

EUROPEAN CONFERENCE ON SOLID STATE CHEMISTRY 2023

PRELIMINARY PROGRAMME

SUNDAY, JULY 9, 2023

13:00 - 19:00 **Registration**

16:00 - 16:20	Opening Session Tomas Wagner
16:20 - 17:00 PT 01	Metal-organic frameworks for sustainable separations and reactions: A computational perspective J. Jiang
17:00 - 17:30 InvT 01	Designer's metal-organic materials and interfaces through ALD/MLD M. Karppinen
17:30 - 18:00 InvT 02	Exploring model catalysts through the integration of in-situ near-ambient pressure XPS and STM P. Matvijja , M. Vorokhta, F. Pchálek, S. Oveysipoor, L. Piliai, T.N. Dinhová, B. Šmíd, I. Matolínová

18:00 - 18:30 **Welcome Drink**

18:30 - 18:50	Negative linear compressibility of the hybrid perovskite $[C(NH_2)_3]Er(HCO_2)_2(C_2O_4)$ T. J. Hitchings , A. B. Cairns, D. Allen, P. J. Saines
18:50 - 19:10	Complex modulations of the crystal structure of functional oxides with perovskite-related structure S. García-Martín , R. Marín-Gamero, E. Urones-Garrote, X. Martínez de Irujo-Labelde
19:10 - 19:30	Perovskite-type $RbNbO_3$ as a High-pressure Polymorphism A. Yamamoto , K. Murase, K. Sugiyama, T. Kawamata
19:30 - 19:50	Chemical and physical pressure effects on structural and magnetic properties of R_2CuTiO_6 perovskite series with R ranging from La to Lu L. Sederholm , A. Yamamoto, M. Karppinen

MONDAY, JULY 10, 2023

8:00 - 12:00 **Registration**

chairperson: Name Surname

9:00 - 9:40 PT 02	Solid-state batteries – at the edge between Solid State Chemistry and Materials Science J. Janek
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SESSION I

chairperson: Name Surname

9:40 - 10:10 InvT 03	Prediction of electrical conductivity of porous composites using 3D equivalent electronic circuit network model. Solid oxides fuel cell electrode case study D. Budáč, V. Miloš, M. Carda, M. Páidar, K. Bouzek
10:10 - 10:30	Critical current density of Li_6PS_5Cl powder pellets and processed films A. Tron , A. Beutl

SESSION II

chairperson: Name Surname

9:40 - 10:10 InvT 04	Synthesis-dependent structure-property relationships of quantum materials L. Clark , J. N. Graham, J. R. Stewart, J. A. Cooley, M. Songvilay, G. Confalonieri, D. Fortes , P. Manuel, A. R. Wildes
10:10 - 10:30	Quantum spin liquids in cation ordered perovskites M. J. Milton , P. Manuel, J. P. Attfield

10:30 - 11:00 Coffee Break

SESSION I

chairperson: Name Surname

11:00 - 11:20	Lithium transport mechanisms characterised by ssNMR and ToF-SIMS in hybrid electrolytes for solid-state batteries <u>T. Meyer</u> , T. Gutel, M. Bardet, H. Manzanarez, E. De Vito
11:20 - 11:40	Packings of sphere packings - a new path to solid state ionic conductors? <u>M. Petrik</u> , W. Hornfeck
11:40 - 12:00	Growth of metal oxide film electrodes for electrochemical capacitor by electrospray deposition <u>M. P. Chavhan</u>
12:00 - 12:20	New tungsten bronzes via electrochemical intercalation <u>B. Rasche</u> , I. Neumann, Y. Chen, M. Yang
12:20 - 12:40	Composition-activity-stability relationship in Pt-Au alloys for oxygen reduction reaction <u>X.X. Xie</u> , V. Briega-Martos, R. Farris, M. Vorokhta, T. Skála, I. Matolínová, K. M. Neyman, S. Cherevko, I. Khalakhan

