compression as a novel method of preparation of nanostructured CoSb_3 skutterudite Krzysztof Wojciechowski <i>AGH University of Science and Technology (Poland)</i>	INVITED The Effective Mass: Our Stranger Friend Marco Fornari <i>Central Michigan University (US)</i>		
09:15- 09:30	Nanoparticle-dispersed $\text{Cu}_{12}\text{Sb}_4\text{S}_{13}$ - based thermoelectric composites Fu-Hua Sun <i>State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science and Engineering, Tsinghua University (China)</i>	High-pressure synthesis of tetragonal iron aluminide FeAl_2 Kazuki Tobita <i>The University of Tokyo (Japan)</i>			

09:30-09:45	INVITED Mineral-Related Sulphides and Selenides for Thermoelectric Energy Harvesting Anthony V. Powell <i>University of Reading (UK)</i>	Optimization of Thermoelectric Transport Properties on Weak Topological Insulator $\text{Bi}_{1-x}\text{Rh}_x\text{I}_3$ Ping Wei <i>State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology (China)</i>	A Study on the Reliability of Thermoelectric Couple Networks Christopher Matthes <i>NASA Jet Propulsion Laboratory, California Institute of Technology (US)</i>
09:45-10:00		Metal Phosphides as Overlooked Thermoelectric Materials Umut Aydemir <i>Department of Chemistry, Koc University (Turkey)</i>	Phonon transport across a Si/Ge interface: the role of inelastic scattering Jesse Maassen <i>Dalhousie University (Canada)</i>
10:00-10:15	Thermoelectric Performance of Tetrahedrite Synthesized by a Solution-Phase Method Daniel Weller <i>Michigan State University (US)</i>	A web application "Starrydata" for collecting and sharing plot data on published papers Masaya Kumagai <i>SAKURA Internet Inc. (Japan)</i>	The importance of considering parasitic heat losses in modelling TEG performance for high temperature application Schwurack Roy <i>Technische Universität Dresden (Germany)</i>
10:15-10:30	Structural phase transitions at high temperature of thermoelectric copper-based sulfides studied by in situ techniques Pierric Lemoine <i>Institut des Sciences Chimiques de Rennes (France)</i>		Theoretical study on thermoelectric properties of metal/semiconductor multilayer with weak electron-phonon coupling Shin Yabuuchi <i>Hitachi, Ltd. (Japan)</i>
10:30-11:00	COFFEE BREAK		
	Chalcogenides (S, Se, Te)	Modules Development and Technology	Oxides
11:00-11:15	Improving the thermoelectric efficiency of $\text{La}_{3-x}\text{Te}_4$ via f-orbital chemistry Sabah Bux <i>Jet Propulsion Laboratory (US)</i>	Reliability Evaluation System for the Thermoelectric Power Generation Module Simulating Thermal Cycle Joon Heo <i>BlueSys Co., Ltd. (South Korea)</i>	INVITED Exploiting Interfaces to Enhance the Performance of Oxide Thermoelectrics Robert Freer <i>University of Manchester (UK)</i>
11:15-11:30	Phase boundary mapping and phase discovery in a quaternary system: carrier density control in $\text{Cu}_2\text{HgGeTe}_4$ Brenden Ortiz	A New Model for Characterising Thermoelectric Modules by Impedance Spectroscopy and its Application in Qualification and Assessing In-service Degradation Hugo Williams	

