

Last minute changes

Design for high throughput manufacturing of electrolyte based thermoelectric devices

Seyedmohammad Mortazavinatanzi, Alireza Rezania, Lasse Rosendahl, Xavier Crispin, Dan Zhao

Wed, 25 Sep / Organics / 14:45 – 15:00

Moved to: Wed 25 Sep, Applications II/Modules III / 12:30-12:45

Revised to: **Large area manufacturing of flexible thermoelectric modules through Hybrid Flexible Electronics**

Seyedmohammad Mortazavinatanzi, Alireza Rezania, Lasse Rosendahl

Fabrication and characterization of organic thermoelectric materials based on doped poly (3-hexylthiophene) and carbon nanotube forest

Saeed Mardi, Khabib Yusupov, P. M. Martinez, Alberto Vomiero, Andrea Reale

Wed, 25 Sep / Organics / 15:00 – 15:15

Moved one slot up, 14:45 – 15:00

The thermoelectric properties of novel Half-Heuslers materials

Kamil Kaszyca, Rafał Zybala

Wed, 25 Sep / Heusler / 12:15 – 12:30

Cancelled

Effects of tin for antimony substitution on the thermoelectric properties of the $\text{Fe}_{1.5}\text{TiSb}_{1-x}\text{Sn}_x$ Heusler alloy

Anna Kalugina, Anastasiia Taranova, Dmitry Karpenkov, Vladislav Kurichenko, Andrei Novitskii, Andrei Voronin, Andriy Grytsiv, Vladimir Khovaylo

Wed, 25 Sep / Heusler / 12:30 – 12:45

Moved one slot up, 12:15 – 12:30

Preparation and characterization of nanostructured $(\text{GeTe})_{75}(\text{AgSbTe}_2)_x(\text{AgSbSe}_2)_y$ thermoelectric materials

Rafał Zybala, Kamil Kaszyca, Maksymilian Schmidt, Mirosław Kruszewski, Łukasz Ciupiński

Added to Wed, 25 Sep / Nanomaterials II / 16:30 – 16:45

Optimization of thermoelectric generator based on High Manganese Silicides and $\text{Mg}(\text{Si},\text{Sn})$ solid solutions

Ivan Tkhorzhevskiy, Anastasiia Tukmakova, Anna Novotel'nova, Grigorii Isachenko

Added to Posters II, Tues, 24 Sep, Power Generation (#36a)

Defects in ZnO obtained by electrochemical reactions

Cristina V. Manzano, Aida Serrano, Álvaro Muñoz-Noval, José F. Fernandez, Marisol S. Martín-González

Added to Posters II, Tues, 24 Sep, Other Materials (#49)

Silicon Nanowires as antennas for thermal conductivity reduction in silicon thin films

Stefano Magagna, Dario Narducci

Added to Posters II, Tues, 24 Sep, Other Materials (#50)

Improved extruded thermoelectric materials of the company RMT

Mariya Nazarenko

Moved to: Position 12A (Posters II)

High Thermoelectric Performance of Reduced Nb-doped SrTiO_3 Containing Exsolved Ni nanoparticles

Michitaka Ohtaki, Shinji Hirata, Koichiro Suekuni

Was: Tue, 24 Sep / Oxides II / 10:45 – 11:00

Moved to: Mon, 23 Sep, Oxides I / 14:15-14:30

Do the spins enhance the thermopower of both magnetic oxides and sulfides?

Maignan Antoine, Berthebaud David

Was: Mon, 23 Sep, Oxides I / 14:15-14:30

Moved to: Tue, 24 Sep / Oxides II / 10:45 – 11:00

Development of thermoelectric segmented (FGM) n-leg with contacts over a wide temperature range (50 600 °C)

Zinovi Dashevsky, Taras Parashchuk, Krzysztof Wojciechowski

Was: Mon, 23 Sep, Modules I / 14:45-15:00

Moved to: Wed, 25 Sep / Nanomaterials II / 16:45 – 17:00

PROGRAM OVERVIEW

Monday, 23 Sep	Tuesday, 24 Sep	Wednesday, 25 Sep
Registration 08:00	Registration 08:00	Registration 08:30
Plenary & Invited I 09:00-10:45	Invited II 08:45-10:15	Invited III 09:15-10:45
Coffee Break 10:45-11:15	Coffee Break 10:15-10:45	Coffee Break 10:45-11:15
Applications I Chalcogenides I Theory and Modeling I 11:15-12:45	Power Generation Chalcogenides III Oxides II 10:45-12:15	Chalcogenides V Applications II/Modules III Heusler 11:15-12:45
Lunch 12:45-14:15	Lunch 12:15-13:30	Lunch 12:45-14:15
Nanomaterials I Modules I Oxides I 14:15-15:30	Chalcogenides IV Modules II Other Materials I 13:30-14:45	Organics Measuring Techniques Other Materials II 14:15-15:30
Coffee Break 15:30-16:00	Coffee Break 14:45-15:15	Coffee Break 15:30-16:00
Chalcogenides II Silicides I Theory and Modeling II 16:00-17:00	Skutterudites Silicides II Sponsors Session/Projects 15:15-16:15	Chalcogenides VI Other Materials III Nanomaterials II 16:00-17:00
Posters I 17:00-18:30	Posters II 16:15-17:45	Closing 17:00-17:30
Welcome Reception 18:30-19:30	Tour & Conference Dinner 17:45-22:00	

DETAILED PROGRAM

Monday, 23th September

8:00	Registration		
9:00-10:45	Room: Panorama Plenary & Invited I		
Chair	Franck Gascoin		
9:00-9:45	Understanding and Designing High Performance Thermoelectrics <i>Mercouri Kanatzidis</i>		
9:45-10:15	Tailoring thermal and electronic properties of bulk $\text{Cu}_{26}\text{T}_2(\text{Ge},\text{Sn})_6\text{S}_{32}$ colusite through defects engineering and functionalization of the conductive network <i>Emmanuel Guilmeau, Ventrapati Pavan Kumar, Pierric Lemoine, Bernard Raveau, Cédric Bourghès, Vivian Nassif, Rabih Al Rahal Al Orabi, Andrew R. Supka, Marco Fornari, Koichiro Suekuni, Oleg I. Lebedev, Yohan Bouyrie, Michihiro Ohta</i>		
10:15-10:45	Screening thermoelectric materials with ab initio atomistic modelling and machine learning techniques <i>Ole Martin Løvvik, Kristian Berland, Filippo Remonato, Espen Sagvolden, Espen Flage-Larsen</i>		
10:45-11:15	Coffee Break		
11:15-12:45	Applications I	Chalcogenides I	Theory and Modeling I
Chair	Jean-Pierre Fleurial	Antonio Goncalves	Neophytos Neophytou
Room	Panorama	Megaron B	Megaron C
11:15-11:30	Thermoelectric Harvesters and the Internet of Things: Technological and Economic Drivers <i>Dario Narducci</i>	Copper iron sulfides as promising thermoelectric materials <i>Paz Vaquero, Shoeb Athar, Ronald Smith</i>	Estimations of thermal conductivity and thermoelectric performance through phase transitions <i>Matthias Agne, G Jeffrey Snyder</i>
11:30 - 11:45	Modeling and Design Optimization of a Thermoelectric Generator for Reducing Fuel Consumption in a Heavy-Duty Vehicle <i>Lars Heber</i>	Crystal structure reinvestigation of synthetic thermoelectric $\text{Cu}_{22}\text{Fe}_8\text{Ge}_4\text{S}_{32}$ germanite from multi-scale characterizations <i>Pierric Lemoine, Laura Paradis-Fortin, Ventrapati Pavan Kumar, Carmelo Prestipino, Bernard Malaman, Gérard Le Caër, Vivian Nassif, Erik Elkaim, Gabin Guélou, Bernard Raveau, Stéphane Cordier, Emmanuel Guilmeau</i>	The annealed-nanograin phase for simultaneous increase of the conductivity and the Seebeck coefficient and large thermoelectric power factor enhancement <i>Xanthippi Zianni</i>
11:45 - 12:00	Radioisotope Power for an Autonomous Ice-Penetrating Cryobot to Explore Icy World <i>David Woerner, Terry Hendricks, Jean-Pierre Fleurial</i>	Kesterite-Type Chalcogenides as Potential Thermoelectric Materials <i>Anthony Powell, Paz Vaquero, Panagiotis Mangelis</i>	Looking for new thermoelectric materials among ternary intermetallics using high-throughput calculations <i>Celine Barreteau, Jean-Claude Crivello, Jean-Marc Joubert, Eric Alleno</i>