SESSION II

chairperson: Name Surname

11:00 - 11:20	Metal-insulator transitions in hollandite vanadate and chromate <u>M. Isobe</u> , P. Puphal, H. Takagi
11:20 - 11:40	Fluoridoargentates(II) as potential analogues to superconducting cuprates <u>M. Dragomir</u> , M. Belak Vivod, M. Lozinšek, Z. Jagličić, G. King
11:40 - 12:00	FeMn₃Ge₂Sn₇O₁₆: a “partial” spin-liquid candidate with a perfectly isotropic 2-D Kagomé Lattice <u>C. D. Ling</u> , M. C. Allison, S. Wurmehl, B. Büchner, J. L. Vella, T. Söhnel, S. A. Bräuninger, H.-H. Klauss
12:00 - 12:20	
12:20 - 12:40	Hidden orders in 2D van der Waals materials: The example of magnetic crossover in the mixed-anion compound CrSBr <u>S. A. López-Paz</u> , Z. Guguchia, V. Y. Pomjakushin, C. Witteveen, A. Cervellino, H. Luetkens, N. Casati, A. F. Morpurgo, F. O. von Rohr

12:40 - 13:40 Lunch

chairperson: Name Surname

13:40 - 14:20	Fast cation conductivity in complex metal halides & hydrides; Prospects for solid state electrolytes PT 03 <u>D. H. Gregory</u>
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SESSION I

chairperson: Name Surname

14:20 - 14:50	Probing fuel cell catalysts degradation under simulated operational environment by advanced in situ techniques InvT 05 <u>I. Khalakhan</u>
14:50 - 15:10	Elucidating catalytic performance of a family of low-valent metal nitrides for the hydrogen evolution reaction from water <u>A. Y. Ganin</u> , Y. Sun, O. Guseynikova, Y. Zhou, N. López
15:10 - 15:30	Understanding the performance of high power niobium oxide based Li ion battery materials A. Green, E. Driscoll, <u>P. Slater</u>

SESSION II

chairperson: Name Surname

14:20 - 14:50	Discovery of quantum materials by combining chemical and physical design principles InvT 06 <u>F. O. von Rohr</u>
14:50 - 15:10	Supraparticles as identifiers or temperature indicators with spectral magnetic readout <u>S. Müssig</u> , J. Reichstein, S. Wintzheimer, K. Mandel
15:10 - 15:30	Crystal and electronic structure of the lanthanide dibismuthides REBi₂ (RE = La, Ce, Pr, Nd, Sm) <u>A. Ovchinnikov</u> , M. Ruck

15:30 - 16:00 Coffee Break

SESSION I

chairperson: Name Surname

16:00 - 16:20	New nickel-based lithium rich layered/disordered rock salt cathode materials for lithium ion batteries <u>B. Dong</u> , J. Castells-Gil, P. Zhu, L. Driscoll, P. Allan, E. Kendrick, P. Slater
16:20 - 16:40	Operando investigation of Ir-Ru-based catalyst for Proton Exchange Membrane Water Electrolysis <u>T. Hrbek</u> , P. Kúš, M. G. Rodriguez, H. Nedumkulam, M. Mirolo, J. Drnec, V. Matolín, I. Matolínová
16:40 - 17:00	The influence of Al and Ga doping on the chemical and electrochemical cycling of T-LiFeO₂ <u>S. Mahato</u> , X. M. De Irujo Labalde, S. Booth, M. Hayward
17:00 - 17:20	Designing new lithium layered oxides from sodium layered oxides to stabilize oxygen redox <u>M. Guignard</u> , V. Saïbi, L. Castro, I. Sugiyama, C. Delmas
17:20 - 17:40	Sodium insertion into TiO₂ hollandite: structural and electrochemical study <u>F. García-Alvarado</u> , A. Duarte, P. Díaz-Carrasco, A. Kuhn, A. Basa
17:40 - 18:00	Structural evolution of layered H₂V₃O₈ high-capacity cathode material for lithium-ion batteries during lithium intercalation <u>A. Kuhn</u> , J. C. Pérez-Flores, J. Prado-Gonjal, E. Morán, M. Hoelzel, V. Díez-Gómez, I. Sobrados, J. Sanz, F. García-Alvarado

SESSION II

chairperson: Name Surname

16:00 - 16:20	Evidence for a disorder-induced spin liquid in the tuneable spin ladder-chain system Ba₂CuTe_{1-x}W_xO₆ (0 ≤ x ≤ 0.3) <u>O. Mustonen</u> , C. Pughe, A. Gibbs, A. Yaresko, P. Baker, L. Mangin-Thro, H. C. Walker, E.J. Cussen
16:20 - 16:40	Structural variations of the magnetic topological insulators Mn_{1+x}Sb_{2-2x}/3Te₄ <u>E. Kochetkova</u> , O. Renier, A. Isaeva, M. Sahoo, L.T. Corredor
16:40 - 17:00	2D-Metals with locked charge density wave, in the novel layered monophosphate tungsten bronzes [Ba(PO₄)₂]_mW_mO_{3m-3} <u>H. Nimoh</u> , R. Glaum, A. Cano, A. M. Arévalo-López, O. Mentré
17:00 - 17:20	Experimental investigation of magnetic dilution effect on the frustrated quantum antiferromagnet SrCu₂(BO₃)₂ <u>L. Šibav</u> , G. King, Z. Jagličić, M. Koblar, M. Otoničar, D. Arčon, M. Dragomir
17:20 - 17:40	Magnetic structures of Dirac nodal-line semimetals LnSbTe <u>I. Plokhikh</u>