	Colorado School of Mines (US)	University of Leicester (UK)	
11:30-11:45	INVITED Considerations for enhancement of the thermoelectric potential of semiconductors Yaniv Gelbstein <i>Ben Gurion University (Israel)</i>	Design of Thermal Contacts for High Performances Heusler-Based Thermoelectric Modules Geoffrey Roy <i>Université catholique de Louvain, Institute of Mechanics, Materials and Civil Engineering, Materials and process Engineering, IMAP (Belgium)</i>	Redox-promoted enhancement of thermoelectric performance in strontium titanate-based materials Andrei Kovalevsky <i>CICECO, Aveiro Institute of Materials, Department of Materials and Ceramic Engineering, University of Aveiro (Portugal)</i>
11:45-12:00		Effect of electrical contact resistance on the performance of cascade thermoelectric coolers Volodymyr Semeniuk <i>Thermion Company (Ukraine)</i>	Challenges to enhance the thermoelectric properties of ZnO-based ceramics Slavko Bernik <i>Jozef Stefan Institute (Slovenia)</i>
12:00-12:15	Promising thermoelectric performance in both rhombohedral and cubic GeTe Juan Li <i>Interdisciplinary Materials Research Center School of Materials Science and Engineering, Tongji University (China)</i>	Non-linear impedance spectroscopy: beyond the ZT estimation Etienne Thiebault <i>Centre de Nanosciences et de Nanotechnologies (France)</i>	Thermoelectric properties of doubly substituted $\text{La}_{0.95}\text{Sr}_{0.05}\text{Co}_{1-x}\text{Cr}_x\text{O}_3$ ($0 \leq x \leq 0.5$) ceramics Cong Chen <i>Bundesanstalt für Materialforschung und -prüfung (Germany)</i>
12:15-12:30	Anomalous transport phenomena and thermoelectric performance enhancement in the Cu-overstuffed ferromagnetic spinel $\text{Cu}_{1+x}\text{Cu}_2\text{Te}_4$ Jean-Baptiste Vaney <i>NIMS Tsukuba (Japan)</i>	Detachable Contacts for Simultaneous Thermoelectric Characterization Antoine Micallef <i>German Aerospace Center (DLR) (Germany)</i>	Defect and Schottky Barrier Engineering in Thermoelectric $\text{SrTiO}_{3-\delta}$ Ceramics Soonil Lee <i>School of Materials Science and Engineering (South Korea)</i>
12:30-14:00	LUNCH		
	Silicides	Other Materials {Skutterudites}	Process
14:00-14:15	INVITED Silicon and metal silicides nanocomposites as high-performance thermoelectric materials	Thermoelectric characterization of n-type and p-type skutterudites fabricated in a up-scalable way Olga Caballero-Calero <i>Instituto de Micro y Nanotecnología (Spain)</i>	Porous thermoelectric materials and their applications Teruyuki Ikeda <i>Ibaraki University (Japan)</i>

14:15-14:30	Ken Kurosaki <i>Graduate School of Engineering, Osaka University (Japan)</i>	Experimental and Computational Phase Boundary Mapping of Co-Sn-Te Phase Space for Skutterudites Caitlin Crawford <i>Colorado School of Mines (US)</i>	Fabrication Of Filled Skutterudites With High Thermoelectric Performance Using Scanning Laser Melting Method Shengqiang Bai <i>Shanghai Institute of Ceramics, Chinese Academy of Sciences (China)</i>
14:30-14:45	Thermoelectric and galvanomagnetic properties of topologically non-trivial (Co-M)Si "new fermion" semimetals (M=Fe, Ni) Alexander Burkov <i>Ioffe Institute (Russia)</i>	Analysis and Risk Mitigation of Raw Materials Sourcing and the Implications for eMMRTG Skutterudite Couple Performance Tim Holgate <i>Teledyne Energy Systems, Inc. (US)</i>	Contact layer development on bismuth Telluride thermoelectric materials using novel light sintering technique Giri Joshi <i>Nanohmics, Inc. (US)</i>
14:45-15:00	Screening silicide thermoelectric materials using ab initio transport calculations Martin Lovvik <i>SINTEF (Norway)</i>	Synergistically enhancement of thermoelectric properties in partially filled CoSb₃ skutterudites through simultaneous doping and nanostructuring Manjusha Battabyal <i>International Advanced Research Centre for Powder Metallurgy and New Materials (India)</i>	Near-net-shape fabrication of thermoelectric element by flash sintering Masashi Mikami <i>National Institute of Advanced Industrial Science and Technology (Japan)</i>
15:00-15:15	Demonstration of thermoelectric generation in the metallurgic industry Marteen Den Heijer, <i>RGS Development B.V. (Netherlands)</i>	Magnesioreduction : a low temperature synthesis route towards CoSb₃-based skutterudites with improved thermoelectric properties Sylvain Le Tonquesse <i>Institut des Sciences Chimiques de Rennes (France)</i>	Laser sintering of thermoelectric compounds Yoshiaki Kinemuchi <i>National Institute of Advanced Industrial Science and Technology (Japan)</i>
15:15-15:30	A thermal-shock resistant, high performance, SiGe thermoelectric generator for industrial waste heat applications Axel Schoenecker <i>RGS Development B.V. (Netherlands)</i>	Optimisation Strategies for Double filled In_xLa_{0.25}Co₄Sb₁₂ (0 ≤ x ≤ 0.5) skutterudite material Mohd Faizul Mohd Sabri <i>University of Malaya (Malaysia)</i>	Enhancing transport properties of Bi₂Te_{3-x}Se_x alloys via doping for thermoelectric power generation applications Omer Meroz <i>Ben-Gurion University of the Negev (Israel)</i>
15:30-15:45	Thermoelectric performance in nanocomposite bulk consisting of MnSi_{1.7} and SiGe Yosuke Kurosaki	Enhanced thermoelectric properties of In_{0.25}Co₄Sb₁₂ with InSb nano inclusions Ramesh Chandra Mallik <i>Indian Institute of Science (India)</i>	Advanced Protective Layers for Improved Chemical Stability in CoSb₃, Mg₂Si and Cu₂X Based Thermoelectric Materials Andrzej Kozłowski

