

19th EUROPEAN CONFERENCE ON THERMOELECTRICS

FINAL PROGRAMME

SUNDAY, SEPTEMBER 17, 2023

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| 15:00 - 20:00 | Registration |
| 18:00 - 20:00 | Welcome Drink |

MONDAY, SEPTEMBER 18, 2023

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| 08:00 - 12:00 | Registration |
| <i>Chair: Jean-Pierre Fleurial</i> | |
| 09:00 - 09:15 | Introduction |
| 09:15 - 10:00 PT 01 | Half and Full-Heusler alloys: thermoelectricity beyond Bi₂Te₃ A. Riss, M. Parzer, F. Garmroudi, A. Grytsiv, G. Rogl, P. Rogl, T. Mori, E. Bauer |
| 10:00 - 10:30 IT 01 | Circular thermoelectrics and green innovations for sustainability A. Weidenkaff , W. Xie, X. Xiao |
| 10:30 - 11:00 | Coffee Break |

SESSION I (MON)

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| <i>Chair: Eckhard Müller</i> | |
| Materials & Processing | |
| 11:00 - 11:15 CT 01 | Understanding thermal transport in GeTe thin films and impact of nanostructuring R. Cravero , J. Paterson, M. Tomelleri, P. Noé, O. Bourgeois, V. M. Giordano |
| 11:15 - 11:30 CT 02 | Exploring the Effect of Resonant Doping on Thermoelectric Properties of Cubic Ge-Sb-Te Thin Films S. Abbas , B. Jarwal, T. T. Ho, S. M. Vailaveettil, L. C. Chen, K. H. Chen |
| 11:30 - 11:45 CT 03 | Origins of ultralow lattice thermal conductivity in PbGa_{6-x}In_xTe₁₀ filled β-Mn-type phases O. Cherniushok , T. Parashchuk, R. Cardoso-Gil, Y. Grin, K. T. Wojciechowski |
| 11:45 - 12:00 CT 04 | Regulation of the intrinsic vacancies for high-performance GeTe thermoelectrics with ultrahigh carrier mobility M. Zhang , Z. Gao, C. Hu, Q. Lou, Z. Han, C. Fu, T. Zhu |
| 12:00 - 12:15 CT 05 | Interplay of resonant level and band convergence in SnTe C. Candolfi , S. Misra, S. El Oualid, B. Wiendlocha, J. Tobola, B. Lenoir |

SESSION II (MON)

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|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Chair: Johannes de Boor</i> | |
| Measurement & Characterisation | |
| 11:00 - 11:15 CT 06 | Towards a complete characterization of thermoelectric figure of merit of individual nanowires T. Lahens, L. Vincent, G. Hallais, S. Grauby, S. Dilhaire |
| 11:15 - 11:30 CT 07 | Designing a high-precision instrument to characterize the thermoelectric material and device H. R. Ren , C. P. Niu, Y. B. Zhao, Y. Q. Li, X. L. Chen, H. L. He |
| 11:30 - 11:45 CT 08 | Understanding current-voltage curves of thermoelectric modules under low temperature difference operation J. García-Cañadas , F. Vidan, B. Beltrán-Pitarch |
| 11:45 - 12:00 CT 09 | Customized measuring station for Peltier modules R. Binninger , S. Unmüßig, M. Vergez, M. Bartel, O. Schäfer-Welsen |
| 12:00 - 12:15 CT 10 | Mechanical and thermoelectric properties of AISI 4340 high-strength martensitic steel with ZnNi coating subjected to hydrogenation M. Sajdak , K. T. Wojciechowski |

| SESSION III (MON) | |
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| Chair: Pawel Ziolkowski | |
| Devices & Applications | |
| 11:00 - 11:15 CT 11 | Demonstration of the economic viability and energy savings potential of thermoelectric generators for pellet boilers J. Schwab , M. Kober, T. Knobelspies, C. Fritscher, F. Rinderknecht, T. Siefkes |
| 11:15 - 11:30 CT 12 | Utilising computational design tools to simulate novel thermoelectric systems for energy recovery in steel making processes M. Phillips , U. Chiarotti, V. Moroli, F. Mintus, S. Bosi, M. Padovan, S. Spagnul, D. Gaspardo, M. Chini, A. Viotto, L. Bianco, T. Bause, P. Fritella, N. Katenbrink, G. Min |
| 11:30 - 11:45 CT 13 | A TEG-based waste heat recovery system for atmospheric pressure plasma jets M. J. Huang , Y. H. Lin, P. C. Hsu, J. Y. Juang |
| 11:45 - 12:00 CT 14 | Enhancing thermoelectric generation with radiative cooling and phase change heat exchangers M. Araiz , L. Catalán, P. Alegría, N. Pascual, D. Astrain |
| 12:00 - 12:15 CT 15 | A design and verification of a non-icing and non-condensing waste-cold-recovery system M. Ch. Lin , H. Y. Chen, F. T. Chung, M. J. Huang |

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| 12:15 - 13:45 | Lunch |
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| SESSION I (MON) | |
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| Chair: Paz Vaquero | |
| Materials & Processing | |
| 13:45 - 14:15 IT 02 | Multiscale phonon scattering in thermoelectric Fe₂VAl E. Alleno |
| 14:15 - 14:30 CT 16 | Transport properties of Co₂HfSn Heusler alloy obtained by rapid solidification and sintering A. Difalco , G. Barrera, P. Allia, M. Palumbo, S. Boldrini, A. Ferrario, P. M. Tiberto, M. Baricco, E. Alleno, A. Castellero |
| 14:30 - 14:45 CT 17 | Enhancing the thermoelectric properties via modulation of defects in p-type MNiSn-based (M=Hf, Zr, Ti) half-Heusler materials X. Ai , B. Lei, M. O. Cichocka, L. Giebeler, R. B. Villorod, S. Zhang, N. Pérez, K. Nielsch, R. He |
| 14:45 - 15:00 CT 18 | Effect of isoelectronic substitution on the transport properties of Co₂Zr_{1-x}HfxSn (x = 0, 0.25, 0.50, 0.75, 1) Heusler alloys A. Difalco, A. Ferrario, S. Boldrini, M. Baricco, A. Castellero |
| 15:00 - 15:15 CT 19 | Anisotropic magneto-thermal transport in Co₂MnGa thin films P. Ritzinger , K. Výborný |

| SESSION II (MON) | |
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| Chair: Bo Iversen | |
| Theory & Modelling | |
| 13:45 - 14:15 IT 03 | In operando X-ray scattering studies of degradation mechanisms in high-performance thermoelectric materials P. S. Thorup |
| 14:15 - 14:30 CT 20 | Machine learning enabled thermoelectric generator modelling and optimisation Y. Zhu , D. Newbrook, P. Dai, C. H. (Kees) de Groot, R. Huang |
| 14:30 - 14:45 CT 21 | Design theory of a tiny high-power-density thermoelectric harvester to power wireless sensor node H. L. He , H. R. Ren, C. P. Niu, Y. Wu, M. Rong |
| 14:45 - 15:00 CT 22 | Advanced simulations of hybrid porous-solid/electrolyte materials for enhanced power factors P. Priyadarshi , S. C. Ruiz, Jorge García-Cañadas, N. Neophytou |
| 15:00 - 15:15 CT 23 | Influence of thermoelectric properties on the output power density of a new design of planar μ-TEG S. El Oualid , F. Kosior, G. Span, E. Mehmedovic, J. Paris, C. Candolfi, B. Lenoir |