18:00 - 20:00	POSTER SESSION I
	Nitridooxorhenate and -technetate anions [MO₃N]₂- (M = Tc, Re) from reactions in highly alkaline media <u>D. Badae</u> , E. Strub, J. Bruns
	Ternary Alkali metal Thallides ATl (A=K/Rb, Cs/Rb) <u>V. F. Schwinghammer</u> , S. Gärtner
	Solution combustion synthesis of thermodynamically metastable oxide-phosphates with rutile- and anatase-related structures <u>S. Früchtnicht</u> , M. Weber, R. Glaum
	Ferroelectric Properties on Ba_{0.975}Ln_{0.017} (Zr_xTi_{0.95-x}) Sn_{0.05}O₃ Materials <u>K. Taïbi</u> , S. Zemouri-Smail, A. Lahmar
	Electrocrystallisation of Ternary Amalgams <u>D. Kraut</u> , C. Hoch
	Cs₂O as a strong oxidiser - A new synthetic route towards oxometalates <u>I. Zaytseva</u> , C. Hoch
	Novel representatives of the structure type Na₇RbTi₄ with the lighter homologue Indium <u>M. Janesch</u> , S. Gärtner
	High-pressure Synthesis of Alkaline Metal Niobates with Tetragonal Tungsten Bronze-type Structure <u>K. Murase</u> , T. Sato, A. Yamamoto, K. Sugiyama
	Anion Redox in Lithium Main-group Metal Oxides <u>Z. Chen</u> , S. Mahato, X. M. De Irujo Labalde, M. Hayward
	Synthesis and characterisation of lanthanum zirconate as a candidate filler material for polymer derived ceramic coatings <u>P. N. Moghaddam</u> , M. Parchovianský, I. Parchovianská, A. Pakseresht
	Investigation of structure and luminescence properties of bismuth-based coordination polymers with N-donor ligands <u>K. V. Borysova</u> , J. R. Sorg, E. A. Mikhalyova, K. Müller-Buschbaum

	Tin-Boroxines-Based Inorganic-Organic Macrocycles: Synthesis, Characterization and Hydrophobicity M. Novák, M. Bouška, Š. Podzimek, R. Jambor
	High-Pressure Synthesis of SmSi₃ T. Neziraj, S. Wirth, Y. Grin, U. Schwarz
	Mixed-metal monophosphate tungsten bronzes containing divalent transition metal ions (MII: Fe, Co, Ni) and tungsten(VI) L. K. Aymans, R. Glaum
	Amino acid crystals as high-performance, eco-friendly structural health monitors K. Hari, S. Bhattacharya, S. Guerin
	High temperature magnetic ordering in new quadruple perovskites Sr₄NaM₃O₁₂ (M = Ru and Os) G. S. Thakur, T. Doert, T. Hansen, E. Osmic, W. Schnelle, T. Herrmannsdörfer, M. Ruck
	Crystal and magnetic structure of a new polymorph of MnTeO₃ R. Morrow, N. Qureshi, S. Savvin, I. Puente-Orench, L.T. Corredor, J. A. Sannes, M. Valldor
	Oligothiophene Dendron-Modified CdS Nanoparticles and Their Optical Properties A. Yoshida, R. Nozawa, Y. Sakagami, M. Matsubara, A. Mori, A. Muramatsu, K. Kanie
	Synthesis and characterization of glass and crystalline compositions in the (Na₂Se)_x(As₂Se₃)_{1-x} chalcogenide system A. Sammoury, M. Kassem, M. Bokova, T. Hamieh, J. Toufaily, E. Bychkov
	Influence of twill fabric topography on bloodstain pattern shape S. Brnada, A. Kalazic
	Assessing the local structure and quantifying defects in Ca₄Fe₉O₁₇ combining STEM and FAULTS J. Oró-Solé, J. Serrano-Sevillano, J. Gázquez, C. Frontera, A. P. Black, M. Casas-Cabanas, M. Rosa Palacín
	Resonant Properties of Polycrystalline Biomolecular Assemblies T.E. Ryan, S. Guerin
	Polysulfide in-situ characterization with 3D electron diffraction for Lithium-Sulfur batteries S. Rahimi, A. Hajizadeh, J. Hadermann
	In-situ 3D ED to study the structural transformation of NMC during electrochemical reactions A. Hajizadeh, S. Rahimi, J. Hadermann
	Bloodstain pattern analysis using shape descriptors A. Kalazic, S. Brnada
	The effects of alkali metal intercalation on the structure and superconductivity of Niobium Selenide. K. Steele, S. J. Clarke
	Discovery of superconductivity in Nb₄SiSb₂ with a V₄SiSb₂-type structure and implications of interstitial doping on its physical properties M. D. Balestra, O. Atanov, O. Blacque, R. Lefèvre, Y. H. Ng, R. Lortz, F. O. von Rohr