	<i>Hitachi, Ltd. (Japan)</i>		<i>AGH - University of Science and Technology, Faculty of Materials Science & Ceramics (Poland)</i>
15:45- 16:00	Effect of element substitution on the phase stability of complex MnSi_x Swapnil Ghodke <i>Toyota Technological Institute (Japan)</i>	A new and fast SPD-method to produce high ZT (>1.3) skutterudites Gerda Rogl <i>Christian Doppler Laboratory for Thermoelectricity, University of Vienna (Austria)</i>	Laser Additive Manufacturing with Bismuth Telluride and Magnesium Silicide Saniya Leblanc <i>The George Washington University (US)</i>
16:00- 16:15	High temperature oxidation of higher manganese silicides and alloys Antoine De Padoue Shyikira <i>University of Agder (Norway)</i>	Realization of high figure of merit in Ni compensated double filled p-type skutterudites Tulashi Dahal <i>Matrix Industries (US)</i>	Additive Printing and Photonic Sintering of High-Performance and Flexible Thermoelectric Materials and Devices Using Colloidal Nanocrystals Tony Varghese <i>Boise State University (United States)</i>
16:15- 16:30	Mechanical Properties and Failure Analysis of Higher Manganese Silicide Yu-Chih Tseng <i>Canmet Materials (Canada)</i>	Filling Fraction Fluctuation in CoSb₃-based Skutterudites Synthesized by High Pressure Federico Serrano-Sanchez <i>Instituto de Ciencia de Materiales de Madrid (Spain)</i>	On the Study of Electrospinning for Thermoelectric Devices Ben-Je Lwo <i>National Defense University (Taiwan)</i>

THURSDAY

	Track 1 (Ballroom A)	Track 2 (Ballroom B)	Track 3 (Ballroom C)
	Chalcogenides (S, Se, Te) {SnSe}	Other Materials {Nanowires, Thin Films}	Oxides
08:30-08:45	<p>Thermoelectric performance of spark plasma-textured n-type polycrystalline SnSe Penpeng Shang <i>State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science and Engineering, Tsinghua University (China)</i></p>	<p>Low-pressure chemical vapour deposition synthesis of metal-chalcogenide materials for thermoelectric micro-generator applications Stephen Richards <i>School of Chemistry (UK)</i></p>	
08:45-09:00	<p>Electro-acoustic Decoupling to Enhanced Thermoelectric Performance of SnTe by High Efficient Cation and Anion Co-doping Junyou Yang <i>Huazhong University of Science and Technology (China)</i></p>	<p>Development of a ZT-Measurement system for thin films plus additional Hall constant determination in a temperature range from LN₂ up to 300 °C Hans-W. Marx, <i>Linseis Messgeräte GmbH (Germany)</i></p>	
09:00-09:15	<p>Ultra-high average figure of merit in synergistic band engineered Sn_{1-x}Na_xSe_{0.9}S_{0.1} single crystals Kunling Peng <i>Chongqing University (China)</i></p>	<p>Transport measurements of bismuth nanowire embedded in quartz template by nano-fabrication Yasuhiro Hasegawa <i>Saitama University (Japan)</i></p>	
09:15-09:30	<p>Modification of bulk heterojunction and Cl doping for high thermoelectric performance SnSe₂/SnSe nanocomposites Yuejiao Shu <i>Wuhan University of Technology (China)</i></p>	<p>Scalable, large-area and adaptable thermoelectric nanomaterials with high energy conversion efficiencies Merce Pacios <i>Catalonia Institute for Energy Research (IREC) (Spain)</i></p>	<p>Transferable nanoporous Ca₃Co₄O₉ thin films for flexible thermoelectric applications Biplab Paul <i>Thin Film Physics Division, Department of Physics, Chemistry, and Biology (IFM), Linköping University (Sweden)</i></p>
09:30-09:45	<p>Structure and transport properties of nanostructured alloys of the novel thermoelectric material SnSe Norbert Nemes</p>	<p>High-Performance Thermoelectric Properties of Multiwall Carbon Nanotubes Through Chemical Treatments André Pereira</p>	<p>Synthesis, sintering and thermoelectric properties of Sr_{1-x}La_xCoO₃ cubic perovskite ceramics Fabian Delorme</p>