| SESSION III (MON) | |
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| Chair: Anthony Powell | |
| Devices & Applications | |
| 13:45 - 14:15 IT 04 | Mg-based thermoelectric generators for near-room-temperature applications: device manufacturing and strategies for further improvement J. de Boor , S. Ghosh, A. Wieder, A. Duparchy, H. Naithani, P. Ziolkowski, G. Oppitz, M. Abdelbaky, W. Mertin, B. Ryu, S. D. Park, E. Müller |
| 14:15 - 14:30 CT 24 | Sustainable n-type CuFeS₂ thin-film thermoelectric generators M. A. Malagutti , K. Lohani, A. Chiapinni, I. C. Prades, A. Navarro, E. Saucedo, N. Ataollahi, P. Scardi |
| 14:30 - 14:45 CT 25 | An on-chip micro-thermoelectric temperature-controller Q. Jin , N. Pérez, K. Nielsch, H. Reith |
| 14:45 - 15:00 CT 26 | Thermoelectric modules based on thin films for IoT applications P. Mele , G. Latronico, H. Shigemune, M. Maeda, C. Bourges, T. Mori, K. Usami |
| 15:00 - 15:15 CT 27 | High-sensitivity flexible thermocouple sensor arrays via printing and photonic curing M. Mallick , L. Franke, A. Rösch, U. Lemmer |

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| 15:15 - 15:45 | Coffee Break |
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SESSION I (MON)

Chair: Emmanuel Guilmeau

Materials & Processing

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| 15:45 - 16:00 | The high-performance n-type Bismuth-telluride-based polycrystalline materials via constructing MoSe₂-2D heterojunction for power generation applications CT 28 | T. Xiong , H.L. He, G. Tian, H.R. Ren, C.P. Niu, Y. Wu, M. Rong |
| 16:00 - 16:15 | The effect of the milling rotation speed of PbTe thermoelectric materials with nanostructure CT 29 | R. Yasuda , M. Bumrungron, T. Maeda, M. Tachii, J. Asai, I. Morioka, R. Yasuhuku, T. Hirai, T. Tsubochi, T. Kanaya, T. Iwamoto, C. Kanda, S. Uno, J. Kanaya, K. Hasezaki |
| 16:15 - 16:30 | Investigating Both Electronic Structure and Thermoelectric Transport Properties of SnBi₂Te₄ CT 30 | I. Terzi , K. Pryga, B. Wiendlocha, C. Candolfi, B. Lenoir |
| 16:30 - 16:45 | High temperature crystal structure analysis, effect of substitution on phase transition and transport properties of Cu₂9Te₂ CT 31 | M. Yahyaoglu , Y. Prots, U. Aydemir |
| 16:45 - 17:00 | Reducing the thermal conductivity of nanocrystalline CuNi alloys CT 32 | C. V. Manzano , O. C. Calero, M. Tranchant, E. Bertero, P. C. Solana, M. M. González, L. Philippe |
| 17:00 - 17:15 | Precision Interface Engineering of CuNi Alloys by Powder ALD Toward High Thermoelectric Performance CT 33 | A. Bahrami , S. He, C. Jung, S. Zhang, R. He, K. Nielsch |

SESSION II (MON)

Chair: María Ibáñez

Materials & Processing

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| 15:45 - 16:00 | On the optimisation of the brazing process of Fe₂VAl Heusler compound-based Thermoelectric Modules CT 34 | V. Marchal-Marchant , G. Roy, C. van der Rest, V. Dupont, J-P. Erauw, P. J. Jacques |
| 16:00 - 16:15 | CoTe₂- Enhanced Thermoelectric Performance of Nanocrystalline Skutterudite Thin Films CT 35 | B. Jarwal , S. Abbas, T. L. Chou, S. M. Vailyaveettil, L. C. Chen, K. H. Chen |
| 16:15 - 16:30 | Fabrication and evaluation of Co-based diffusion barriers for skutterudite thermoelectric materials obtained via pulse plasma sintering CT 36 | M. J. Kruszewski , K. Cymerman, M. Chmielewski, D. Moszczyńska, Ł. Ciupiński |
| 16:30 - 16:45 | Development of high-entropy-type thermoelectric materials CT 37 | A. Yamashita , A. Seshita, P. Rani, Y. Mizuguchi |
| 16:45 - 17:00 | Electrochemical and thermoelectric characterization of mixed-conducting high-entropy oxides CT 38 | T. Miruszewski , D. Jaworski, M. Czudec, K. Kuc, J. Budnik, W. Skubida, B. Trawiński, M. Gazda |
| 17:00 - 17:15 | Thermoelectric properties of high-entropy type AgBi(S, Se, Te)₂ CT 39 | A. Seshita , A. Yamashita, Y. Mizuguchi |

SESSION III (MON)

Chair: Thierry Caillat

Devices & Applications

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| 15:45 - 16:00 | Dynamic thermoelectric generators: increased efficiency at maximum power by modulation of heat fluxes CT 40 | D. Narducci |
| 16:00 - 16:15 | In-situ electrode bonding process for improving the reliability and efficiency in nanostructured PbTe-based modules CT 41 | P. Sauerschnig , P. Jood, M. Ohta |
| 16:15 - 16:30 | Height Optimized Micro-Thermoelectric Devices CT 42 | N. B Pulumati , A. S Dutt, D. Berger, N. Sherkat, U. Pelz, P. Woias, K. Nielsch, H. Reith |
| 16:30 - 16:45 | Long-term performance stability of all-Si based micro-thermoelectric generators with integrated heat sink CT 43 | A. Rodriguez-Iglesias , D. Estrada-Wiese, J. M. Sojo, M. Fernández-Regúlez, I. Martín-Fernández, A. Morata, A. Tarancon, L. Abad, J. Santander, M. Salleras, L. Fonseca |
| 16:45 - 17:00 | Development of Nano-CHP Based on Middle and Low Temperature Thermoelectric Modules Arranged as a Cascade CT 44 | A. Stumpf , T. Metz |
| 17:00 - 17:15 | 300mm wafer level fabrication of CMOS-compatible thermoelectric energy-harvester and cooler devices CT 45 | C. Schwinge , M. Czernohorsky, G. Gerlach, M. Wagner-Reetz |

TUESDAY, SEPTEMBER 19, 2023

Chair: Ernst Bauer

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| 09:00 - 09:45 | Interface and grain boundary effects on thermoelectrics |
| PT 02 | <u>G. J. Snyder</u> |
| 09:45 - 10:15 | Microscale Imaging of Thermal Conductivity Suppression at Grain Boundaries |
| IT 05 | <u>E. Isotta</u> , S. Jiang, G. Moller, A. Zevalkink, G. J. Snyder, O. Balogun |
| 10:15 - 10:45 | Coffee Break |