TUESDAY, JULY 11, 2023

chairperson: Name Surname

9:00 - 9:40 PT 04	Phase change optical memory materials: Why are alloys of Ge, Sb, and Te almost the only materials of choice? R. O. Jones
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SESSION I

chairperson: Name Surname

9:40 - 10:10 InvT 07	Chalcogenide glasses and fibers for photonic applications in the infrared J.-L. Adam, J. Trolès, C. Boussard-Plédel, X.H. Zhang
10:10 - 10:30	Light-induced surface microstructures on Ge-As-S glasses E. Samsonova, P. Kutálek, E. Černošková, P. Knotek, J. Schwarz

SESSION II

chairperson: Name Surname

9:40 - 10:10 InvT 08	Polymorphism and magnetic properties in high pressure A-site manganites E. Solana-Madruga
10:10 - 10:30	Locking any magnetization by freezing of magnetic domains in a transient soft to super-hard magnet O. Mentré, B. Leclercq, A. Pautrat, A.M. Arevalo-Lopez, S. petit, V. Stolyarov

10:30 - 11:00 Coffee Break

SESSION I

chairperson: Name Surname

11:00 - 11:20	Er³⁺-doped TeO₂-ZnO-La₂O₃ optical glasses <u>J. Suský</u> , S. Šlang, L. Beneš, B. Frumarová, R. Svoboda, T. Wágner, L. Střížík
11:20 - 11:40	Structural analyses and properties of complex sulphides in the Cr-Sn-S system <u>F. Guiot</u> , V. Dorcet, E. Guilmeau, B. Malaman, T. Schweitzer, P. Lemoine, C. Prestipino
11:40 - 12:00	Holmium-doped TeO₂-ZnO-La₂O₃ tellurite glasses for photonics applications and fibre optics <u>J. Hrabovsky</u> , F. Desevedavy, L. Strizik, J. Oswald, L. Nowak, T. Wagner, F. Smektala, M. Veis
12:00 - 12:20	Gold(I)-thiolate coordination polymers as transparent glasses and cyclic phase-changing materials <u>S. Vaidya</u> , O. Veselska, Z. Fan, A. Zhadan, A. Fateeva, P. Bordet, S. Horike, A. Demessence
12:20 - 12:40	Tuning the metallic glasses properties via ultrafast heating/cooling <u>J. Orava</u> , Y. H. Sun, I. Kaban

SESSION II

chairperson: Name Surname

11:00 - 11:20	Cation ordered doping of ferrite perovskites: influence on redox behaviour, magnetism, and mixed ionic electronic conductivity <u>A. J. Brown</u> , O. Wagstaff, A. Manjón-Sanz, H. Brand, M. Avdeev, I. Evans, C.D. Ling
11:20 - 11:40	Understanding the texture degree on zinc aluminate Nd, Ce sub-micrometer films by screen printing for NIR emitting applications <u>R. E. Rojas-Hernandez</u> , F. Rubio-Marcos, J. F. Fernandez, I. Hussainova
11:40 - 12:00	Many body localisation in CeMnAsO_{1-x}F_x? <u>A. C. McLaughlin</u> , G. Lawrence, S. Simpson, E. J. Wildman
12:00 - 12:20	V-V dimerization in MnVO₃ ilmenite low-pressure polymorph: Crystal and magnetic structures and properties <u>A. M. Arévalo-López</u> , D. Khalyavin, O. Mentré
12:20 - 12:40	Multifunctional coordination polymers for fluorescent sensing of VOCs and hazardous ions from contaminated water <u>K. A. Siddiqui</u>