DETAILED PROGRAM

Room	Panorama	Megaron B	Megaron C
12:00-12:15	Thermoelectric Generator Design and Experimentation for Waste-heat Recovery in a Manufacturing Plant Miguel Araiz , David Astrain, Patricia Aranguren, Alvaro Martínez, Leyre Catalan, Alvaro Casi	Effect of order-disorder transition and crystal symmetry on the thermoelectric properties of nanostructured kesterite Cu_2ZnS_4 Eleonora Isotta , Carlo Fanciulli, Nicola Maria Pugno, Paolo Scardi	A theoretical model for the Seebeck coefficient in superlattices and nanocomposite materials with partial energy relaxation Vassilios Vargiamidis , Mischa Thesberg, Neophytos Neophytou
12:15-12:30	Autonomous volcanic monitoring stations at Teide national park (Spain) Leyre Catalan , Miguel Araiz, Patricia Aranguren, Amaia Garacochea, David Astrain, Vidal Dominguez, Ana Carolina Montañez, Germán D. Padilla, Nemesio M. Perez, Pedro A. Hernandez, José Barrancos, José F. Albert, Celestino García de la Noceda	Process-controlled transport properties of scaled-up synthetic mineral colusite Gabin Guélou , Christophe Couder, Charles Manière, Gaél Marnier, Pauline Martin, Eric Hug, Pierric Lemoine, Christophe Coureau, Emmanuel Guilmea	Accessing lattice thermal conductivity of complex crystal structures via machine learning interatomic potentials Pavel Korotaev
12:30-11:15	Assessment of Thermoelectric Generator Concepts incorporating Thermal Control during Driving Cycles Francisco P. Brito , Rui Vieira, Nuno Pacheco, Jorge Martins, Luís Goncalves	Nanograined low doped chalcopyrite – route to the optimization of thermoelectric properties Jiri Hejtmanek , Petr Levinsky, Maria Pashchenko, Cestmir Drasar, Jiri Navratil, Erika Dutkova, Peter Balaz	Phonon Lifetimes in $\text{S}_2\text{T}_2\text{O}_3$ Investigated with High-Energy Resolution Neutron Spectroscopy Klaus Habicht , Katharina Fritsch, Tommy Hofmann, Thomas Keller
12:45-14:15	LUNCH		
14:15-15:30	Nanomaterials I	Modules I	Oxides I
Chair	Daryoosh Vashaee	Krzysztof Wojciechowski	Emmanuel Guilmeau
Room	Panorama	Megaron B	Megaron C
14:15 -14:30	Boosting the efficiency of thermoelectric materials using porous alumina: recent examples Marisol Martin Gonzalez	Scalable and efficient ceramic interconnect technologies for the integration of Half-Heusler thermoelectric alloys in modules Jochen Schilm , Daniel Zuckermann, Axel Rost, Jan Marien, Mario Trache, Vitali Macin	Do the spins enhance the thermopower of both magnetic oxides and sulfides? Maignan Antoine , Berthebaud David
14:30 -14:45	Hybrid thermoelectrics based on mesoporous silicon filled with functionalized molecules Natalia Gostkowska , Klaus Habicht, Tommy Hofmann	Reliability assessment of thermoelectric device for power generation Seungwoo Han , Seunggik Shin	Investigation of the Electronic Transport Mechanism of La- and Y-doped Ca_2MnO_4 Amram Azulay , Marwan Wahabi, Yuriy Natanzon, Yaron Amouyal

DETAILED PROGRAM

Room	Panorama	Megaron B	Megaron C
14:45-15:00	Thermoelectric properties of thin film of Graphene-Mesoporous semiconductor nanocomposites Stéphanie Sauze, Arnaud Stolz, Pascal Brault, Nadjib Semmar, Mohammad Reza Aziziyan, Richard Arès, Abderraouf Boucherif	Development of thermoelectric segmented (FGM) n-leg with contacts over a wide temperature range (50 600 °C) Zinovi Dashevsky, Taras Parashchuk, Krzysztof Wojciechowski	Near-broken gap junction for ohmic high temperature direct-junction thermoelectrics. Raphael Schuler, Federico Bianchini, Helmer Fjellvåg, Truls Norby
15:00 - 15:15	Organic-inorganic hybrid thermoelectrics based on mesoporous silicon and poly(3,4-ethylenedioxythiophene) (PEDOT) polymer blends Haider Haseeb, Klaus Habicht, Danny Kojda, Britta Ryll, Tommy Hofmann	Integrated Thermoelectric Sensors based on Quantum Dots Superlattices for Thermal Management Applications Guillaume Savelli, Jean-Philippe Colonna, Matthias Keller, Daniel Wendler, Pascal Faucherand, Agnès Royer	Fully-inorganic p-type $\text{Ca}_3\text{Co}_4\text{O}_9$ and n-type ZnO thin films for flexible thermoelectric Biplab Paul, Per Eklund
15:15-15:30	Ionic liquid ferrofluids for thermoelectrics applications Alessandro Talone, Alberto Maria Testa, Sonja Jovanovic, Sara Laureti, Aldo Capobianchi, Elisabetta Agostinelli, Gaspere Varvaro, Patrizia Imperatori, Maria Salvador, Davide Peddis	High power thermoelectric generators based on large arrays of silicon nanowires Shaimaa Elyamny, Elisabetta Dimaggio, Giovanni Pennelli	Control of Thermoelectric Properties of TiO_2 Oxide Ceramics by Niobium Doping Xiaodong Liu, Feridoon Azough, Robert Freer
15:30-16:00	Coffee Break		
16:00-17:00	Chalcogenides II	Silicides I	Theory and Modeling I
Chair	Marisol Martin Gonzalez	Johannes de Boor	Ole Martin Løvvik
Room	Panorama	Megaron B	Megaron C
16:00-16:15	Template assisted electrodeposition of intricate Bi_2Te_3 structures Olga Caballero-Calero, Rut Martinez-Moro, María Jesús Ramírez-Peral, Marisol Martín-González	Low-temperature thermal conductivity of $\text{Co}_{1-x}\text{Fe}_x\text{Si}$ Yuri Ivanov, Sergei Novikov, Alexander Zyuzin, Dmitry Pshenay-Severin, Mikhail Volkov, Alexander Burkov, Lauritz Schnatmann, Nikolaus Perez, Heiko Reith, Gabri Schierring, Kornelius Nielsch	Thermal transport in disordered nanoporous Si geometries from large-scale molecular dynamics Laura de Sousa Oliveira, Vassilios Vargiamidis, Neophytos Neophytou

DETAILED PROGRAM

Room	Panorama	Megaron B	Megaron C
16:15-16:30	Low-temperature synthesis of bismuth telluride-based materials and its characterization Dennis Groeneveld, Torben Dankwort, Michael Poschmann, Hendrik Groß, Lorenz Kienle, Wolfgang Bensch, Juergen Woellenstein, Jan Koenig	Amorphous and crystalline Cr-Si thin films: thermoelectric properties and crystallization kinetics depending on the composition and film thickness Sergei Novikov, Alexander Burkov, Victoria Kuznetsova, Joachim Schumann	Numerical extraction of TE coefficients of complex bandstructure materials with full energy/momentum scattering dependences – the example of half-Heusler alloys Patrizio Graziosi, Chathurangi Kumarasinghe, Neophytos Neophytou
16:30-16:45	Binary and ternary chalcogenide thermoelectric thin films via single source low pressure chemical vapour deposition Kees de Groot, Daniel Newbrook, Steven Richard, Ruomeng Huang, Andrew Hector, Bill Levason, Gill Reid	Thermoelectric properties of modulation doped $\text{Si}_{1-x}(\text{Si}_{75}\text{Ge}_{25})_x$ Vladimir Khovaylo, Illia Serhiienko, Aleksandra Ivanova, Andrey Usenko, Takao Mori	First principle investigation of electronic and thermal properties of Stanene/h-BN hetrostructure Shivani Saini, Sanjai Singh
16:45 - 17:00	Interplay between Structural and Thermoelectric Properties in Epitaxial $\text{Sb}_{2+x}\text{Te}_3$ Alloys Stefano Cecchi, Daniele Dragoni, Dominik Kriegner, Elisa Tisbi, Eugenio Zallo, Fabrizio Arciprete, Václav Holý, Marco Bernasconi, Raffaella Calarco	Mechanical properties characterization of $\text{Mg}_2(\text{Si},\text{Sn})$ thermoelectric materials at room temperature and above Gustavo Castillo Hernandez, Mohammad Yasser, Sahar Ayachi, Benedikt Klobes, Johannes de Boor, Eckhard Müller	Enhancement of the Seebeck coefficient in ferrofluid based thermoelectric materials Marianna Vasilakaki, Julia Chikina, Valeriy Shikin, Nikolaos Ntallis, Davide Peddis, Andrey Varlamov, Kalliopi Trohidou
17:00-18:30	Posters I		
Chairs	Marisol Martin Gonzalez, Luis Fonseca, Alexander Burkov		
18:30-19:30	Welcome Reception		