SESSION I (TUE)

Chair: Anke Weidenkaff

Materials & Processing

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| 10:45 - 11:00 | Novel fabrication route for reproducible and high zT in superionics Ag₂X (X = Se, Te) |
| CT 46 | <u>N. Jakhar</u> , N. Bisht, D. K. Kedia, A. Kumar, K. Saurabh, A. Katre, S. Singh |
| 11:00 - 11:15 | Metavalent bonding mediated high thermoelectric properties of SnSe-Ag₂V₂ alloys |
| CT 47 | <u>N. Lin</u> , R. He, T. Ghosh, O. Cojocaru-Mirédin, Y. Yu, M. Wuttig |
| 11:15 - 11:30 | In-depth study on preparation of Bi₂O₂Se polycrystals |
| CT 48 | <u>J. Zich</u> , A. Sojka, K. Knižek, J. Navrátil, Č. Drašar |
| 11:30 - 11:45 | Synthesis and thermoelectric properties of Cr_{1-x}MexN (Me = Mo, V) |
| CT 49 | V. Hjort, <u>N. Singh</u> , S. Chowdhury, R. Shu, A. Le Febvrier, P. Eklund |
| 11:45 - 12:00 | Influence of ion implantation on the thermoelectric properties of transition metal nitrides thin films. |
| CT 50 | <u>H. Bouteiller</u> , R. Burcea, P. Eklund, A. Le Febvrier, S. Dubois, J. F. Barbot |

SESSION II (TUE)

Chair: Christophe Candolfi

Materials & Processing

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| 10:45 - 11:00 | Understanding the mechanism of metal-assisted chemical etching to optimize thermoelectric devices based on Si nanopillars |
| CT 51 | <u>F. Giulio</u> , D. Narducci |
| 11:00 - 11:15 | Impact of the nanostructuring and Sr purity on the thermal and thermoelectric properties of α-SrSi₂ |
| CT 52 | <u>R. Ghannam</u> , A. Moll, D. Bérardan, B. Villeroy, R. Viennois, M. Beaudhuin |
| 11:15 - 11:30 | Thermal conductivity of GeSn alloys: a CMOS energy harvesting platform for green computing |
| CT 53 | <u>A. A. Corley-Wiciak</u> , P. Graziosi, A. A. Chimienti, O. Concepción, D. Buca, D. Spirito, A. Tomadin, M. Virgilio, S. Roddaro, G. Capellini |
| 11:30 - 11:45 | Suppressing the thermal conductivity of type-I clathrates by mesostructuring |
| CT 54 | <u>M. Lužnik</u> , G. Lientschnig, M. Taupin, A. Steiger-Thirsfeld, X. Yan, A. Prokofiev, S. Paschen |
| 11:45 - 12:00 | High-performance n-type silicide thermoelectrics developed by recycled Si kerf |
| CT 55 | <u>P. Mangelis</u> , A. Sousanis, G. Mesaritis, A. K. Sgöland, T. Kyratsi |

SESSION III (TUE)

Chair: Krzysztof Wojciechowski

Devices & Applications

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| 10:45 - 11:00 | A Heusler-based Transverse Thermoelectric Generator Processed by Co-Sintering |
| CT 56 | <u>M. Delcroix</u> , G. Roy, V. Marchal-Marchant, C. van der Rest, P. J. Jacques |
| 11:00 - 11:15 | Development and experimental adjustment of a computational model for geothermal thermoelectric generators |
| CT 57 | <u>P. Alegria</u> , L. Catalán, M. Araiz, N. Pascual, D. Astrain |
| 11:15 - 11:30 | High-efficiency printed radial thermoelectric generators utilizing photonic curing on p- and n-type inorganic chalcogenides-based inks |
| CT 58 | <u>L. Franke</u> , M. Mallick, A. G. Rösch, M. I. Khan, U. Lemmer |
| 11:30 - 11:45 | New architectures for heat sink less organic and inorganic thin film thermoelectric (TE) devices inspired by Kirigami |
| CT 59 | <u>C. Zeng</u> , E. Bilotti |
| 11:45 - 12:00 | Characterisation and optimisation of passive heat exchangers for enhancing the operation of thermoelectric generators under extreme environmental conditions |
| CT 60 | <u>N. Pascual</u> , M. Araiz, P. Alegria, L. Catalán, I. Erro, A. Martínez, D. Astrain |

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| 12:00 - 13:30 | Lunch |
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| SESSION I (TUE) | |
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| <i>Chair: Peter Baláz</i> | |
| Materials & Processing | |
| 13:30 - 14:00 IT 06 | Structure-property relations in ternary copper sulphides for thermoelectric applications A.V Powell , P. Vaqueiro, S. Tippireddy |
| 14:00 - 14:15 CT 61 | Enhanced electronic transport and low thermal conductivity in eco-friendly Cu₂CoSnS₄-xSex diamond-like materials T. Parashchuk , O. Cherniushok, O. Smitiukh, O. Marchuk, K.T. Wojciechowski |
| 14:15 - 14:30 CT 62 | Thermoelectric properties of Cu₁₂-xNixSb₄S₁₃-ySey tetrahedrite D. Moço, J. F. Malta, E. B. Lopes, L. F. Santos, D. Zavanelli, G. J. Snyder, A. P. Gonçalves |
| 14:30 - 14:45 CT 63 | High-Performance Thermoelectric Properties of Cu₂Se Fabricated via Cold Sintering Process S. Pinitsoontorn , P. Piyasin |
| 14:45 - 15:00 CT 64 | Atomic and nanoscale order/disorder phenomena in thermoelectric copper-based sulfides E. Guilmeau |

| SESSION II (TUE) | |
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| <i>Chair: Dario Narducci</i> | |
| Theory & Modelling | |
| 13:30 - 14:00 IT 07 | Phonons and thermal properties of complex crystals S. Pailhès , V. M. Giordano, S. R. Turner, P.F. Lory, C. Candolfi, M. de Boissieu, H. Euchner |
| 14:00 - 14:15 CT 65 | Predicting phonon transport in thermoelectric Sr₂Si_{1-x}Gex alloys from a highly accurate machine learning interatomic potential H. J. You , L. Z. Yao, Y. F. Liu, T. Ong, Y. T. Yao, T. R. Chang, H. Lin |
| 14:15 - 14:30 CT 66 | Designing phonons for thermoelectric metamaterials with physics and machine learning optimization X. Zianni , A. D. Stefanou, I. Chouthis |
| 14:30 - 14:45 CT 67 | Comprehensive fitting tool to analyse temperature-dependent transport data: Introduction and examples of usage M. Parzer , F. Garmroudi, A. Riss, M. Reticcioli, T. Mori, E. Bauer |
| 14:45 - 15:00 CT 68 | Best thermoelectric efficiency exploration by solving thermoelectric integral equation over material big data of Starrydata2 B. Ryu , J. Chung, M. Kumagai, Y. Katsura, S.D. Park |