12:40 - 13:40 Lunch

chairperson: Name Surname

13:40 - 14:20	New possibilities in in situ and ex situ crystal structure determination based upon 3D ED PT 05 <u>R. Poppe</u> , D. Vandemeulebroucke, M. Quintelier, A. Hazijadeh, S. Rahimi, S. Gholam, M. Batuk, <u>J. Hadermann</u>
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SESSION I

chairperson: Name Surname

14:20 - 14:50	In-situ characterization of gas-solid interfaces by near-ambient pressure X-ray photoelectron spectroscopy InvT 09 <u>M. Vorokhta</u> , L. Piliai, T.N. Dinhová, P. Matvija, I. Matolinová
14:50 - 15:20	Bias-free graphene-based in situ TEM observation of electrode materials for batteries InvT 10 <u>J. Y. Cheong</u> , J. H. Chang
15:20 - 15:40	Structural investigation of new Li ion containing oxides using combined diffraction and NMR and EXAFS spectroscopy <u>F. N. Sayed</u> , Q. Jacquet, P. Groszewicz, S. P. Emge, P. C. M. M. Magusin, C. O'Keefe, S. Dey, C. Kocer, A. Morris, C. P. Grey

SESSION II

chairperson: Name Surname

14:20 - 14:50	Investigating the catalytic potential of iron-doped calcium titanate: a study of oxide vacancy structures and microstructures InvT 11 <u>M. Amano Patino</u> , M. Ibrahim, N. Frederich, H. Kaper, M. Ceretti, W. Paulus
14:50 - 15:10	Theoretical insights into the monolayer adsorption and characterization of HB238 merocyanine on Ag(100) surface <u>R. Tomar</u> , A. Kny, M. Sokolowski, T. Bredow
15:10 - 15:30	Understanding the synthetic reliability of NaxMnO₂ and similar layered phases <u>J. Beecham-Lonsdale</u> , D. C. Arnold, S. Ramos-Perez

15:30 - 16:00 Coffee Break

SESSION I

chairperson: Name Surname

16:00 - 16:20	X-ray photoelectron spectroscopy: a key tool for assessment of 2D molybdenum dichalcogenides synthesized by ALD J. Rodriguez-Pereira, R. Zazpe, J. Charvot, F. Bures, J.M. Macak
16:20 - 16:40	Charge density refinement on inorganic crystals using electron diffraction E. Yörük, A. Suresh, P. Brázda, M. K. Cabaj L. Palatinus
16:40 - 17:00	Chemistry at the nanoscale: AFM meets IR spectroscopy J. Horák
17:00 - 17:20	CeScSi-type intermetallics: Modulation of magnetic properties through light elements insertion and catalysis of ammonia E. Gaudin, K. Alabd, C. Croisé, F. Can, X. Courtois, N. Bion, A. Villesuzanne, S. Tencé
17:20 - 17:40	Analysis of ground particle behavior in wet ball milling by DEM-CFD simulation K. Kushimoto, J. Kano

SESSION II

chairperson: Name Surname

16:00 - 16:20	Optomagnetic composites by combination of strong magnetic and luminescent components K. Müller-Buschbaum, M. Seuffert, T. Wehner ¹
16:20 - 16:40	Exploring structure-property correlations in the frustrated layered material, Mn₂Mo₃O₈ D. C. Arnold, H. L. McPhillips, S. Ramos
16:40 - 17:00	Developments in high-pressure growth of rare earth nickelates single crystals D. J. Gawryluk
17:00 - 17:20	Tuning physicochemical properties in TbMgNi_{4-x}Cox-(H,D)₂ system V. Shtender
17:20 - 17:40	Magnetic properties controlled by short-range structural and spin order in layered materials J.D. Bocarsly, S.E. Dutton, C.P. Grey
17:40 - 18:00	Solid-state synthesis of carbon-coated lithium vanadate Li₃VO₄- as anodes for High-Performance Li-ion Capacitors S. Lonkar, C. Busa