Chalcogenides I

1. Mechanochemistry for Thermoelectrics : ternary Cu-Sb-S Sulphides Synthesized in an Industrial Mill
Peter Baláž, Emmanuel Guilmeau, Oleksandr Dobrozhan, Matej Baláž, Michal Hegedus, Tristan Barbier, Nina Daneu, Marcela Achimovičová, Mária Kaňuchová, Zdenka Lukáčová-Bujňáková
2. Solid-State Synthesis and Thermoelectric Properties of Permingeatite Cu_3SbSe_4
Go-Eun Lee, Ji-Hee Pi, Il-Ho Kim
3. Synthesis and Thermoelectric Properties of Fe-Doped Tetrahedrites $\text{Cu}_{12-x}\text{Fe}_x\text{Sb}_4\text{S}_{13}$
Sung-Yoon Kim, Go-Eun Lee, Il-Ho Kim
4. Effects of Se Doping on Thermoelectric Properties of Tetrahedrites $\text{Cu}_{12}\text{Sb}_4\text{S}_{13-z}\text{Se}_z$
Sung-Gyu Kwak, Go-Eun Lee, Il-Ho Kim
5. Thermoelectric Properties of Ge-Doped Famatinites $\text{Cu}_3\text{Sb}_{1-x}\text{Ge}_x\text{S}_4$ Prepared by Mechanical Alloying and Hot Pressing
Ji-Hee Pi, Go-Eun Lee, Il-Ho Kim
6. Structural, thermoelectric and stability studies of Fe-doped copper sulfide
Andrzej Mikula, Paweł Nieroda, Krzysztof Mars, Andrzej Kolezynski
7. Thermoelectrical properties and Shubnikov – de Haas effect in single crystals $\text{Sb}_{2-x}\text{Cu}_x\text{Te}_3$
Vladimir Kulbachinskii, Dmitry Zinoviev, Zharaskan Ismailov, Vladimir Kytin
8. Thermoelectric properties of $\text{Cu}_{1-x}\text{Pd}_x\text{FeS}_2$ below room temperature
Petr Levinsky, Jiri Hejtmánek, Jiri Navrátil, Cestmír Drasar, Lenka Kubickova
9. Experimental and theoretical study of thermoelectric properties of $\text{Ge}(\text{Sn,Pb})\text{Te}$ alloys doped with bismuth and antimony
Dmitry Pshenay-Severin, Alexander Shabaldin, Alexander Samunin, Sergei Novikov, Petr Konstantinov, Alexander Burkov
10. Green Chemical and High-throughput Synthesis of Bi_2Te_3 and Sb_2Te_3 Nanostructures
Bejan Hamawandi, Martina Orlovská, Sedat Ballıkaya, Muhammet Toprak
11. Thermoelectric sulphides for a green and sustainable future
Duarte Moço, Luís Filipe Santos, Elsa Branco Lopes, **António Pereira Gonçalves**
12. Control of Electrical and Thermal Properties through Site-selective Codoping in n-type Bismuth Telluride Thermoelectric Material
Jae Ki Lee, Byungki Ryu, Sungjin Park, JongHo PARK, Su-Dong Park

Heuslers

13. Effect of dual substitution for the thermoelectric properties of Fe₂VAI based Heusler alloys
Andrei Voronin, Illia Serhiienko, Anastasiia Taranova, Andrei Novitskii, Rie Umetsu, Vladimir Khovaylo
14. Atomic scale characterization of Fe₂VAI Heusler alloy for thermoelectric applications
Leonie Gomell, Shyam Katnagallu, Stefan Maier, Dierk Raabe, Christina Scheu, Eric Alleno, Baptiste Gault
15. Enhanced thermoelectric properties of Fe₂VAI-based thin films
Alexander Riss, Bernhard Hinterleitner, Christoph Eisenmenger-Sittner, Ernst Bauer
16. Fabrication of Half Heusler Solid Solutions: Mechanical Alloying vs. Arc Melting
Georgios Mesaritis, Gil Breuer, Yaniv Gelbstein, Theodora Kyratsi
17. Thermoelectric properties of p-type Half-Heusler TiCoSb Solid Solutions fabricated by Mechanical Alloying and Arc-Melting
Ioanna Ioannou, Gil Breuer, Yaniv Gelbstein, Theodora Kyratsi
18. Thermoelectric properties of self-substituted Fe₂VAI alloys
Abou Diack Rassello, Eric Alleno, Celine Barreateau, Jean-Marc Joubert, Jean-Claude Crivello

Nanomaterials

19. Temperature dependent changes in the material properties of sputtered Si₈₀Ge₂₀ thin films in combination with ultra-thin Au films
Alexander Steigert, Danny Kojda, Katherine Ann Mazzio, Rene Gunder, Florian Ruske, Johannes Frisch, Klaus Habicht, Simone Raoux
20. Nanostructuring of bismuth telluride by an oxidation - reduction method
Bartosz Trawiński, Bogusław Kusz
21. Flexible thermoelectric materials by hybridizing PPy particles/PEDOT: PSS with nanoporous Ca₃Co₄O₉ thin films
Binbin Xin, Erik Ekström, lei wang, Arnaud Febvrier, Biplab Paul, Per Eklund
22. Phases study of the thermoelectric NaPb₁₀SbS₁₂ composite by Electron Microscopy Techniques
Stavros Kozakos, Christos B. Lioutas, Nikolaos Vouroutzis, Nikolaos Frangis, Tyler John Slade, Mercouri G. Kanatzidis
23. Electron microscopy study of the thermoelectric NaPb₂SbS₄ composite
Stavros Kozakos, Nikolaos Vouroutzis, Christos B. Lioutas, Nikolaos Frangis, Tyler John Slade, Mercouri G. Kanatzidis
24. Photoresponse manifestation in thermoelectric phenomena on thin films of bismuth and bismuth-antimony
Elena Makarova, Anastasiia Tukmakova, Nataliya Kablukova, Vladislav Fomin, Anna Novotelnova, Michael Khodzitsky, Peter Demchenko
25. Design and Fabrication of Si-based multi-barrier structures using non-uniform doping distribution
Panagiotis Mangelis, Fei Tong, Elisabetta Dimaggio, Neophytos Neophytou, Dario Narducci, Giovanni Pennelli
26. MEMS integrable vertically aligned SiGe thermoelectric nanowires
Jose Manuel Sojo Gordillo, Jaime Segura, **Mercé Pacios**, Gerard Gadea, Alex Morata, Albert Tarancón

Organics

27. Fabrication and characterization of Graphene nanoplatelets and ethyl cellulose composite as printable thermoelectric materials

Saeed Mardi, Marco Risi Ambrogioni, Andrea Reale

Oxides

28. Reactive sputtering of oxide thin films on sapphire and van der Waals epitaxial growth on flexible muscovite

Erik Ekström, Arnaud le Febvrier, Ludvig Landälv, Justinas Palisaitis, Fredrik Eriksson, Biplab Paul, Per Eklund

29. Substrate-induced modification of microstructure and thermoelectric properties in Sr-doped $\text{Ca}_3\text{Co}_4\text{O}_9$ thick films

Maria A. Madre, Mario Mora, Hippolyte Amaveda, Miguel A. Torres, Andres Sotelo

30. Modifying $\text{Ca}_3\text{Co}_4\text{O}_9$ properties through CTi nanoparticles addition

Andres Sotelo, Hippolyte Amaveda, Mario Mora, Sylvain Marinel, Miguel A. Torres, Maria A. Madre

31. Structure/property relationships of the thermoelectric $\text{Zn}_{1-x}\text{Al}_x\text{O}$ obtained by chemical precipitation and spark plasma sintering

Illia Serhiienko, Evgenia Chernyshova, Andrei Novitskii, Evgeny Kolesnikov, Vladimir Khovaylo, Takao Mori

32. Crystal Growth of Aurivillius phase Bi-V-O

Hitoshi Kohri, Masahiko Kato

Applications

33. Thermoelectric generation as a part of the optimal solution in off-grid hybrid renewable system in places with low irradiation.

Daniel Champier, Rodolfo Dufo-López, Stéphane GIBOUT, Juan M. Lujano-Rojas, José A. DomínguezNavarro

34. Study of different heat exchangers for geothermal thermoelectric generators for Timanfaya national park (Spain)

Leyre Catalan, Miguel Araiz, Patricia Aranguren, David Astrain

35. Thermoelectric wearable devices

Katarzyna Placha, Richard Tuley, Richard Dixon, Phil Kunovski

36. Experimental study and modeling of thermoelectric energy harvesting in low temperature dynamic condition

Alberto Ferrario, Alvise Miozzo, Stefano Boldrini

Cooling Systems

37. Influence of the Design Parameters of a Thermoelectric Subcooler on the COP of a Transcritical CO_2 Refrigeration System

Patricia Aranguren, David Astrain, **Miguel Araiz**, Leyre Catalan, Álvaro Casi, Daniel Sánchez, Rodrigo Llopis, Ramón Cabello

38. Finite Element Modeling of a Thermoelectric Cooler

Ioannis Papadopoulos, **Euripides Hatzikraniotis**

Modules

39. Study of the degradation of different thermoelectric modules in acidic environment
Leyre Catalan, Gurutze Perez, Carlos Berlanga, Amaia Garacochea, David Astrain, Patricia Aranguren, Miguel Araiz
40. Development of TE segmented (FGM) p-leg with contacts over a wide temperature range (50 - 600 °C)
Zinovi Dashevsky, Rafał Knura, Taras Parashchuk, Krzysztof Wojciechowski
41. Detachable Contacts for Simultaneous Thermoelectric Characterization of Half-Heusler Materials
Antoine Micallef, Christian Stiewe, Gregor Oppitz, Stephan Tiedke, Eckhard Müller
42. Performance Evaluation and Stability of Silicide-based Thermoelectric Modules
Antoine de Padoue Shyikira, Gunstein Skomedal, Peter Hugh Middleton
43. Method for investigation of laser processing parameters on thermoelectric properties of dispenser printed bismuth telluride-based thermoelectric materials
Moritz Greifzu, Roman Tkachov, Lukas Stepien, Fabian Lange, Axel Marquardt, Elena Lopez, Frank Brückner, Christoph Leyens
44. Optimizing heat harvesting in a membrane based planar μ TEG; modelling and fabrication
Zahia Bougrioua, Ibrahim Bel-Hadj, Katir Ziouche