| SESSION III (TUE) | |
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| <i>Chair: Theodora Kyratsi</i> | |
| Materials & Processing | |
| 13:45 - 14:15 IT 08 | The Concept of the Composite Thermoelectric Materials with Attuned Electronic Structure and Mismatched Phonon Structure (AES-MPS) K. Wojciechowski , A. Kosonowski, A. Kumar, T. Parashchuk, A. Lis, K. Zazakowny, S. Gogoc, J. Tobola, K. Wolski, S. Zapotoczny |
| 14:00 - 14:15 CT 69 | Protective Covers for Cu_{10.5}Ni_{1.5}Sb₄S₁₃ Tetrahedrites R. Coelho , E. B. Lopes, F. P. Brito, A. P. Gonçalves |
| 14:15 - 14:30 CT 70 | Interstitials in half-Heusler compounds W. Xie , R. Yan, A. Weidenkaff |
| 14:30 - 14:45 CT 71 | Enhancing the thermoelectric performance of n-type Mg₃(Sb,Bi)₂ by high-temperature sintering and metallic inclusions J. W. Li , H. L. Zhuang, J. F. Li |
| 14:45 - 15:00 CT 72 | Dilemma and opportunities: A review on industrial-scale applications of thermoelectric power generation H. Yin |

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| 15:00 - 17:15 | POSTER SESSION I |
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WEDNESDAY, SEPTEMBER 20, 2023

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| <i>Chair: Jeffrey Snyder</i> | |
| 09:00 - 09:45 PT 03 | Enhanced atomic ordering leads to ultra-high thermoelectric performance K. Biswas |
| 09:45 - 10:15 IT 09 | Solution-Processed Inorganic Thermoelectric Materials: new avenues for material control T. Kleinhanns, M. Calcabrini, C. Fiedler, S. Horta, D. Balazs, M. Ibáñez |
| 10:15 - 10:45 | Coffee Break |

| SESSION I (WED) | |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Chair: Fabian Garmroudi</i> | |
| Materials & Processing | |
| 10:45 - 11:00 CT 73 | Role of lone pair rotation in the ultralow thermal conductivity of aikinite <u>P. Vaqueiro</u> , V. Carnevali, S. Mukherjee, D. J. Voneshen, K. Maji, E. Guilmeau, A. V. Powell, M. Fornari |
| 11:00 - 11:15 CT 74 | Innovative synthesis methods to reach quaternary thioantimonate Ag₄MnSb₂S₆ <u>S. Nar</u> , A. Stolz, D. Machon, A. Kusiak, J.-L. Battaglia, A. Boucherif, N. Semmar |
| 11:15 - 11:30 CT 75 | Rare Earth Chalcogenides: A Promising Group of Materials for Thermoelectric Applications <u>J. U. Rahman</u> , K. Jang, Ch. Jung, S. Zhang, K. Nielsch, R. He |
| 11:30 - 11:45 CT 76 | Thermoelectric studies of synthetic mineral Kutinaite Cu₁₄Ag₆As₇ <u>P. K. Ventrapati</u> , R. S. Christensen, T. B. E. Grønbech, K. A. H. Stöckler, B. B. Iversen |
| 11:45 - 12:00 CT 77 | Mixed Anion Chalcogenides with Disordered Structures as New Thermoelectric Candidates <u>Z. Malik</u> , G. Hyett |

| SESSION II (WED) | |
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| <i>Chair: David Astrain</i> | |
| Materials & Processing | |
| 10:45 - 11:00 CT 78 | Optimization of magnesium-based materials for near room temperature applications <u>B. A. Santos</u> , J. de Boor, A. P. Gonçalves |
| 11:00 - 11:15 CT 79 | On the stability of thermoelectric materials: investigating Mg diffusion in Mg₂(Si,Sn) at room temperature <u>A. Duparchy</u> , R. Deshpande, S. Ghosh, E. Müller, J. de Boor |
| 11:15 - 11:30 CT 80 | Tuning micro- and nanostructures by decomposition of PbAgSbTe₃ and the influence on thermoelectric properties <u>P. Kemmesies</u> , X. Li, O. Oeckler |
| 11:30 - 11:45 CT 81 | Enhancing Low Temperature Thermoelectric Properties of n-type Mg_{3.2-x}(Sb_{0.3}Bi_{0.7})_{1.996}Te_{0.004} through Nb Addition <u>M. Özen</u> , A. B. Burçak, U. Aydemir |
| 11:45 - 12:00 CT 82 | Low thermal conductivity in metal halide and chalcogenide <u>P. Acharyya</u> , E. Guilmeau, K. Biswas |

| SESSION III (WED) | |
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| <i>Chair: Neophytos Neophytou</i> | |
| Theory & Modelling | |
| 10:45 - 11:00 CT 83 | Large enhancement of the silicon power factor in on-chip multi-barrier nanodevices <u>A. Masci</u> , E. Dimaggio, C. Capello, D. Narducci, N. Neophytos, G. Pennelli |
| 11:00 - 11:15 CT 84 | Strong charge carrier scattering at grain boundaries of PbTe caused by the collapse of metavalent bonding <u>Y. Yu</u> , M. Wuttig |
| 11:15 - 11:30 CT 85 | Magneto-thermal switching using superconductors and importance of phonon-glass-electron-crystal states to the switching performance <u>M. Yoshida</u> , M. R. Kasem, A. Yamashita, K. Uchida, Y. Mizuguchi |
| 11:30 - 11:45 CT 86 | Soft optical phonons enabling ultralow and glass-like thermal transport in Argyrodite Cu₇PS₆ <u>X. C. Shen</u> , Y. Chen, E. Guilmeau |
| 11:45 - 12:00 CT 87 | Temperature dependent Evolution of Optical Phonon Modes and Thermoelectric Properties in polycrystalline Bi₂Te₃ M. Tiadi, D. K. Satapathy, <u>M. Batabyal</u> |

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| 12:00 - 13:30 | Lunch |
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| SESSION I (WED) | |
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| <i>Chair: Takao Mori</i> | |
| Materials & Processing | |
| 13:30 - 14:00 IT 10 | Thermoelectricity and magnetism in selected oxides and chalcogenides <u>S. Hébert</u> |
| 14:00 - 14:15 CT 88 | Thermoelectric properties of defective half-Heusler Nb_{0.80}CoSb-TiCoSb solid solutions <u>Y. Huang</u> , K. Y. Xia, Z. H. Gao, C. G. Fu, T. J. Zhu |
| 14:15 - 14:30 CT 89 | Analysis of crystal structure and Thermoelectric properties of Sr-substituted [Ca₂CoO₃]_pCoO₂ <u>Y. Shimizu</u> , K. Hayashi, Y. Miyazaki |
| 14:30 - 14:45 CT 90 | Co-Cr-Fe-Mn-Ni oxide as a highly efficient thermoelectric high-entropy alloy <u>D. Pankratova</u> , K. Yusupov, A. Vomiero ¹ |