18:00 - 20:00	POSTER SESSION II
	Selective ion transport of catalytic hybrid aerofilm Li-S batteries C. Senthil, S.S. Kim, H.S. Kim, J.W. Hong, H.Y. Jung
	Solid-state electrolytes for Na-ion batteries: exploring the synergy between metal-organic frameworks and ionic liquids A. Mirandona-Olaeta, E. Goikolea, S. Lanceros-Mendez, A. Fidalgo-Marijuan, I. Ruiz de Larramendi
	Understanding Fe-cation migration in LiFe_{2-x}In_xSbO₆ Cathode Materials X. Martinez de Irujo-Labalde, S. Mahato, M. Hayward
	Synthesis of Low-Pt-Based Electrocatalyst Derived from Porous MOF-808(Zr)-NH₂ Nanoparticles Towards Oxygen Reduction Reaction T. M. Pham, J. Kim
	Upcycling Lithium Titanate (LTO) Anodes into the Next Generation of High Power Ti Doped Nb₂O₅ Anodes (TNO). A. J. Green, E. H. Driscoll, P. R. Slater
	Investigation of electrochemical properties of Zn-ion batteries based on ZnMo₆S₈ cathodes Y. Wang, A. Y. Ganin
	Crystal chemistry of Argyrodite type Li-ion conductors D. Shanbhag, J. Auvergniot, V. Viallet, C. Masquelier
	Boosting the electrochemical performance of TNO anode material through structural and compositional modifications E. García-González, A. Solana-Bello, F. García-Alvarado
	Fabrication and characterization of Cu, Zn-doped Li₄Ti₅O₁₂ anode nanomaterials for energy conversion applications J. Dhairat, B. A. Albiss, A. Bozeya
	Alloy Nanowire Arrays With Controlled Compositions Templated by Block Copolymers O. Burg, R. Shenhar
	Local Structure Insight into Hydrogen Evolution Reaction with Bimetal Nanocatalysts Q. Li, X. Xing

	Impact of Surfactant-Assisted Downsizing to Luminescent nanoMOFs on Morphological and Photophysical Properties M. Maxeiner, L. Wittig, A. Sedykh, T. Kasper, K. Müller-Buschbaum
	Hydrophobic materials based on heteroboroxines R. Jambor, M. Srb, M. Novák
	Preparation of GeTe nanoparticles by low temperature synthetic method M. Bouška, Y. Milasheuskaya, R. Jambor, P. Němec
	High-spin vs low-spin Ni²⁺ ions in highly distended octahedral environments: Sr₂NiO₂Cu₂Se₂, Sr₂NiO₂Cu₂S₂ and the solid solution Sr₂NiO₂Cu₂(Se_{1-x}S_x)₂ R. D. Smyth, J. N. Blandy, Z. Yu, S. Liu, C. V. Topping, S. J. Cassidy, C. F. Smura, D. N. Woodruff, P. Manuel, C. L. Bull, N. P. Funnell, J. E. McGrady, S. J. Clarke
	Complex magnetic ordering of the mixed-valent layered oxychalcogenides Ca₂Fe₂6O₃S(2-x)Se(x) (x=0, 0.5, 1, 1.5) A. Gillette, B. Sheath, S. J. Clarke
	Tuning magnetism and superconductivity in transition metal chalcogenides as a function of composition L. Taskesen, S. J. Clarke
	Lattice Dynamics of Cs₂[Mo₂O₇]*CsX (X = Cl, Br, I) A. K. Weber, K. Denisova, P. Lemmens, A. Möller
	Novel Oxochloridoselenites(IV) with Cuban-derived Structural Motives M. A. Bonnin, C. Feldmann
	Wurtzite-Type Be₂PN₃ - a new and hard-type material G. Krach, M. Pointner, K. Witthaut, W. Schnick
	Ionic-liquid-based synthesis of Ge₃N₄ nanoparticles F. Jung, C. Feldmann
	Structural Influence of Lone Pairs in GeP₂N₄, a Germanium(II) Nitridophosphate S. J. Ambach, C. Somers, T. de Boer, L. Eisenburger, A. Moewes, W. Schnick
	Ca₅AsSb(NH)₂ – a cation-deficient Antiperovskite with A-site ordering T. Chau, S. Rudel, D. Han, F. Wolf, T. Bein, H. Ebert, W. Schnick
	Morin transition in beta-Fe₂SeO N. Qureshi, R. Morrow, S. Eltokhy, V. Grinenko, Y. A. Onykienko, D. S. Inosov, M. Valldor
	Electron-Electron and Electron-Phonon Interactions in van-der-Waals compounds: MOX, M = Sc, Ti, V, Fe and X=Cl, Br F. Predelli, F. Büscher, P. Lemmens, V. P. Gnezdilov, Yu. G. Pashkevich, T. N. Shevtsova, S. Berinskat, A. Möller
	Intercalation chemistry of excitonic insulator candidate Ta₂NiSe₅ P. A. Hyde, J. Cen, S. J. Cassidy, N. H. Rees, P. Holdship, R. I. Smit, D. O. Scanlo, S. J. Clarke