	<i>Department of Materials Physics, Universidad Complutense de Madrid (Spain)</i>	<i>Departamento de Física e Astronomia da Faculdade de Ciências da Universidade do Porto (Portugal)</i>	<i>Université de Tours (France)</i>
09:45-10:00	Electrodeposition and thermoelectric characterizations of SnSe films Nicolas Stein <i>Institut Jean Lamour (France)</i>	Integrated Silicon/Silicon Germanium Nanowires Thermo-Electric Generators Alex Morata <i>Catalonia Institute for Energy Research (IREC) (Spain)</i>	Self-assembled oxide 2D nanocomposite with enhanced thermoelectric power factor and reduced thermal conductivity Armin Feldhoff <i>Leibniz University Hannover (Germany)</i>
10:00-10:15	Reassessment of thermoelectric potential of SnS Jiri Hejtmanek <i>Institute of Physics of the Czech Academy of Sciences, Praha (Czech Republic)</i>	Simulation, fabrication and measurements of thermoelectric transport properties of crystalline sub-micron silicon beams Andrej Stranz <i>IMB-CNM (CSIC) (Spain)</i>	Extended Solubility Limit of ZnO on Binary Doping Leading to Anomalously Low Thermal Conductivity Michitaka Ohtaki <i>Research and Education Center for Advanced Energy Materials, Devices, and Systems, Kyushu University (Japan)</i>
10:15-10:30	Effect of resonant dopant In on the thermoelectric properties of Sn_{1.03}Te Shantanu Misra <i>Institut Jean Lamour (France)</i>	Thin film Tin Selenide (SnSe) Thermoelectric Generators Exhibiting Ultra-Low Thermal Conductivity Matthew Burton <i>University of Swansea (UK)</i>	The Seebeck coefficient in some Ru oxides Florent Pawula <i>Laboratoire CRISMAT, Caen (France)</i>
10:30-11:00	COFFEE BREAK		
	Other Materials	Modelling	Applications
11:00-11:15	Enhancement of Thermoelectric Performances in Topological Crystal Insulator Pb_{0.7}Sn_{0.3}Se via Weak Perturbation of the Topological State and Chemical Potential Tuning by Chlorine Doping Rhyee Jong-Soo <i>Kyung Hee University (South Korea)</i>	INVITED Thermopower of thermoelectric materials with resonant levels - beyond the constant scattering time approximation Bartłomiej Wiendlocha <i>Faculty of Physics and Applied Computer Science, AGH University of Science and Technology (Poland)</i>	Key Issues in Developing Viable PV/TE Hybrid Systems Gao Min <i>Cardiff University (UK)</i>
11:15-11:30	Self-compensating defects in AgSbTe₂ from first principles studies Szczyпка Wojciech <i>AGH University of Science and Technology (Poland)</i>		Harvesting Waste Heat from Cement Kiln by Thermoelectric System Alireza Rezaniakolaei <i>Department of Energy Technology, Aalborg University (Denmark)</i>

11:30-11:45	INVITED Quantum materials for thermoelectricity Kornelius Nielsch <i>Leibniz Institute for Solid State and Materials Research - IFW Dresden (Dresden, Germany) (Germany)</i>	Anharmonic and highly anisotropic low energy vibrational guest modes in the type IX chiral cubic barium-silicon clathrate Romain Viennois <i>Institut Charles Gerhardt Montpellier (France)</i>	Zonal thermoelectric passenger cooling: Simulation and Experiment Guido Francesconi <i>European Thermodynamics Ltd. (UK)</i>
11:45-12:00		Experimental validation of a 3D transient model of a Thermoelectric Generator Jesus Ernesto Jimenez Aispuro <i>Laboratoire des Sciences de l'Ingénieur Appliquées à la Mécanique et au Génie Electrique (France)</i>	Do high efficiency kW pulsed thermoelectric generators exist? John Stockholm <i>Marvel Thermoelectrics (France)</i>
12:00-12:15	Telluride based Thermoelectrics: from Glasses to Polycrystalline Materials Bhuvanesh Srinivasan <i>Institut des Sciences Chimiques de Rennes (France)</i>	Angular Anisotropy of Thermoelectric Properties of a Periodic Composite Medium in the Presence of a Magnetic Field Yakov Strel'niker <i>Department of Physics, Bar-Ilan University (Israel)</i>	Comparative analysis of different cooling systems for geothermal thermoelectric generators Leyre Catalan <i>Public University of Navarre (Spain)</i>
12:15-12:30	Effect of microstructure on the thermoelectric properties of bulk $\text{Ag}_{16.7}\text{Sb}_{30}\text{Te}_{53.3}$ mosaic crystals. Lamya Abdellaoui <i>Max-Planck-Institut für Eisenforschung GmbH</i>	The law of soil heat transfer in the temperature difference power generation system of forest soil Chen Chen <i>Beijing Forestry University (China)</i>	Prototypical thermoelectric generator TEG for waste heat conversion from biogas-fired burner Rafal Zybała <i>ITME Institute of Electronic Materials Technology (Poland)</i>
12:30-14:00	LUNCH		
Other Materials		Applications	Organic and Hybrid Materials {Hybrids}
14:00-14:15	A Critical Assessment of the Impact of Excess Ni on the Thermoelectric Properties of ZrNiSn Popuri Srinivasarao <i>University of Glasgow (UK)</i>		
14:15-14:30	Half-Heusler Thermoelectrics: Stable or Unstable? Wenjie Xie,	Complete characterization of bulk thermoelectric elements up to 250 °C by means of impedance spectroscopy	Enhanced Thermoelectric Properties of PEDOT/Te Quantum Dot Composite Films Qin Yao