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| 14:45 - 15:00 | Nanostructure Engineering and Thermoelectric Properties of SrTiO₃/TiN Nanocomposites Consolidated by Spark Plasma Sintering CT 91 M. Ohtaki , S. Umeno, S. Nagasaki, K. Suekuni |
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SESSION II (WED)

Chair: Peter Skjøtt Thorup

Theory & Modelling

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| 13:30 - 14:00 | Electronic transport simulations in complex band materials beyond the constant relaxation time approximation IT 11 N. Neophytou , Z. Li, P. Graziosi |
| 14:00 - 14:15 | Thermoelectric figure of merit under constant Seebeck coefficients CT 92 J. Chung , B. Ryu, H. Seo |
| 14:15 - 14:30 | Efficient and accurate calculations of thermoelectric coefficients for materials with complex bands: The example of Mg₃Sb₂ CT 93 Z. Li , P. Graziosi, N. Neophytou |
| 14:30 - 14:45 | Direct simulation of thermoelectric transport in rubrene from nonadiabatic dynamics CT 94 J. Elsner , J. Blumberger |
| 14:45 - 15:00 | Unravelling the mystery: Does thermopower depend on specific heat or entropy? CT 95 M. Jazandari, J. Abouie, D. Vashaee |

SESSION III (WED)

Chair: António Pereira Gonçalves

Emerging Topics

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| 13:30 - 14:00 | Unlocking high thermoelectric performance in metallic NiAu alloys via inter-orbital scattering IT 12 F. Garmroudi , M. Parzer, A. Riss, C. Bourgès, S. Khmelevskiy, T. Mori, E. Bauer, A. Pustogov |
| 14:00 - 14:15 | Playing with phonons: from the reduction of the thermal conductivity to the full control of the phonon flux CT 96 C. Capello , A. Masci, E. Dimaggio, G. Pennelli |
| 14:15 - 14:30 | Seebeck, Nernst and magnetotransport in dense Co₃Sn₂S₂ ceramic CT 97 A. Maignan , R. Daou, D. Pelloquin, S. Hébert |
| 14:30 - 14:45 | Sustainable metal phosphide thermoelectrics with promising performance CT 98 R. J. Quinn, J. W. G. Bos |
| 14:45 - 15:00 | Large atomic size mismatch induced novel meta-phase and high thermoelectric performance CT 99 K. Zhao , L. Chen, X. Shi |

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| 15:00 - 17:15 | POSTER SESSION II |
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| 19:00 - 22:00 | CONFERENCE DINNER |
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THURSDAY, SEPTEMBER 21, 2023

Chair: Eleonora Isotta

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| 09:00 - 09:45 | Development of enhanced thermoelectric materials and viable devices PT 04 T. Mori |
| 09:45 - 10:15 | The Next Generation RTG Project – Rebuilding the Past and Preparing for the Future IT 13 J. P. Fleurial |

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| 10:15 - 10:45 | Coffee Break |
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SESSION I (THU)

Chair: Luis Fonseca

Materials & Processing

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| 10:45 - 11:00 | Strong enhancement of the thermoelectric properties of nanostructured α-SrSi₂ by combining Melt-spinning and Spark Plasma Sintering CT 100 R. Ghannam, A. Moll, D. Bérardan, B. Villeroy, R. Viennois, M. Beaudhuin |
| 11:00 - 11:15 | Poly(3-hexylthiophene) layers modified by acids as promising p-type thermoelectric materials CT 101 S. Gogoc , P. Gnida, K. Wojciechowski, P. Data |
| 11:15 - 11:30 | Exploring the Potential of Nanostructured Ag₂Se in Hybrid Thermoelectric Films CT 102 B. Hamawandi , P. Genc, A. B. Ergül, M. S. Toprak |

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| 11:30 - 11:45 CT 103 | More than 3 times power factor improvement of PEDOT:PSS induced by electrolytes <u>M. Solis-de la Fuente</u> , L. Márquez-García, S. Castro-Ruiz, E. Lioutaud, L. Fournier, C. Chatard, A. Bouvet-Marchand, J. García-Cañadas |
| 11:45 - 12:00 CT 104 | Thermoelectric properties of pedot: PSS thin films in different concentration <u>Ş. Özkan</u> , G. Gürlek, M. Şener, Y. Seki, B. O. Gürses, L. Altay, M. Sarıkanat |
| 12:00 - 12:15 CT 105 | Electrochemically grown bismuth telluride inside commercial polyester filters for flexible thermoelectric generators. <u>O. Caballero-Calero</u> , P. Cerviño Solana, M. Á. Tenaguillo, M. M. González |

SESSION II (THU)

Chair: *Stéphane Pailhès*

Theory & Modelling

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| 10:45 - 11:00 CT 106 | Ab-initio Studies of Electronic Properties of Tungsten Carbide for Thermoelectric Applications A. K. Vishwakarma, R. Saraswat, S. Bhattacharya, <u>R. Verma</u> |
| 11:00 - 11:15 CT 107 | Does Zn form a resonant level in SnTe? <u>K. Pryga</u> , B. Wiendlocha |
| 11:15 - 11:30 CT 108 | In-gap states: mechanism of ZT improvement and their difference to resonant levels <u>B. Wiendlocha</u> |
| 11:30 - 11:45 CT 109 | Interplay Between Doping, Morphology and Lattice Thermal Conductivity in Organic Polymers <u>P. S. Floris</u> , N. Zahabi, A. Cappai, I. Zozoulenko, C. Melis, R. Rurali |
| 11:45 - 12:00 CT 110 | Criteria for erroneous substrate contribution to the thermoelectric properties of thin films <u>A. Riss</u> , M. Stöger, M. Parzer, F. Garmroudi, T. Mori, E. Bauer |
| 12:00 - 12:15 CT 111 | Lifetime prediction of a Bi₂Te₃ thermoelectric module <u>Y.Q. Zhang</u> , C.P. Niu, H.L. He, Y. Wu, M. Rong |

SESSION III (THU)

Chair: *Antoine Maignan*

Devices & Applications

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| 10:45 - 11:00 CT 112 | Advanced thermoelectric converter technologies for integration into a potential advanced radioisotope thermoelectric generator <u>T. Caillat</u> , S. Pinkowski, I. Chi, J. Paik, K. Smith, R. Bennett, S. Keyser, A. Lane, K. Wefers |
| 11:00 - 11:15 CT 113 | Feasibility of a Low-Power RTG Concept Utilizing a GPHS Heat Source <u>A. Ray</u> , K. Sherick, P. Berneron, B. A. Tolson, C. Barklay, M. den Heijer |
| 11:15 - 11:30 CT 114 | ISA-TEG: High temperature modules based on Half-Heusler compounds ready for commercialization <u>A. Fey</u> , C. Klingelhöfer, S. Moos, B. Orth, B. Pfeiffer, N. Rink, J. Marien, D. Zuckermann |
| 11:30 - 11:45 CT 115 | 0.5 kW facility of geothermal thermoelectric generator from hot dry rocks on canary islands <u>D. Astrain</u> , N. Pascual, P. Alegría, L. Catalán, M. Araiz, I. Erro |
| 11:45 - 12:00 CT 116 | A new direct p-n junction based on Heusler compounds manufactured by co-sintering <u>G. Roy</u> , M. Delcroix, N. Namazzade, V. Marchal-Marchant, C. van der Rest, P.J. Jacques |