Theory and Modeling

45. Correction of Lattice Thermal Conductivity in Compounds with Electrically Resistive Grain Boundaries
Max Wood, Jimmy Kuo, Tyler Slade, G. Jeffrey Snyder
46. Modeling and uncertainty analysis of Seebeck coefficient measurements by Finite Element Method
Kai Huang, Frank Edler, Sebastian Haupt, Pawel Ziolkowski, Christian Stiewe, Eckhard Mueller
47. First-principles evaluation of electron-phonon coupling factor and lattice thermal conductivity of L12 type alloys
Shin Yabuuchi, Yosuke Kurosaki, Naoto Fukatani, Jun Hayakawa
48. Development of a mathematical model of the automotive thermoelectric generator system operation taking into account the negative impact on engine power and the specific driving cycles.
Konstantin Shishov, Roman Poshekhonov, Alexey Osipkov, Pavel Shiriaev, Shehak Sattar
49. In silico studies of chosen doped and co-doped type I silicon clathrates
Wojciech Szczypka, Andrzej Kolezynski
50. Thermodynamics of atom motion and metal deposition in mixed ionic electronic conductors
Matthias Agne, Pengfei Qiu, Xun Shi, G Jeffrey Snyder
51. FEM simulation of terahertz antenna based on Sb and BiSb₁₂ thin films
Aleksei Asach, Mikhail Khodzitsky, Elena Makarova, Natalya Kablukova, Anastasiia Tukmakova, Ivan Tkhorzhevskiy, Anna Novotelnova

Tuesday, 24th September

08:00	Registration		
08:45-10:15	Room: Panorama Invited II		
Chair	Terry Hendricks		
08:45-09:15	Advanced High Temperature Thermoelectric Converter Technologies: Resolving Development Challenges and Planning for a Successful Infusion into System Applications Jean-Pierre FLEURIAL , Thierry CAILLAT		
09:15-09:45	Thermoelectric generators with high power density: challenges and study case with skutterudites-based modules <i>Iurii Kogut, Driss Kenfoui, Philippe Masschelein, Soufiane El Oualid, Christophe Candolfi, Bertrand Lenoir, Markus Bartel, Eugen Geczi, Martin Jaegle, Jan König, Anne Dauscher, Alexandre Jacquot</i>		
09:45-10:15	Understanding Detailed Crystal Structures to Further Improve Thermoelectric Properties of Silicide-based Materials Yuzuru Miyazaki , <i>Hiroki Nagai, Wataru Saito, Kei Hayashi</i>		
10:15-10:45	Coffee Break		
10:45-12:15	Power Generation	Chalcogenides III	Oxides II
Chair	Dario Narducci	Janusz Tobola	Antoine Maignan
Room	Panorama	Megaron B	Megaron C
10:45 - 11:00	Thermoelectric System Economics: New Hot-Side Thermal Design Paradigm Drives Terrestrial Thermoelectric Power System Costs Terry Hendricks	TI-doped SnSe single crystals <i>Kateřina Šraitrová, Petr Levinsky, Jiří Hejtmanek, Vladimír Kuček, Cestmir Drasar</i>	High Thermoelectric Performance of Reduced Nb-doped SrTiO ₃ Containing Exsolved Ni nanoparticles Michitaka Ohtaki , <i>Shinji Hirata, Koichiro Suekuni</i>
11:00-11:15	Industrially Scalable Thermoelectric System for Waste Heat Recovery using Heusler-based Modules and Heat Pipes Geoffrey Roy , <i>Valentin Marchal-Marchant, Olivier Poncelet, Camille van der Rest, Alain Schmitz, Pascal J. Jacques</i>	Effect of the resonant In dopant on the electronic structure, effective mass and lifetimes in SnTe studied using Bloch spectral functions Bartłomiej Wiendlocha , <i>Shantanu Misra, Anne Dauscher, Bertrand Lenoir, Christophe Candolfi, Janusz Tobola</i>	Enhancement of Thermoelectric Response in A-site Deficient Ln ₂ /3TiO ₃ (Ln=La and Nd) Perovskites by Nano Structuring Feridoon Azough , <i>Dursun Ekren, Demie Kéaptsoglou, Quentin Ramasse, Emmanuel Guilmeau, Marion Schaefer, Robert Freer</i>

DETAILED PROGRAM

Room	Panaroma	Megaron B	Megaron C
11:15-11:30	Growth of a compact thermoelectric generator based on multi-disciplinary approach Carlo Fanciulli, <i>Silvana De Iuliis, Adelaide Nespoli, Hossein Abedi, Enrico Bassani, Nicola Bennato, Roberto Dondè, Francesca Migliorini, Simone Battiston, Naida El Habra, Francesco Montagner, Rosalba Gerbasi, Francesca Passaretti</i>	Thermal conductivity of Bi_2Te_3 and SnSe using Debye-Callaway model and Boltzmann transport equation Patricia Al Alam, <i>David Lacroix, Gilles Pernot, Mykola Isaiev, Melanie De Vos, Nicolas Stein, David Osenberg, Laetitia Philippe</i>	"Structural imperfections" in the transition metal oxides SPS synthesis and thermoelectricity. Ihor Veremchuk, <i>Felix Kaiser, Yuri Grin</i>
11:30-11:45	Integration of the Lifetime Performance Prediction Model with SINDA for Improved Thermoelectric Generator Power Estimates Christopher Matthes, <i>Terry Hendricks, Eric Wood</i>	Electronic mechanisms for optimizing the thermoelectric properties of SnTe alloys Dana Ben-Ayoun, <i>Yaniv Gelbstein</i>	Improved thermoelectric performance of calcium cobaltite by controlling composition and processing conditions Jincheng Yu, <i>Kan Chen, Feridoon Azough, Michael J. Reece, Robert Freer</i>
11:45-12:00	Assessment of a High Power Density Thermoelectric Generator Concept for Industrial Applications Francisco P. Brito, <i>Rui Vieira, Nuno Pacheco, Jorge Martins, Luis M. Goncalves, Antonio Goncalves, Theodora Kyratsi, John Stockholm</i>	Transition metal dichalcogenides: the influence of samples sintering on their thermoelectric properties Vitalii Kuznetsov, <i>Galina Yakovleva, Sofya Artemkina, Boris Kuchumov, Anatoliy Romanenko, Vladimir Fedorov, Mi-Kyung Han, Sung-Jin Kim</i>	BiCuSeO phase formation mechanism during reactive spark plasma sintering Andrei Novitskii, <i>Iliia Serhiienko, Vladimir Khovaylo, Takao Mori</i>
12:00-12:15	SiGe low density fibres mats as efficient thermoelectric generators Merce Pacios, <i>Jose Manuel Sojo, Gerard Gadea, Alex Morata, Andreu Cabot, Albert Tarancon</i>	The effect of samples texturing on thermoelectric properties of titanium dichalcogenides with double substitutions $\text{Ti}_{1-x}\text{Nb}_x\text{S}_{2-y}\text{Se}_y$ Anatoliy Romanenko, <i>Galina Yakovleva, Alexandra Ledneva, Sofia Artemkina, Vitalii Kuznetsov, Kamil Zhdanov, Vladimir Fedorov, Mi-Kyung Han, Sung-Jin Kim</i>	Experimental study of the structure and thermoelectric properties in the Bi_2PdO_4 system Hong Hai Nguyen, <i>Jan-Ekkehard Hoffmann, Klaus Habicht, Katharina Fritsch</i>
12:15-13:30	Lunch		