WEDNESDAY, JULY 12, 2023

chairperson: Name Surname

9:00 - 9:40 PT 06	Exploring new transition metal nitride materials A. Fuertes
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SESSION I

chairperson: Name Surname

9:40 - 10:10 InvT 12	Compositionally complex alloys for the hydrogen society M. Sahlberg
10:10 - 10:30	Crystal growth of new uranium and transuranic phases via high temperature solution and mild hydrothermal methods: Exploration of new materials as potential nuclear waste forms H.-C. zur Loye, T. K. Deason, A. T. Hines, H. Tisdale, T. M. Besmann, J. Amoroso, D. P. DiPrete

SESSION II

chairperson: Name Surname

9:40 - 10:10 InvT 13	Mineral-inspired sulphides for thermoelectric energy harvesting A.V. Powell
10:10 - 10:30	In-situ XRD and PDF investigation of battery fluoride materials MF₃.3H₂O (M = Fe, Cr) in controlled atmosphere: accessing new phases with controlled chemistry G. Nénert, L. Ding, Kerstin Forsberg, Claire V. Colin

10:30 - 11:00 Coffee Break

SESSION I

chairperson: Name Surname

11:00 - 11:20	A facile preparation of Y₂O₂S nanoparticles through sulfidation under a CS₂ atmosphere <u>Y. Kanazawa</u> , M. Matsubara, R. Ohsuga, A. Muramatsu, K. Domen, K. Kanie
11:20 - 11:40	Mechanochemical process to prepare amorphous oxides precursor with isomorphous substitution of Si(IV) by heteroatoms and successive hydrothermal synthesis to crystalize zeolites <u>A. Muramatsu</u> , H. Kobayashi, G. Tanaka, M. Yabushita, Ryota Osuga, K. Ninomiya, M. Matsubara, S. Maki, M. Nishibori, K. Kanie
11:40 - 12:00	Alkali shuffling in honeycomb layered oxides <u>E. Mumba-Mpanga</u> , R. Berthelot
12:00 - 12:20	Inorganic materials synthesis in ultra-alkaline hydroflux H. He, Y. Li, R. Albrecht, <u>M. Ruck</u>
12:20 - 12:40	Anion redox as a means to derive layered manganese oxychalcogenides with exotic intergrowth structures <u>S. Giri</u> , S. Sasaki, S. Cassidy, S. Dey, G. Cibin, C. Grey and S. Clarke

SESSION II

chairperson: Name Surname

11:00 - 11:20	Quadrature frequency resolved spectroscopy on green upconversion photoluminescence in GeGa(As)S:Er³⁺ CHALCOGENIDE GLASSES <u>L. Strizik</u> , T. Aoki, V. Prokop, J. Hrabovsky, T. Wagner
11:20 - 11:40	Density Functional Theory (DFT): A tool for rational design of crystalline piezoelectrics <u>G. Kumari</u> , S. Guerin
11:40 - 12:00	Local structure and high performance catalysts <u>X. Xing</u> , Q. Li
12:00 - 12:20	Defect engineering: Eu³⁺ emission enhancement via induced local distortion <u>S. C. S. Lemos</u> , M. Assis, L. Gracia, L. K. Ribeiro, A. F. Gouveia, Y. G. Galvão, E. Cordocillo, R. C. Lima, Elson Longo, J. Andrés
12:20 - 12:40	Urinary oxidative stress sensor based on zinc oxide nanorods <u>A. Ejaz</u> , D. Gibson, C. Garcia Nuñez