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| 12:15 - 13:45 | Lunch |
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| 13:45 - 14:30 | ROUND TABLE SESSION |
| 14:30 - 15:00 | FAREWELL |

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| TUESDAY 15:00 - 17:15 | POSTER SESSION I |
| | Theory & Modelling |
| P 01 | First-principles study of structural disorder, site preference, chemical bonding and transport properties of Li-doped tetrahedrites <u>A. Kolezynski</u> , K. Kapera |
| P 02 | Identification of dominant scattering mechanism and its influence on transport properties of half-Heusler compound <u>D. Bhattacharjee</u> , P. R. Raghuvanshi, A. Bhattacharya, T. Dasgupta |
| P 03 | A multiband fitting technique for analyzing temperature dependent electronic band structure of thermoelectric materials <u>B. Agrawal</u> , T. Tarachand, J. de Boor, T. Dasgupta |

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| P 04 | Complex Fermi surface responsible for high zT <u>Ø. A. Grimenes</u> , O. M. Løvvik, K. Berland |
| P 05 | Efficiency improvement of discrete thermoelectric generators operating under local thermal non-equilibrium domain A. Massaguer, <u>M. Teixidor</u> , J. J. Suñol, E. Massaguer |
| P 06 | High-throughput and accurate prediction of the thermal and electron transport properties of large chemical spaces accelerated by machine learning <u>J. J. Plata</u> , A. M. Márquez, E. J. Blancas, V. Posligua, R. Grau-Crespo, J. Fdez Sanz |
| P 09 | Effect of PEDOT:PSS and bismuth tellure on electric potentials in the thermoelectric generator <u>G. Vardar</u> , M. Şener, B. O. Gürses, G. Gürlek |
| P 10 | Thermoelectric algebraic representation: equations and inequalities for simple thermoelectric device design <u>B. Ryu</u> , J. Chung, S. Park, S. D. Park |
| P 11 | The stability and role of defects in Bi2O2Se <u>K. Knížek</u> , J. Navrátil, Č. Drašar |
| P 12 | Investigating the transport properties of CrN: Insights into phonon thermal conductivity and scattering <u>K. Ahn</u> , J. Hejtmánek, K. Knížek |
| P 13 | First-principles calculations of thermal properties in the triangular lattice antiferromagnet AgCrSe2 <u>S.-J. Kim</u> , H. Rosner |
| P 14 | Efficiency improvement of discrete thermoelectric generators operating under local thermal non-equilibrium domain <u>M. Teixidor</u> , A. Massaguer, J.J Suñol, E. Massaguer |
| Measurement & Characterization | |
| P 15 | Establishing a protocol for the approval of thermoelectric materials used in biomedical applications <u>K. P. Walsh</u> |
| P 16 | Novel methods of scattering parameter analysis for BiSbTe thermoelectric materials under constant temperature without Hall measurements. <u>K. Hasezaki</u> , J. Asai, M. Bumrungpon, T. Tsubochi, T. Kanaya, M. Tachii, T. Maeda, T. Iwamoto, C. Kanda, R. Yasuda, S. Uno, J. Kanaya |
| P 17 | Experimental estimation of electrical conductance of heterostructured Ge nanowires for thermoelectrical applications. T. Lahens, G. Hallais, L. Vincent, S. Dilhaire, <u>S. Grauby</u> |
| P 18 | Characterization and Seebeck coefficient of mesoporous silicon: effect of nanographene incorporation <u>S. Nar</u> , A. Stolz, D. Machon, A. Boucherif, N. Semmar |
| P 19 | Lattice dynamics study of thermoelectric cubic SrSi2 by Raman scattering experiments and ab initio calculations <u>R. Ghannam</u> , J. Rouquette, M. Beaudhuin, R. Viennois |
| P 20 | In praise of the humble four point probe: Characterisation for scale up <u>R. S. Tuley</u> , C. Koz, H. Hunter, E. Stefanaki, K. Simpson |
| P 21 | Thermal interface resistance analysis of thermoelectric devices by using thermoreflectance microscopy <u>H.-B. Kim</u> , H. Jang |
| P 22 | A cross-plane Seebeck measurement system for sub-µm-thick films <u>H. Shin</u> , S. Lee |
| P 23 | Test and simulation study for µ-TEGs based on screen-printed PbSe QDs V. Sousa, R. Coelho, P. Alpuim, Y. V. Kolen'ko, F.P. Brito, <u>A. P. Gonçalves</u> , E. M. F. Vieira |
| P 24 | Hierarchically designed tetrahedrite with reduced thermal conductivity facilitated by all-scale phonon scattering <u>U. Rout</u> , R. Ch. Mallik |
| P 25 | Mechanical properties characterization of thermoelectric materials <u>S. J. Jeon</u> , S. Shin, D. H. Kim, S. Han |
| P 26 | Thermoelectric properties of doped SnSe alloys <u>F. Mihok</u> , K. Saksl |
| P 27 | A Self-Independent Binary-Sublattice Construction in Cu2Se Thermoelectric Materials <u>H. Zhao</u> , H. Hu, J.-W. Li, J.-F. Li, J. Zhu |
| Thermoelectric Materials & Processing | |
| P 28 | Development and evaluation of bismuth antimony telluride-PEDOT: PSS hybrid thermoelectric fiber using co-sputtering D. H. Kim, S. Shin, S. J. Jeon, <u>S. Han</u> |