13:30-14:45	Chalcogenides IV Chair Euripides Hatzikraniotis Room Panorama Power Factor Improvements in Thermoelectric PbTe under Stress Gavin Woolman, Ingo Loa	Modules II Luis Fonseca Megaron B Combined spray-coating and laser structuring as unique fabrication method for thermoelectric generators Mario Wolf, Marvin Abt, Ludger Overmeyer, Armin Feldhoff	Other Materials I Anthony Powell Megaron C Exploration of Thermoelectric properties of Nuclear Based Materials Jean-Christophe Griveau, Eric Colineau, Roberto Caciuffo
13:30-13:45			
13:45-14:00	Inflection Point for Phonon Thermal Conductivity in Submicron Scale Grained Undoped PbTe by Mechanical Grinding-Hot Pressing Mongkol Bumrungron, Issei Morioka, Toshiharu Hirai, Ryusuke Yasufuku, Kenichi Hanasaku, Kazuhiro Hasezaki	Assembly of liquid-based thermoelectric generator modules based on amine bonding Laure Jeandupeux, Edith Laux, Claudio Prieur, Philippe Potty, Herbert Keppner	Yb ₁₄ M _n Sb ₁₁ and Co: a Zintl-transition metal composite for enhanced thermoelectric performance Giacomo Cerretti, Sabah Bux, Jean-Pierre Fleurial
14:00-14:15	Enhancement of thermoelectric performance in Pb _{1-x} In _x Te _{1-y} I _y semiconductor by Fermi level tuning and optimization of carrier concentration Taras Parashchuk, Zinovi Dashevsky, Krzysztof Wojciechowski	Selection of tetrahedrite compositions for application on thermoelectric modules. Elsa Branco Lopes, Rodrigo Coelho, Elli Symeou, Theodora Kyratsi, António Pereira Gonçalves	Modeling, Characterizing, and Engineering of Grain Boundaries in N-type Mg ₃ Sb ₂ -based Compounds Jimmy Kuo, Max Wood, Kazuki Imasato, G. Jeffrey Snyder
14:15-14:30	The effect of exceptionally high Cd addition on room-temperature thermoelectric properties of monocrystalline PbTe-CdTe solid solution Michal Szot, Pawel Pfeffer, Krzysztof Dybko, Andrzej Szczerbakow, Leszek Kowalczyk, Piotr Dziawa, Roman Minikayev, Tatiana Zayarnyuk, Kazimierz Piotrowski, Maria Gutowska, Andrzej Szewczyk, Włodzimierz Zawadzki, Tomasz Story	Modern developments in microTEC production Alexandr Nazarenko	Improvement of Low-Temperature zT in Mg ₃ Sb ₂ -Mg ₃ Bi ₂ Solid Solution via Mg-Vapor Annealing Max Wood, Jimmy Kuo, Kazuki Imasato, G. Jeffrey Snyder
14:30-14:45	Enhancement of the ZT parameter in PbTe by Bandgap and Fermi Level Tuning Rafał Knura, Taras Parashchuk, Akira Yoshiasa, Zinovi Dashevsky, Krzysztof Wojciechowski	Thin Film TEG with Controlled Heat Flow Mutsunori Uenuma, Yukiharu Uraoka	Controlled doping and strategies for ZT optimisation in halide perovskites Oliver Fenwick, Tianjun Liu
14:45-15:15	Coffee Break		

DETAILED PROGRAM

15:15-16:15

Skutterudites

Silicides II

Sponsors Session/Projects

Chair

Olga Caballero-Calero

Yuzuru Miyazaki

Jan Koenig

Room

Panorama

Megaron B

Megaron C

15:15-15:30

A review of rapid fabrication methods of skutterudite materials

Mirosław Jakub Kruszewski, Łukasz Ciupirski, Rafał Zybala

Beyond the rigid band model: thermoelectric transport in p-type Mg₂Ge

Johannes de Boor, Hasbuna Kamila, Aryan Sankhla, Mohammad Yasser, Eckhard Müller

Thermoelectric Figure of Merit – Characterization by a Powerful Combination of Laser Flash Method and Seebeck Analyzer

André Lindemann

15:30-15:45

ZT_{max} = 1.4 in non-nanostructured single filled Yb_{0.15}Co₄Sb₁₂

Mohamed Seghir Benyahia, J.B. Vaney, Karine Provost, Valérie Paul-Boncourt, Judith Monnier, Anne Dauscher, Bertrand Lenoir, Eric Alleno

Low resistance contacts for reliable Mg₂(Si,Sn) based thermoelectric modules

Eleni-Chrysanthe Stefanaki, Cevriye Koz, Richard S. Tuley, Kevin Simpson

10 years of thermoelectric testing at TCS Ltd

Jonathan Siviter, Andrew Knox

15:45-16:00

Structural evolution and correlation with thermoelectric properties in filled CoSb₃ skutterudites

Norbert Nemes, Javier Gainza, Federico Serrano-Sanchez, Jesus Prado-Gonjal, Oscar Juan Dura, Neven Biskup, Jose Luis Martinez, Francois Fauth, Maria Teresa Fernández-Díaz, Jose Antonio Alonso

Thermal stability under air of Mg₂Si_{0.6}Sn_{0.4} thermoelectric materials

Mostafa Oulfarsi, Anne Dauscher, Nicolas David, Lionel Aranda, Ghouti Medjahdi, Hilaire Ihoumouko

Heatsink optimization with thermoelectric modules

Nils Katenbrink

16:00-16:15

Thermoelectric properties of bulk CoSb₃-PbTe composite and the effect of phase boundary on the transport parameters

Artur Kosonowski, Taras Parashchuk, Laurent Chaput, Krzysztof T. Wojciechowski

Microstructural investigations of Bi-doped magnesium silicides: effects of the synthesis method

Andreas Delimitis, Elli Symeou, Theodora Kyratsi

The H2020 INTEGRAL project: upscaling production of thermoelectric GEN2 TE materials and demonstrating waste heat harvesting

Jean-Yves Escabasse, Luc Aixala, Christelle Navone, Krunoslav Romanjek, Joel Dufourq, Daniel Zuckermann, Maarten den Heijer, Cédric Lhomme, Emmanuel Hanrot

16:15-17:45

Posters II Room: Panorama

Chairs

Marisol Martin Gonzalez, Luis Fonseca, Alexander Burkov

17:45-22:00

Tour & Conference Dinner

Materials: Chalcogenides II

1. The influence of synthesis methods on structural and transport properties of copper sulfide
Andrzej Kolezynski, Pawel Nieroda, Andrzej Mikula, Krzysztof Mars, Juliusz Leszczynski
2. Effect of changes in chemical composition on thermoelectric efficiency in $W_{1-x}Nb_xSe_{2-y}S_y$ solid solutions
Galina Yakovleva, Anatoliy Romanenko, Alexandra Ledneva, Vladimir Fedorov, Alexander Burkov, Sergei Novikov, Petr Konstantinov, Mi-Kyung Han, Sung-Jin Kim
3. Comparative study: transport properties of natural and high-purity synthetic pyrites (FeS_2)
Esteban Zuñiga-Puelles, Raul Cardoso-Gil, Matej Bobnar, Igor Veremchuk, Cameliu Himcinschi, Christoph Hennig, Jens Kortus, Gerhard Heide, Roman Gumeniuk
4. Chromium resonant impurity effect on the thermoelectric properties of $Pb_{1-x}Sn_xTe$
Aleksandra Królicka, Krzysztof Dybko, Roman Minikayev, Anna Reszka, Jarosław Więckowski, Andrzej Szewczyk, Aneta Grochot, Hanka Przybylińska, Wojciech Knoff, Katarzyna Gas, Maciej Sawicki, Aleksandra Mirowska, Andrzej Materna, Mirosław Piersa, Tomasz Story
5. Thermoelectric and Transport Properties of n-type Mn-Doped Chalcopyrite $Cu_{(1-x)}Mn_x(FeS_2)$ Compounds
Jiří Navrátil, Jana Kašparová, Čestmír Drasar, Ludvík Beneš, Petr Levinsky, Jiri Hejtmanek
6. Synthesis, Crystal Structure and Thermoelectric Properties of Cu-Sn-S Compounds
Tong Xing, Igor Veremchuk, Yurii Prots, Pengfei Qiu, Lidong Chen, Yuri Grin
7. Percolation effects and self-organization processes in $Bi_2(Te_{1-x}Se_x)_3$ solid solutions
Elena Rogacheva, Tatyana Shelest, Ekaterina Martynova, Anna Doroshenko, Olga Nashchekina
8. Synthesis, crystal structure, and thermoelectric properties of $PbGa_6Te_{10}$
Oleksandr Cherniushok, Raul Cardoso-Gil, Taras Parashchuk, Juri Grin, Krzysztof T. Wojciechowski
9. Effect of strain on thermoelectricity of textured GeTe films and $Bi_2Te_3/GeTe$ superlattices
Heng Zhang, Joshua Levinsky, Qikai Guo, Graeme Blake, Beatriz Noheda, Bart Kooi
10. Initial stages of formation, growth and thermoelectrical performance of bismuth selenide thin films deposited on different substrates by physical vapour deposition technique
Edijs Kauranens, Liga Britala, Jana Andzane, Donats Erts
11. Fabrication and characterization of bismuth and antimony chalcogenide and CNT heterostructures
Krisjanis Buks, Jana Andzane, Juris Katkevics, Donats Erts
12. Thermoelectric properties of gallium doped copper (I) selenide
Bartosz Trawiński, Beata Bochentyn, Tadeusz Miruszewski, Bogusław Kusz

Materials: Silicides

13. Thermoelectric properties of hot-pressed p- $Mg_2Si_{0.3}Sn_{0.7}$ with SiO_2 inclusions.
Grigori Isachenko, Alexandr Samunin, Kseniya Samusevich, Petr Konstantinov
14. Co-pressed contact layers in $Mg_2Si_{0.8}Sn_{0.2}$ composition for silicide based thermoelectric generators.
Grigori Isachenko, Dmitry Dolgintsev, **Aleksandr Samunin**
15. Dependence of thermoelectric performance on Re amount in $MnSi_y$ co-substituted by Re and Ge
Yosuke Kurosaki, **Naoto Fukutani**, Shin Yabuuchi, Akinori Nishide, Yuzuru Miyazaki, Tomohisa Takamatsu, Jun Hayakawa
16. Amorphous protective coatings for Mg_2Si and Cu_2S thermoelectric materials
Pawel Nieroda, Juliusz Leszczynski, Jolanta Nieroda, Krzysztof Mars, Andrzej Mikula, Andrzej Kolezynski