	<i>Institute for Material Science, University Stuttgart (Germany)</i>	Jorge García-Cañadas <i>Universitat Jaume I (Spain)</i>	<i>Shanghai Institute of Ceramics, Chinese Academy of Sciences (China)</i>
14:30-14:45	Efficient waste heat recovery in metal-rich TiNiCu_ySn half-Heusler alloys Jan-Willem Bos <i>Heriot-Watt University (UK)</i>	A Study on Forest Soil Thermoelectric Energy Harvesting Method Ga Latai <i>School of Technology (China)</i>	Energy filtering effect of PEDOT:PSS/Bi₂Te₃ nanowire composites Wan Sik Kim <i>GIST (Gwangju Institute of Science and Technology) (South Korea)</i>
14:45:15:00	Low Temperature Magnetotransport Anomalies in Fe-Doped (Ti, Hf, Zr)NiSn Alloys Trevor Bailey <i>University of Michigan, Department of Physics (US)</i>	Maximum Power Point Tracking on a TEG operated under constant heat conditions Marcos Compadre <i>School of Engineering, University of Glasgow (UK)</i>	Module Design for Organic Thermoelectric Materials Masakazu Mukaida <i>Nanomaterial Research Institute, National Institute of Advanced Industrial Science and Technology (AIST) (Japan)</i>
15:00-15:15	The decreases of the lattice thermal conductivity of the FeV_{0.955-x}Hf_{0.045}Ti_xSb half-Heusler phases Kevin Delime-Codrin <i>Toyota Technological Institute (Japan)</i>	A new thermoelectric generator concept for maximizing waste heat recovery under highly variable thermal load Francisco Brito <i>Universidade do Minho, Mech. Eng. Dept. (Portugal)</i>	Towards the Fabrication of Flexible and Efficient Organic Thermoelectric Generators by Inkjet Printing Technique Marco Cassinelli <i>Italian Institute of Technology (Italy)</i>
15:15-15:30	Unique role of refractory Ta alloying in enhancing the figure of merit of NbFeSb thermoelectric materials Junjie Yu <i>Zhejiang University (China)</i>	Preview Certified Reference Material Data, Measurement Protocols, and Uncertainty Analysis for p-Type Polycrystalline Silicon Germanium at High Temperature Joshua Martin <i>National Institute of Standards and Technology (US)</i>	Films of carbonaceous nanofillers and polymers as stable n-type materials for thermoelectric devices Clara M. Gómez <i>Institute of Material Science (Spain)</i>
15:30-15:45	Ultra-fast fabrication of bulk ZrNiSn thermoelectric material through self-propagating high-temperature synthesis combined with in-situ quick pressing Tiezheng Hu <i>Wuhan University of Technology (China)</i>	Wearable Electrocardiography System Powered by a Flexible Thermoelectric Power Generation Module Choong Sun Kim <i>Korea Advanced Institute of Science and Technology (South Korea)</i>	Interfacial thermal resistance between Bismuth Telluride and PEDOT: PSS Koji Miyazaki <i>Kyushu Institute of Technology (Japan)</i>

15:45- 16:15	COFFEE BREAK
	PLENARY SESSION and CLOSING CEREMONY
16:15- 16:55	Young Investigator Award lecture
16:55- 17:35	Outstanding Achievement Award lecture
17:35	CLOSING REMARKS