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| P 29 | Experimental and DFT study of doped CrN thin films for thermoelectric applications N. Singh, D. Gambino, A. Febvrier, B. Alling, P. Eklund |
| P 30 | Highly tailored gap-like structure for excellent thermoelectric performance X. Xu, R. He, K. Nielsch, J. Q. He |
| P 31 | Anomalous thermal conductivity of alkaline-metals-substituted EuTiO₃ induced by resonant scattering W. Xie, X. Xiao, A. Weidenkaff |
| P 32 | Manipulation with natural mineral chalcopyrite CuFeS₂ via mechanochemistry: properties and thermoelectric potential P. Baláž, E. Dutková, M. Baláž, N. Daneu, L. Findoráková, J. Hejtmánek, P. Levinský, K. Knížek, M. Bali Hudáková, R. Džunda, R. Bureš, V. Puchý |
| P 33 | Enhance thermoelectric performance of Mg₃Sb₂-based materials via Ag doping strategy J. Li, R. Chetty, T. Mori |
| P 34 | Chemical bonding origin of the excellent thermoelectric properties of Bi₂Te₃-based alloys N. Lin, Y. Yu, M. Wuttig |
| P 35 | Synthesis, characterization and thermoelectric properties of p-type MnSi_{1.73} and Mg₂(Si, Sn) prepared using Si-kerf from PV cutting process G. Mesaritis, I. Ioannou, A. K. Soiland, Th. Kyratsi |
| P 36 | Growth and thermoelectric properties of ScN-based ternary alloys S. Chowdhury, V. Hjort, N. Singh, F. A. F. Lahiji, M. Magnuson, A. L. Febvrier, P. Eklund |
| P 37 | Improving Thermoelectric Efficiency of InSb by Nano-Boron Doping A. B. Burçak, R. Cardoso-Gil, U. Aydemir |
| P 38 | p-type copper iodide thin film for transparent and flexible thermoelectrics P. Goel, W. Wojnicka, T. Koskinen, I. Tittonen |
| P 39 | Low purity elements based skutterudites for mid-temperature thermoelectric applications R. Bhardwaj, E. Alleno |
| P 40 | Surface LASER processing effect on the thermoelectric properties of bismuth-antimony-tellurium alloy G. Samourganidis, T. Kyratsi |
| P 41 | Effect of element substitution on thermoelectric properties and oxidation resistance of iron disilicide H. Kohri |
| P 42 | Reduced contact resistance of Cu₂SnS₃ thermoelectric legs S. Nakamura, H. Araki, Y. Akaki |
| P 43 | Thermoelectric materials grown by magnetron sputtering codeposition: a thin film approach A. Conca, E. Ferreira-Vila, J. M. Domínguez-Vázquez, C. V. Manzano, O. Caballero-Calero, A. Cebollada, M. Martin-Gonzalez |
| P 44 | Mechanochemical synthesis of tetrahedrite Cu₁₂Sb₄S₁₃ nanocomposites: challenge for thermoelectric performance P. Baláž, A. Baran Burcak, U. Aydemir, A. Mikula, P. Nieroda, M. Baláž, L. Findoráková, R. Bureš, V. Puchý, M. Erdemoglu, M. Achimovičová, E. Guilmeau |
| P 45 | Design and properties of composites made of bismuth nanowires confined in mesoporous silica and alumina for Peltier applications R. Viennois, M. Fabbiani, Y. Zhao, J. Haines, O. Cambon, J. Rouquette, M. Beaudhuin, V. Flaud, P. Toulemonde, M. Legendre, C. Goujon, J.-L. Bantignies, L. Alvarez, C. Levelut, L. Konczewicz, S. Contreras |
| P 46 | Thermoelectric properties of Cu₂Se obtained by the SPS and the "SPS melting" method P. Nieroda, J. Leszczyński, M. J. Kruszewski, A. Koleżyński |
| P 47 | Thermoelectric properties of electrodeposited bismuth selenide thin films R. Kaur, A. Tanwar, N. Padmanathan, K. M. Razeeb |
| P 48 | Comparison of different co-doping strategies in optimizing thermoelectric properties of tetrahedrites J. Leszczyński, P. Nieroda, A. Koleżyński |
| P 49 | Organic/inorganic thermoelectric composites prepared via mechanical mixing S. Hadjipanteli, Th. Krasia-Christoforou, Th. Kyratsi |
| P 50 | Thermoelectric properties of conventionally and mechanothermally prepared chalcogenide spinels CuCr₂Se₄ V. Kucek, M. Achimovičová, M. Baláž, V. Puchý |
| P 51 | Selective scatterings of phonons and electrons in defective Half-Heusler Nb_{1-d}CoSb for the figure of merit zT > 1 Z. H. Gao, K. Y. Xia, P. F. Nan, L. Yin, B. H. Ge, Q. Zhang, C. G. Fu, T. J. Zhu |
| P 52 | Effect of sintering temperature on thermoelectric transport properties of n-type Mg₃Sb₂ J. H. Son, J. I. Jang, B. S. Kim, B. K. Min, S. J. Joo |

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| WEDNESDAY 15:00 - 17:15 | POSTER SESSION II |
| | Thermoelectric Devices & Applications |
| P 53 | Transient-Liquid-Phase bonding for Skutterudite-based thermoelectric modules <u>Ch. Stiewe</u> , P. Ziolkowski, E. Müller |
| P 54 | Half-Heusler modules with high power density for nano-CHP application N. Rink, C. Klingelhöfer, S. Moos, B. Orth, B. Pfeiffer, <u>A. Fey</u> , Dr. J. Marien, D. Zuckermann |
| P 55 | Fabrication of high power density telluride-based thermoelectric generator module for mid-temperature applications below 550 oC <u>J. Park</u> , B. Ryu, S.D. Park |
| P 56 | Thermoelectric cooling system for the monolithic microwave integrated circuits chip S. Shin, D. Kim, S. Jeon, <u>S. Han</u> |
| P 57 | Procedure of failure analysis on commercial available thermoelectric modules <u>K. H. Gresslehner</u> , M. Krenn, J. Schaumberger, P. Kerepsi, E. Machado Charry, B. Sonderegger |
| P 58 | Thermoelectric generator for autarkic maritime heating systems <u>P. Ziolkowski</u> , D. Zuckermann, P. Schmidt, E. Müller |
| P 59 | Development of thermoelectric generator for low-temperature waste heat recovery <u>R. Zybala</u> , B. Bucholc, K. Kowiorski, G. Kuderski, A. Strojny-Nędza, M. Chmielewski, K. Krzyżak, A. Majcher, K. Kaszyca |
| P 60 | Optimization of a two-stage cascade type thermoelectric generator through finite element analysis <u>A. Miozzo</u> , A. Ferrario, M. S. Natali, S. Boldrini |
| P 61 | Thermoelectric devices based on block copolymer nanostructured Si thin films <u>A. Rodríguez-Iglesias</u> , I. Martín-Fernández, F. Pérez-Murano, J. Santander, F. Xavier Álvarez, A. F. Lopeandia, L. Fonseca, L. Abad, M. Salleras, M. Fernández-Regúlez |
| P 62 | Twist angle resolved thermal conductivity in bilayer MoSe2 <u>M. Mandal</u> , N. Maity, P. K. Barman, A. K. Singh, P. K. Nayak, K. Sethupathi |
| P 63 | Reliability and electrical characterization of transient liquid phase sintering interconnects for thermoelectric devices <u>A. Ferrario</u> , M. S. Natali, A. Castellero, C. Fanciulli, A. Miozzo, S. Barison, L. Armelao, S. Boldrini |
| P 64 | Difficulties in preparing a truly pure Bi2O2Se <u>A. Sojka</u> , J. Zich, J. Navrátil, L. Beneš, T. Plecháček, Č. Drašar |
| P 65 | Inkjet printing flexible thermoelectric devices for sustainable power generation <u>Q. Zhang</u> , A. Huang, L. Wang, W. Jiang, U. Lemmer |
| P 66 | Design optimization of printed thermoelectric generators tailored for plate heat exchangers in waste heat recovery applications <u>M. I. Khan</u> , L. Franke, A. G. Rösch, U. Lemmer |
| | Emerging Topics |
| P 67 | A Cr complex solution able to produce a large power factor improvement in a nanostructured and porous oxide film <u>S. Castro-Ruiz</u> , L. Márquez-García, M. Solis-de la Fuente, B. Beltrán-Pitarch, P. Íñigo-Rabinal, G. Guisado-Barrios, J. García-Cañadas |
| | Others |
| P 68 | Thermoelectric data analysis toward power generation evaluation and standardization <u>S.D. Park</u> , J. Chung, J. Park, J. Jang, J. Lee, S. Park, B. Ryu |
| | Thermoelectric Materials & Processing |
| P 69 | Single-phase synthesis and thermoelectric properties of nowotony chimney-ladder FeGe <u>T. Kurosawa</u> , K. Hayashi, Y. Miyazaki |
| P 70 | Textured Ca3Co4-xO9-δ ceramics of electrospun nanoribbons with improved thermoelectric performance <u>K. Kruppa</u> , I. I. Maor, F. Steinbach, M. Mann-Lahav, G. S. Grader, A. Feldhoff |
| P 71 | The comparison of properties of tellurides doped monocrystals <u>K. Kaszyca</u> , G. Boczkal, B. Bucholc, K. Kowiorski, G. Kuderski, R. Zybala |
| P 72 | Properties of semiconductor-metal junctions obtained by the SPS/FAST process <u>K. Kowiorski</u> , K. Kaszyca, B. Bucholc, M. Chmielewski, K. Krzyżak, G. Kuderski, R. Zybala |