17. Enhancement of Thermoelectric Performance of N-type Mg_2Si by Chemical Pressure of Impurity Dopants
Naomi Hirayama, Yoji Imai, Noriaki Hamada
18. Simultaneous enhancement of electrical and thermal transport properties of higher manganese silicide nanocomposites
Gwansik Kim, Jong Wook Roh, Jeongmin Kim, Kyu Hyoung Lee, Wooyoung Lee
19. Structural and Thermoelectric Properties of Higher Manganese Silicides Synthesized by Pack Cementation
Aikaterini Teknetzi, Elli Symeou, Eleni Pavlidou, Theodora Kyratsi, **Euripides Hatzikraniotis**, George Vourlias
20. Application of a two-band model to evaluate local thermoelectric properties
George Polymeris, **Euripides Hatzikraniotis**, Eleni Stefanaki, Konstantinos Paraskevopoulos, Theodora Kyratsi

Materials: Skutterudites

21. Thermoelectric Properties of Partially Double Filled Skutterudites $(\text{La/Ce/Yb})\text{yFe}_{4-x}\text{Co}_x\text{Sb}_{12}$
Ye-Eun Cha, Doek-Yeong Choi, **Ji-Hee Pi**, Il-Ho Kim
22. Enhancement of thermoelectric properties by Zn and Cd substitution in p-type $\text{Co}_2\text{Ge}_3\text{S}_3$ skutterudite related material
Mi-Kyung Han, Sung-Jin Kim
23. Composite Si-O-C amorphous coatings for protection against high temperature oxidation of antimonide skutterudites
Juliusz Leszczyński, Pawel Nieroda, Jolanta Nieroda, Andrzej Mikula, Andrzej Kolezynski

Measuring Techniques

24. 3D X-ray diffraction computed tomography as a tool for elucidating the decomposition of PLEC thermoelectric materials
Oliver Oeckler, Matthias Jakob, Gavin B. M. Vaughan

Projects

25. MAGENTA: Magnetic nanoparticle based liquid energy materials for thermoelectric applications (EU-H2020FET-Proactive project)
Sawako Nakamae
26. THERMOSS Project: Sustainable Thermoelectric Modules based on Non-toxic Silicides and Sulphides for Recovery of Waste Heat to Power Generation
Elli Symeou, Loucas Louca, Theodora Kyratsi, Nikolaos Vlachos, Rodrigo Coelho, Elsa Branco Lopes, António Pereira Gonçalves, Francisco P. Brito, Jorge Martins, Luis M. Goncalves, Rui Vieira
27. MarTEnergy Project: Sustainable and Affordable Half-Heusler based Thermoelectric Converters for Utilization of Waste Heat into Electrical Power in Maritime Applications
Ioanna Ioannou, George Mesaritis, Gil Breuer, Nikolaos Vlachos, Loucas Louca, Yaniv Gelbstein, Theodora Kyratsi
28. H2020 European project EnABLES: free of charge characterization of thermoelectric materials
Guillaume Savelli, Pascal Faucherand

Power Generation

29. Effects of a Module Array on Electrical Power of a Thermoelectric Generator system
Chong-pyo Cho, Young-dug Pyo, Gang-chul Kim, Yongjin Jung
30. Telluride-based Two-Stage Segmented Thermoelectric Module for High Power Generation in MidTemperature Application
JongHo PARK, Jae Ki Lee, Jaywan Chung, Byungki Ryu, SuDong Park
31. Thermoelectric Properties in Thin Film with pn Junction
Hoshito Murakawa, Mutsunori Uenuma, Jenichi Felizco, Yukiharu Uraoka
32. Investigation of thermoelectrics generators use for waste heat recovery - power generation system and techno-economic feasibility analysis of different plant configuration in cement industry: A case study
Nikolaos Vlachos, Theodora Kyratsi, Iakovos Skourides, Loucas S. Louca
33. Design of an Air-Cooled Thermoelectric Generator through Modeling and Simulation, for use in Cement Industries
Krini Charilaou, Theodora Kyratsi, **Loucas Louca**
34. Design of a Thermoelectric Generator for Cement Industry Applications: Modeling, verification and Sensitivity Analysis
Nikolaos Vlachos, Francisco Brito, André Barbosa, Rui Vieira, Loucas Louca, Theodora Kyratsi
35. Improved Performance of TEG Systems for Vehicle Purpose: Bending Prevention
Young-dug Pyo, Gang-chul Kim, Yongjin Jung, Chong-pyo Cho, Youma Bang
36. Evaluating series/parallel arrays of SiGe nanowires based micro thermoelectric generators
Jose Manuel Sojo Gordillo, **Mercè Pacios**, Marc Salleras, Luis Fonseca, Alex Morata, Albert Tarancón

Other Materials

37. Thermoelectric Effect in Metal Dental Restorations
Keith Walsh
38. Optical characterization of polycrystalline p-type ZnSb
Josef Humlicek, **Karl-Heinz Gresslehner**, Florian Pflügl, Hao Yin, Guenther Hendorfer
39. Thermal decomposition and thermoelectric decline of mechanically alloyed ZnSb upon temperature cycling
Christopher M. James, Mathias S. Wickleder, Eckhard Mueller
40. Effect of magnesium doping on thermoelectric and magnetic properties of copper chromite ceramic samples
Vladimir Kytin, Anna Duvakina, Dmitry Zinoviev, Eugene Kupriyanov, Igor Korsakov, **Vladimir Kulbachinskii**
41. Nanocomposites of Bismuth Telluride for Thermoelectric Applications
Jonathan Kenny, Anthony Powell, Paz Vaqueiro
42. Microstructure, mechanical, thermoelectric properties of high-temperature electrode material based on ZrB2
Aleksandra Dubiel, Annamaria Naughton-Duszova, Pawel Rutkowski, Artur Kosonowski, Krzysztof T. Wojciechowski

- 43. First principle investigation of electronic and thermal properties of Stanene/h-BN heterostructure
*Shivani Saini, **Sanjai Singh***
- 44. Temperature and magnetic field dependences of thermoelectric properties of $\text{Bi}_{1-x}\text{Sb}_x$ solid solutions in the range $x = 0 - 0.25$
*Elena Rogacheva, Anna Doroshenko, **Olga Nashchekina***
- 45. Electrochemical behaviour of expanded graphite electrodes for thermogalvanic cells and thermally chargeable capacitors applications
***Sawako Nakamae**, Blanca Torres Bautista, Michel Beaughon, Marco Bonetti, Mark Robbins, Domenico Cupertino, Kakoli Bhattacharya*
- 46. Isotropic Intra-layer Resistivity in Orthorhombic LaSb_2 due to an Imperfect Structure
***Karl F. F. Fischer**, Nikolaj Roth, Bo Brummerstedt Iversen*
- 47. Thermoelectric properties of Zn_4Sb_3 obtained by cold sintering process
***Stefano Boldrini**, Stefano Fasolin, Alberto Ferrario, Simona Barison, Carlo Fanciulli, Enrico Bassani, Francesco Aversano, Alberto Castellero*
- 48. Improved extruded thermoelectric materials of the company RMT
Mariya Nazarenko

Wednesday, 25th September

08:30	Registration		
9:15-10:45	Room: Panorama Invited III		
Chair	Mercouri Kanatzidis		
9:15-9:45	Electronic and ionic thermoelectric effects with conducting polymers Xavier Crispin		
9:45-10:15	Advanced thermoelectric transport simulations in complex bandstructure and nanostructured materials Neophytos Neophytou , <i>Vassilios Vargiamidis, Samuel Foster, Chathurangi Kumarasinghe, Patrizio Graziosi, Mischa Thesberg, Dhritiman Chakraborty, Laura de Sousa Oliveira</i>		
10:15-10:45	Development of advanced half-Heusler based elements for thermoelectric applications Yaniv Gelbstein		
10:45-11:15	Coffee Break		
11:15-12:45	Chalcogenides V	Applications II/Modules II	Heusler
Chair	Anne Dauscher	Francisco Brito	Eric Alleno
Room	Panorama	Megaron B	Megaron C
11:15-11:30	Improving the Thermoelectric Performance of Rare-Earth Tellurides Using Band Structure Engineering Dean Cheikh , <i>Brea Hogan, Steven Gomez, Trinh Vo, Paul von Allmen, Bruce Dunn, Jean-Pierre Fleurial, Sabah Bux</i>	Overtaking silicon photovoltaic efficiency by thermoelectric hybridization of perovskite solar cells Bruno Lorenzi	Fast synthesis and thermoelectric properties of n-type half-Heusler, TiNiSn <i>Kan Chen, Chris Nuttall, Robert Potter, Katarzyna Placha, Richard Tuley, Kevin Simpson, Jan-Willem Bos, Michael Reece</i>
11:30-11:45	Interplay between electronic structure, crystal defects and electron transport properties in tetrahedrites studied from ab initio calculations Janusz Tobola , <i>Petr Levinsky, Jiri Hejtmánek, Christophe Candolfi, Anne Dauscher, Bertrand Lenoir</i>	Construction and Experimental Verification of Simple Model for Predicting Peltier Module Performance during PWM Driving Nobuyuki Isoshima , <i>Wataru Sato, Nobuhiro Tsukada, Hironori Ogawa</i>	Amorphous and crystalline TaCoSn: study of a new thermoelectric material Francesco Aversano , <i>Alberto Ferrario, Stefano Boldrini, Carlo Fanciulli, Marcello Baricco, Alberto Castellero</i>
11:45-12:00	Thermal stability, oxidation resistance and protective coatings for tetrahedrites Rodrigo Coelho , <i>Elsa Branco Lopes, António Pereira Gonçalves</i>	Highly integrated silicon thermoelectric microgenerator Marc Salleras , <i>Marc Dolcet, Andrej Stranz, Jose Manuel Sojo, Mercè Pacios, Alex Morata, Albert Tarancón, Luis Fonseca</i>	Enhanced thermoelectric performance in Fe-Ti-Sb Heusler system with Yttrium doping Anastasiia Taranova , <i>Anna Kalugina, Dmitry Karpenkov, Vladislav Kurichenko, Andrei Novitskii, Andrei Voronin, Andriy Grytsiv, Vladimir Khovaylo</i>