12:40 - 13:40 Lunch

SESSION I

chairperson: Name Surname

13:40 - 14:10	Reaction mechanisms in molten salts for the design of solid-state materials at the nanoscale InvT 14 <u>D. Portehault</u> , F. Igoa Saldaña, E. de Rolland Dalon, M. Baron, A. Ghoridi, A. Séné, E. Defoy, Y. Song, P.-O. Aufran, D. Thiaudière
14:10 - 14:30	Tecto-borosulfates—syntheses, structures and properties E. Turgunbajew, P. Netzsch, M. Hämmer, G. Buchner, <u>H. A. Höppe</u>
14:30 - 14:50	Crystal structures of new phosphidosilicates and its homologues <u>D. Johrendt</u> , A. Haffner, V. Weippert, J. Aicher, K. Witthaut
14:50 - 15:10	Exploring trirutile materials as a platform for energy storage <u>E. Djafri</u> , D. Arnold, O. Mentré
15:10 - 15:30	Understanding the formation mechanism of intermetallic nanoparticles in polyol processes M. Smuda, J. Ströh, N. Pienack, A. Khadiev, H. Terraschke, M. Ruck, <u>T. Doert</u>

SESSION II

chairperson: Name Surname

13:40 - 14:10	Nanostructured thin-film catalysts for hydrogen production via PEM water electrolysis InvT 15 <u>P. Kúš</u> , T. Hrbek, H. Nedumkulam, M. Mirolo, I. Martens, J. Drnec, I. Matolínová
14:10 - 14:30	Photoluminescence properties of nanocrystalline multicomponent garnet Gd₃Sc_xGa_{5-x}O₁₂ doped with Er³⁺ <u>T. Netolicky</u> , L. Benes, S. Slang, B. Frumarova, J. Oswald, T. Wagner
14:30 - 14:50	Base-metal nanoparticles as reactants at room temperature <u>C. Feldmann</u>
14:50 - 15:10	Functionalization of chalcogenide IR photonic sensor by polymer membrane for the purpose of detecting aromatic hydrocarbon pollutants in water <u>M. Vrazel</u> , R.K. Ismail, M. Baillieul, P. Nemeč, P. Loulergue, A. Szymczyk, K. Boukerma, R. Courson, A. Hammouti, L. Bodiou, J. Charrier, T. Halenkovic, M. Bouska, V. Nazabal

15:10 - 15:30	Soft chemistry of layered titanium and vanadium oxytellurides N. D. Kelly, S. J. Clarke
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15:30 - 16:00 Coffee Break

SESSION I

chairperson: Name Surname

16:00 - 16:20	Thermal transformations and cation redistribution on A2B2O6 oxides K. Ji, E. Solana-Madruga, M. A. Patino, Y. Shimakawa, J. Paul Attfield
16:20 - 16:40	Structural trends and ion diffusion mechanisms in the postspinel-type NaFe_{1+x}Ru_{1-x}O₄ system L. Benincasa, M. Duttine, M. Suchomel, M. Guignard
16:40 - 17:00	Borosulfates – silicate analogue anions with the potential to stabilize polycations J. Bruns
17:00 - 17:20	Characterisation of Rh⁴⁺ oxides, an unusual case of pyrochlore stabilisation under high pressure, high temperature synthesis conditions S.D. Injac, B. Mullens, F. Denis Romero, M. Avdeev, C. Barnett, A.K.L. Yuen, B.J. Kennedy, Y. Shimakawa
17:20 - 17:40	Alkali metal oxide mercurides with isolated mercuride anions L. Nusser, S. Feldl, C. Hoch

SESSION II

chairperson: Name Surname

16:00 - 16:20	Synthesis and characterization of a novel oxychloride, SrTe₂FeO₆Cl J.A. Sannes, B. Gonano, Ø.S. Fjellvåg, S. Kumar, O. Nilsen, M. Valldor
16:20 - 16:40	The absence of expected paramagnetic behavior in Ba₆Fe₂Te₃S₇ E. H. Frøen, P. Adler, M. Valldor
16:40 - 17:00	Oxides as Pt catchment materials in the ammonia oxidation process - methodology and mechanistic insight J. Hessevik, A. S. Fjellvåg, O. Iveland, C. S. Carlsen, H. Sønsteby, T. By, J. Skjelstad, D. Waller, H. Fjellvåg, A. O. Sjøstad
17:00 - 17:20	Probing for dynamics in a strongly frustrated magnet L. Kubíčková, A. K. Weber, M. Panthöfer, A. Möller
17:20 - 17:40	Chemical pressure driving phase transition and morphology in Eu³⁺-doped KY₃F₁₀: An experimental and theoretical insight P. Serna-Gallén, S.C.S. Lemos, L. Gracia, E. O. Gomes, H. Beltrán-Mir, E. Cordoncillo, J. Andrés

17:40 - 18:00	Closing Ceremony Tomas Wagner
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