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| P 73 | The properties of tellurides fabricated by SHS technique <u>B. Bucholc</u> , K. Mars, K. Kowiorski, G. Kuderski, A. Strojny-Nędzka, K. Kaszyca, R. Zybala |
| P 74 | Role of the magnetism on the thermoelectric properties in FeCr₂S₄ <u>S. El Haber</u> , D. Pelloquin, O. Lebedev, R. Daou, A. Maignan, S. Hébert |
| P 75 | Impact of excess Cu on phase separation and thermoelectric properties of arc melted Ti_{0.5}Zr_{0.5}NiCu_ySn <u>B. F. Kennedy</u> , J.W.G. Bos |
| P 76 | Band engineered and carrier modulated thermoelectric enhancement in half-Heusler <u>A. Kumar</u> , P. Ghosh, S. Singh |
| P 77 | Engineering Thermoelectric Transport in Transparent Conducting Oxides S. Biswas, S. Majumder, E Jagadeswarareddy, <u>V. B. Kamble</u> |
| P 78 | Modelling the lattice thermal conductivity of skutterudites: ab-initio calculations, machine learning and more <u>E. R. Remesal</u> , A. M. Márquez, E. J. Blancas, V. Posligua, J. J. Plata, J. Fdez Sanz |
| P 79 | Preparation and thermoelectric properties of nonstoichiometric full-Heusler Mn₂+xV_{1-x}Al alloys <u>G. Kanno</u> , K. Hayashi, Z. Huang, H. Li, Y. Miyazaki |
| P 80 | Unraveling the origin of donor-like effect in bismuth-telluride-based thermoelectric materials <u>F. Liu</u> , M. Zhang, P. F. Nan, X. Zheng, Y. Z. Li, K. Wu, Z. K. Han, B. H. Ge, X. B. Zhao, C. G. Fu, T. J. Zhu |
| P 81 | Enhanced thermoelectric properties by anion-engineering of 2-dimensional transition metal dichalcogenides <u>K. Ch. Kwon</u> , H. Shin |
| P 82 | Enhancing thermoelectric and mechanical properties of p-type (Bi, Sb)₂Te₃ through Rickardite mineral (Cu_{2.9}Te₂) incorporation K. Saglik, M. Yahyaoglu, C. Candolfi, <u>U. Aydemir</u> |
| P 83 | Effect of magnetic entropy in the thermoelectric properties of Fe-doped Fe₂VAl full-Heusler <u>Tarachand</u> , N. Tsujii, T. Mori |
| P 84 | Carrier engineering-driven high thermoelectric performance in Ti doped Yb_{0.4}Co₄Sb₁₂ <u>A. Dadhich</u> , M. Saminathan, S. Perumal, M. S. Ramachandra Rao, K. Sethupathi |
| P 85 | Rapid synthesis and thermoelectric characterization of Ag₂Se_{1+x} compounds: Unveiling the secret of ultrafast formation and high performance K. Gáborová, P. Levinský, J. Hejtmánek, K. Knížek, <u>M. Achimovičová</u> |
| P 86 | The enhancement of thermoelectric performance in MgAgSb via post-annealing process <u>S.Y. Back</u> , W. Zhang, M. Yoshitaka, H. Cho, D. H. Nguyen, N. Kawamoto, D. Berthebaud, T. Mori |
| P 87 | Growth and TE properties of n-type Mg₃Bi₂-based thermoelectric thin film <u>S. Bano</u> , P. Ying, A. Takashi, R. Chetty, T. Mori |
| P 88 | Porous Ag₂Se fabricated by a modified cold sintering process with the average ZT around unity near room temperature D. Palaporn, <u>S. Pinitsoontorn</u> |
| P 89 | Enhanced thermoelectric performance of Al-doped ZnO nanocomposite obtained via chemical co-precipitation <u>I. Serhienko</u> , A. Novitskii, V. Khovaylo, T. Mori |
| P 90 | Energy harvesting from thermoelectric thin film by electromagnetic induction <u>M. Şener</u> , G. Gürlek, B. O. Gürses, Ş. Özkan |
| P 91 | Thermoelectric properties of a novel AgMnSbTe₃ compound <u>P. Levinský</u> , J. Hejtmánek, C. Candolfi, B. Lenoir |
| P 92 | Synthesizing double/triple Half-Heusler to explore larger compositional space <u>K. Imasato</u> , P. Sauerschnig, T. Ishida, A. Yamamoto, M. Ohta |
| P 93 | Electronic/ thermal transport and thermoelectric phenomena in implanted diamond nanostructures <u>S. Salami</u> , s. Pailhès, C. Adessi, V. Giordano, Z. Mthwesi, D. Régis, F. Rémy, B. Nicholas, A. Every, S. Naidoo |
| P 94 | Effects of annealing on thermoelectric properties of thin films and their application in micro-thermoelectric devices <u>H. Reith</u> , M. Naumochkin, N. Pulumati, L. Wilkins, K. Nielsch |
| P 95 | Optimizing thermoelectric properties of electrodeposited chalcogenides by electrochemical reduction reaction of tellurium ion <u>J. Kim</u> |
| P 96 | Improved thermoelectric performance of p-type tin monosulfide through tin precipitates <u>M. Y. Fakhri</u> , T. T. Ho, W. J. Lai, S. M. Valiyaveetil, B. Jarwal, L. C. Chen, K. H. Chen |
| P 97 | High thermoelectric performance in Ag₂Se achieved through a sustainable solution synthesis <u>F. Millillo</u> , T. Kleinhans, M. Calcabrini, C. Fiedler, S. Horta, D. Balazs, M. Ibáñez |

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| P 98 | Quantum and thermal fluctuations in spin configurations: deciphering their impact on magnetic order parameter and thermopower in MnSe across the critical temperature M. Jazandari, J. Abouie, D. Vashaee |
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