DETAILED PROGRAM

Room	Panorama	Megaron B	Megaron C
12:00-12:15	Study of NiS_2 as p-type thermoelectric material <i>Helena Maçarico Ferreira, Elsa Branco Lopes, José Francisco Malta, Luis M. Ferreira, Maria Helena Casimiro, Luis Filipe Santos, Manuel Francisco Costa Pereira, António Pereira Gonçalves</i>	Detachable Contacts for Simultaneous Thermoelectric Characterization of Iron Disilicide Antoine Micallef , Christian Stiewe, Gregor Oppitz, Stephan Tiedke, Eckhard Müller	Role of secondary phases and interstitial Ni on thermoelectric properties of TiNiSn half Heusler alloys <i>Francesco Aversano, Alberto Ferrario, Stefano Boldrini, Carlo Fanciulli, Enrico Bassani, Daniele Marre, Marcello Baricco, Alberto Castellero</i>
12:15-12:30	Structural characterization and thermoelectric properties of indium thiospinel Pawel Wyzga , Igor Veremchuk, Cameliu Himcinschi, Ulrich Burkhardt, Wilder Carrillo-Cabrera, Matej Bobnar, Christoph Hennig, Andreas Leithe-Jasper, Jens Kortus, Roman Gumeniuk	Global analysis of the assembly of Fe_2VAl and metal electrode through the study of the bonding process conditions. Valentin Marchal-Marchant , Geoffrey Roy, Camille van der Rest, Olivier Poncelet, Pascal Jacques	The thermoelectric properties of novel Half-Heuslers materials <i>Kamil Kaszyca, Rafał Zybala</i>
12:30-12:45	Pseudo 3D-Printed Earth Abundant Non-Toxic $\text{Cu}_2\text{-xS}$ with High Figure of Merit Matthew Burton , Matthew Carnie, Sha Mehraban		Effects of tin for antimony substitution on the thermoelectric properties of the $\text{Fe}_{1.5}\text{TiSb}_{1-x}\text{Sn}_x$ Heusler alloy Anna Kalugina , Anastasiia Taranova, Dmitry Karpenkov, Vladislav Kurichenko, Andrei Novitskii, Andrei Voronin, Andriy Grytsiv, Vladimir Khovaylo
12:45- 14:15	Lunch		
14:15-15:30	Organics	Measuring Techniques	Other Materials II
Chair	Xavier Crispin	Alexander Burkov	Eckhard Müller
Room	Panorama	Megaron B	Megaron C
14:15-14:30	Low and high thermal conductivity states in polymer thermoelectric Thibault Degousée , Fabiola Liscio, Denis Gentili, Massimiliano Cavallini, Viktoriia Untilova, Laure Biniek, Xinzhao Xu, Matteo Palma, Silvia Milita, Martin Brinkmann, Oliver Fenwick	A straightforward 2 omega technique for the measurement of the Thomson effect Isaac Haik Dunn , Ramzy Daou, Colin Atkinson	Paramagnons: A New Paradigm for Designing Thermoelectric Materials Daryoosh Vashae , Md H Mobarak Polash, Morteza Rasoulianboroujeni, Joseph Heremans, Vladislav Pereygin, Alex Smirnov

Room	Panorama	Megaron B	Megaron C
14:30-14:45	Stoichiometric Control of Hybrid Ag_{2-x}Te Nanoparticle/PEDOT:PSS Composites for Tunable Thermoelectric Performance Katherine Mazzio, Danny Kojda, Britta Ryll, Jens Niederhausen, Klaus Habicht, Simone Raoux	Influence of size effects on the absolute Seebeck coefficient of platinum Maxmilian Kockert, Rüdiger Mitdank, Anton Zykov, Stefan Kowarik, Saskia F. Fischer	From n-type to p-type behaviour of CrN thin films: the importance of stoichiometry Arnaud Le Febvrier, Davide Gambino, Gregory Abadias, Fabien Giovanelli, Björn Alling, Peter Eklun
14:45-15:00	Design for high throughput manufacturing of electrolyte based thermoelectric devices Sayedmohammad Mortazavinatanzi, Alireza Rezania, Lasse Rosendahl, Xavier Crispin, Dan Zhao	Suspended silicon nanostructures for thermoelectric generation Elisabetta Dimaggio, Dario Narducci, Giovanni Pennelli	Pronounced transport anisotropy in the type-I clathrate $\text{Ba}_2\text{Au}_{(6-x)}\text{Ge}_{(40+x)}$ G. Eguchi, A. Hariki, M. Ikeda, P. Tomes, N. Barisic, J. Kunes, M. Baitinger, D. Nguyen, M. Mihalkovic, A. Smontara, C. Allio, C. Krellner, P.-F. Lory, M. de Boissieu, S. Pailhes, V.M. Giordano, H. Euchner, Y. Grin, S. Paschen
15:00-15:15	Fabrication and characterization of organic thermoelectric materials based on doped poly (3-hexylthiophene) and carbon nanotube forest Saeed Mardi, Khabib Yusupov, P. M. Martinez, Alberto Vomiero, Andrea Reale	Measurement and optimizing of COP in Peltier-cooling technique Dieter Platzeck, Ignasi Cabezas, Bettina Still, German Noriega	Impact on organic solvents in combination with redox-couples on magnitude and sign of Seebeck coefficient and electrical current in thermoelectric generators Edith Laux, Laure Jeandupeux, Alexandra Homsy, Martin Hofmann, Philippe Potty, Herbert Keppner
15:15-15:30		On improvement of speed of the complex absolute method of measuring of thermoelectric parameters of materials Valentyn Lyisko, Lukyan Anatychuk	Intermetallic semiconductor FeGa_3: Chemical nature and thermoelectric properties Raul Cardoso-Gil, Frank R. Wagner, Matej Bobnar, Igor Veremchuk, Yuri Grin
15:30-16:00	Coffee Break		
16:00-17:00	Chalcogenides VI	Other Materials III	Nanomaterials II
Chair	Cestmir Drasar	Yaniv Gelbstein	Elli Symeou
Room	Panorama	Megaron B	Megaron C
16:00-16:15	The Meta-Status and Ag-Additive Effects of Telluride Thermoelectric Compounds with Ah SuDong Park, Jae Ki Lee, Byungki Ryu, JongHo PARK, Jae-hwan Chung, Ho-Sung Lee	Low-grade thermal energy harvesting using ionic ferrofluids Sawako Nakamae, kakoli bhattacharya, Michel Beaughon, Michel Roger, Jesse Riedl, Véronique Peyre, Emmanuelle Dubois, Edith Laux, Laure Jeandupeux, Herbert Keppner, Botao Huang, Yang Shao-Horn	Thermoelectric properties of SPS sintered Si/Al nano powders Danny Kojda, Tommy Hofmann, Alexander Steigert, Klaus Habicht

DETAILED PROGRAM

Room	Panorama	Megaron B	Megaron C
16:15-16:30	Stability of thermoelectric copper iodide, copper chalcogenides and solid solutions between them Tobias Stollenwerk, Matthias Jakob, Marc Jankowski, Oliver Oeckler	Redox reactions in ionic liquids-based thermo-electric systems. Maciej Bobrowski, Sylwia Freza, Iwona Anusiewicz, Piotr Skurski	Optimising the nanostructure of Pb_{1-x}GexTe to minimise thermal conductivity Hong Lian, Anil Kumar
16:30-16:45	Influence of Milling Media on Thermoelectric Properties of Bi_{0.3}Sb_{1.7}Te_{3.0} Issei Morioka, Kazuhiro Hasezaki, Kenichi Hanasaku, Mongkol Bumrungpon, Toshiharu Hirai, Ryusuke Yasufuku	On the oxidation behavior of the thermoelectric material ZnSb Henrik Riis, Reshma Madathil, Reidar Haugrud, Øystein Prytz	
16:45-17:00	Vacancies in SnSe single crystals in a near-equilibrium state Katerina Sraitrova, Jakub Cizek, Cestmir Drasar	Study of GaN, AlGaN and 2D electron gas thermoelectric properties and of electrical contacts for thermal sensors application. Charlotte Bryan, Pascal Faucherand, Marc Plissonnier, Guillaume Savelli	
17:00-17:30	Closing Room: Panorama		

SOCIAL EVENTS



Welcome Reception

Date: Monday, 23th of September

Time: 18:30-20:00

Location: St. Raphael Lawns

The Welcome Reception is the first social gathering between all conference delegates and it will take place at the Venue Hotel. It will be a relaxing evening during which delegates will have the opportunity to talk to colleagues and peers, while enjoying local drinks and ample canapés.

Welcome Reception is included in all Registration fees



Tour & Conference Dinner

Date: Tuesday, 24th of September

Time: 17:45-22:00

Location: Aphrodite Hills Hotel by Atlantica

Departure Time: 17:45 - St. Raphael Lobby

We will get together at 17:45 at the Venue Hotel lobby, from where we will promptly depart at 17:45 in air-conditioned coaches for a fascinating tour. Experienced professional guides will tell us about the history of Cyprus in general and Limassol town in particular. Our tour will finish with a dinner which will consist of an array of traditional dishes complimented with local drinks and deserts. During the dinner we will enjoy an entertaining programme with traditional dances by a local dance group.

Tour & Conference Dinner is included in all Registration fees

TOP LIMASSOL LANDMARKS

Limassol Castle

There is no doubt that the Limassol Castle occupies a dominant position in the landmark and tourist attractions in the city. Richard the Lionheart is supposed to have married his fiancée Princess Berengaria of Navarre in this castle. The Castle was used as a prison between 1790 and 1940 and it now serves as a medieval museum. A visitor can see numerous exhibits: Cannons, wood carvings of the 17th and 18th century, paintings and tombstones, statues, suits of armour, coins, terracotta, metalware and pottery, glass and marble artcrafts.

Kolossi Medieval Castle

A renowned archaeological site, the castle was built in the 15th century by the Knights of Saint John of Jerusalem on a land gifted by King Hugh I. Earlier, it used to be home to a 13th century fortress whose ruins are still visible in the castle. Later the castle was occupied by Richard I of England and the Knights Templar.

Amathus Ruins

The ancient city of Amathus is one of the oldest imperial cities on the island. A greek myth would have Amathus built by one of the sons of Heracles who was worshipped there. The city had a very special place for Phoenix, the goddess of beauty and love. Visitors at the ruins can perceive an era that existed 3000 years ago through the mythical excavations and artefacts.

Archaeological Museum

The Archaeological Museum in Limassol is a particularly interesting sight for art and history lovers. The museum houses artefacts related to societal development of Cyprus, which include ceramics, pottery and antiquities from the Roman period. Also, on display are finds from the Neolithic until the Late Bronze Age.

Kourion Archaeological Site

One of the most famous attractions in Cyprus and a stunning archaeological excavation, thanks to its impressive Greco-Roman theatre, stately villas, spectacular floor mosaics, an early Christian Basilica and other kingly treasures.

Twin Cities Park

The Twin Cities Park (or the Sculpture Park), situated on the waterfront and spanning more than 1,5 km long, is home to a series of sculptures commissioned by the Limassol Municipality and created by Cypriot and foreign sculptors.

Municipal Garden

The Municipal Garden, along the coastal road, has a rich bounty of green and shady space where visitors relax or take a stroll down the pathways. The nearby area plays host to several family attractions like the Lemesos Zoo Garden and Dinosaur Park.

Travelling Around Limassol

For all tourist information concerning sites of interest, visit the official webpage of Cyprus Tourism Organization www.visitcyprus.com.

A list of all buses around Cyprus including night buses, rural buses and intercity buses can be found on 'Cyprus by Bus' website at www.cyprusbybus.com. The buses are separated by city while route details, time-tables and maps are available for each route. Limassol boasts a reliable and efficient public bus service which runs every day and covers the whole Limassol District. The bus fare for a single journey is €1.50 (day fare) and €2.50 (night fare, after 21:00). The daily ticket with unlimited journeys costs €5.00 and the weekly ticket costs €20.00. Tickets can be purchased on the bus. For more information about the bus routes and schedules can be found on the Limassol's Transport Organization (EMEL Buses) website, www.limassolbuses.com. For ease of reference, **Route 30 (MY MALL -PARKLANE HOTEL - MY MALL)** passes close by all the conference hotels.

Taxi Service

Taxis in Cyprus are relatively cheap and reliable. It is best to use a registered taxi company; therefore we recommend that you ask as a member of staff at the on-site Conference Help Desk who will be pleased to reserve a taxi for you.

Getting Back to the Airport

Private Transportation

Whether you require a transfer to Larnaca or Paphos Airports, you can contact a member of staff at the on-site Conference Help Desk who will be pleased to reserve a taxi for you.

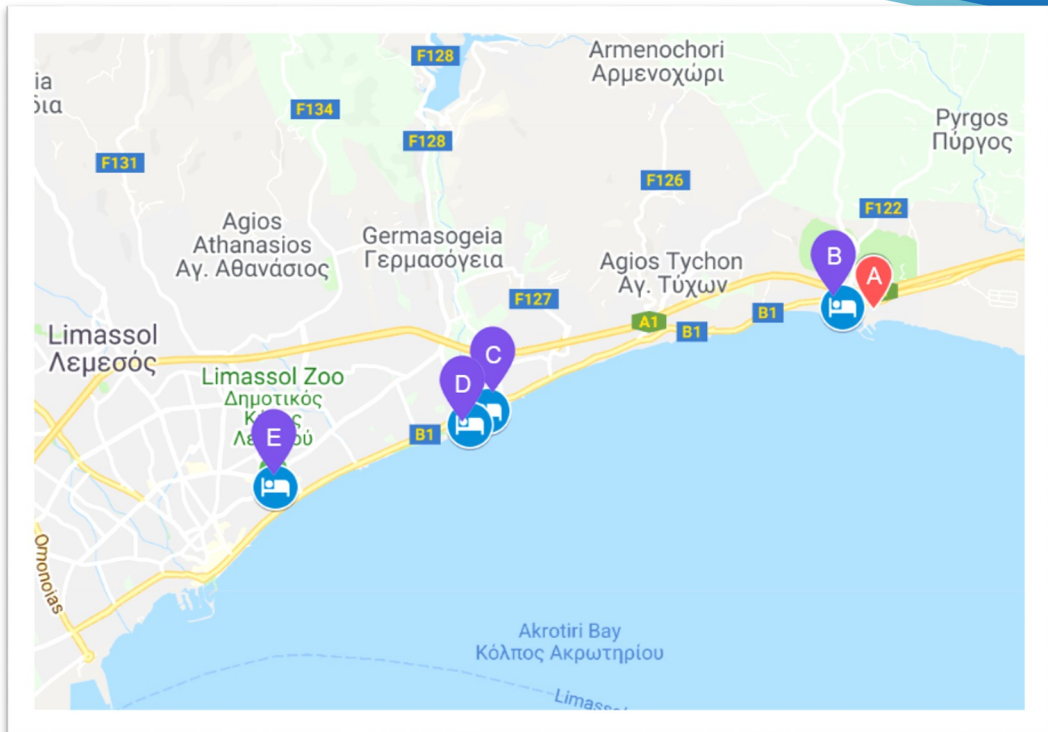
Public Transportation

In case that you would like to use the public bus service, you may take the direct service to Larnaca or Paphos International Airports handled by 'Limassol Airport Express' coaches. Please visit www.limassolairportexpress.eu for the latest information and time schedule.

Useful Contact Numbers

Country code prefix	+357
Directory Enquiry Service	11892
Private Doctors on Call	90 901432
Ambulance & Police	112
Pharmacies (after hours)	90 901412
Limasol General Hospital	25 801 100
Limassol Transport Organization	7777 8121
Larnaca and Paphos International Airports	77 778833

VENUE & HOTELS MAP



A. ST RAPHAEL RESORT

Address: Amathountos Avenue 502,
Pyrgos 4520
Phone: +357 25 834 200
Fax: +357 25 636 394
Email: reservations@straphael.com

C. THE ROYAL APOLLONIA

Address: Georgiou A' 68,
4048, Limassol
Phone: + 357 25 508 800
Email: info@theroyalapollonia.com

B. ELIAS BEACH HOTEL

Address: 125 Ancient Amathus Avenue,
Pareklisia 4533
Phone: +357 25 636 000
Fax: +357 25 274 300
Email: eliasres@kanikahotels.com

D. HARMONY BAY HOTEL

Address: Georgiou A' 68,
4048, Limassol
Phone: + 357 25 328 081
Fax: +357 25 328 082
Email: info@harmonyhotel.com.cy

E. CURIUM PALACE

Address: Byron Street 11,
3105, Limassol
Phone: + 357 25 891 100
Fax: +357 25 891 350
Email: info@curiumpalacehotel.com.cy