European Materials Research Society

2025 Spring Meeting

May 26 - 30 | Strasbourg Convention Centre

View symposium details

SYMPOSIUM K

Solid state ionics: functional materials and devices for electrochemical energy conversion and storage applications

Oral sessions : ORCHESTRE - GROUND FLOOR
Poster sessions : ETOILE - FIRST FLOOR

Symposium Organizers:

Alexander K. OPITZ, TU Wien, Institute of Chemical Technologies and Analytics, Austria

Emma KENDRICK, University of Birmingham, School of Metallurgy and Materials, UK

Miguel LAGUNA-BERCERO (Main organizer), Institute of Nanoscience and Materials of Aragon, CSIC-Univ. Zaragoza, Spain

Sandrine RICOTE, Colorado School of Mines, USA

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Monday May 26

K01 Surface chemistry

Chairperson(s): SITTE Werner

View session abstracts

08:30	1759	Understanding surface chemistry and its impact on ionic transport in oxide ceramics **SKINNER Stephen (Invited)**
09:00	1745	Surface chemistry and electrochemical properties of porous SOC electrodes revealed during in-situ ambient pressure XPS **NENNING Andreas**
09:15	3009	Understanding the role of acidity on the surface exchange reaction in mixed conductors: What is the effect of surface hydration? **HARRINGTON George**
09:30	2774	Validating glow discharge optical emission spectroscopy (GDOES) for comprehensive characterization of complex oxide nanomaterials **LAA Lisa**
09:45	2805	Leveraging defects for optimal stability-activity tradeoff in mixed conductors **BAIUTTI Federico**

Monday May 26

K02 Fundamentals

Chairperson(s): BAIUTTI Federico

SKINNER Stephen

View session abstracts

10:30	1169	Numerical simulation of solid oxide cells: Structure of porous electrode and its performance **IWAI Hiroshi (Invited)**
11:00	3021	Emergent Phenomena in Porous Particles **SERAPHIM Nicola**
11:15	935	Triple-conducting Ba(Ce,Fe,Acc)O3-δ composites: phase formation, defect distribution and electronic structure investigated by density functional theory **SITTE Werner**
11:30	1862	Complementary analytical techniques for quantifying point defects in perovskite-type oxides **WEISS Maximiliam**
11:45	1708	Defect thermodynamics and engineering in transferable oxide thin films and heterostructures **F. GUNKEL, M. WOHLGEMUTH, K. NAYAK, L. HEYMANN, A. KAUS**

Monday May 26

K03 Solid Oxide Cells I

Chairperson(s): HARRINGTON George

IWAI Hiroshi

View session abstracts

13:45	2927	Scaling Up SOC Devices: The Role of Additive Manufacturing in Developing New SOC Technology with Enhanced Properties **TORRELL Marc (Invited)**
14:15	2135	High Performance Oxygen Electrodes for Thin Film Reversible Solid Oxide Cells **BURRIEL Monica**
14:30	857	Electrolysis degradation of fuel electrode-supported solid oxide cells under different steam conditions **CAMPOS GALERA Andres**
14:45	1162	The CuO role in the formation process of the High Entropy Oxide (Mg,Co,Ni,Cu,Zn)O **MARANINI Giulia**
15:00	1799	Assessment of high entropy perovskites as cathodes in intermediate temperature solid oxide fuel cell **ROSENDO SANTOS Paula**
15:15	1389	Real-time Monitoring of Thin Film Growth and Electrochemical Performance Using In Situ Impedance Spectroscopy during Chemical Vapor Deposition (iCVD) **COLLARD Maxence**
15:30	1088	Effect of hydration on electrical and electromechanical properties of lanthanum-cerium oxides **BEN ZION Or**
15:45	2682	Synthesis and characterization of antimony doped strontium ferrite as potential oxygen electrode for Solid Oxide Electrolyzers Cells **NATOLI Alejandro**

Monday May 26

K04 Solid Oxide Cells II

Chairperson(s): BURRIEL Monica

NENNING Andreas

View session abstracts

16:30 867
Joining and integration challenges for solid oxide cells and proton conductive membranes
SMEACETTO Federico (Invited)

17:00 1234
High-throughput exploration of perovskite oxides by combinatorial synthesis and machine learning
TARANCON Albert

17:15 1215
Surface Oxygen Exchange Analysis of Mixed Ionic-Electronic Conductors (MIEC): Limitations of the Classical Conductivity Relaxation Method
SUDARIKOV Denis

17:30 2317
Design and Evaluation of Sr_2CoNbO_6-δ as a High-Performance Material for Intermediate-Temperature Solid Oxide Fuel Cells
KALA Jyotsana

17:45 2942
Development of solid oxide electrolyzers: from optimization of functional materials to batch fabrication
CIAURRIZ Paula

18:00 2233
Influence of gas phase impurities on the oxygen exchange kinetics of mixed conducting oxides
NICOLLET Clement

18:15 1502
Cu_2OCeO_2-PTFE Hydrophobic Electrocatalyst for CO_2 Reduction to C_2H_4
ALARCÓN Andreina

Tuesday May 27

K05 Reactors/catalyst for fuels

Chairperson(s): JUNG Woochul

NICOLLET Clement

View session abstracts

08:30 1237
Protonic ceramic electrochemical reactors and their application in chemical industry
ESCOLASTICO Sonia (Invited)

09:00 862
Alternative catalysts to nickel for hydrogen electrode in SOFC/SOEC
ABDOULI Insaf

09:15 2943
Enhancing Green Hydrogen Production with High-Pressure Solid Oxide Microtubular Cells
ORERA Alodia

09:30 1246
CO_2 electro-catalytic reduction to synthetic fuels in a pressurized protonic electrochemical membrane reactor
QUINA GARCÍA Imanol

09:45 391
Environmental Life Cycle Assessment of Ionogels: Toward Sustainable Electrochemical Energy Storage Devices
ZHOU Kejie

Tuesday May 27

K06 Protonic cells/catalyst

Chairperson(s): ESCOLASTICO Sonia

FABBRI Emiliana

View session abstracts

10:30 1249
Cobalt-Free Air Electrodes for Protonic Ceramic Cells
CIUCCI Francesco (Invited)

11:00 2162
Preparation of Nickel Hydroxide Nanosheet Membranes for H_2/O_2 Fuel Cells and the Effects of Compressive and Tensile Strains on Their Hydroxyl Ion Conductivity
TAKEGAMI Kaito

11:15 1179
Exploring the interplay between oxidation state, electronic structure, and proton uptake in the triple-conducting perovskite-type oxide BaFe0.85Y0.15O3-δ
Anstiss Melanie

11:30 3172
Beyond Oxides: Novel Approaches for Ex-Solution Catalysts
JUNG Woochul (Invited)

Tuesday May 27

K07 Ionic/electronic conductors

Chairperson(s): NICOLLET Clement

OPITZ Alexander

View session abstracts

13:45 964
Atomic-scale effects of surface modifications on mixed ionic and electronic conducting oxides
SIEBENHOFER Matthäus (Invited)

14:15 2163
Electrochemically Driven Redox Phenomena in Oxide Ion Conducting Solid Electrolytes
KORTE Carlsten

14:30 1258
Electrochemical control of oxygen deficiency in La1-xSrxFeO3-δ: correlating electronic, magnetic properties and structural phase transitions
CHIABRERA Francesco

14:45	846	In-situ XPS and AES study of electrochemically controlled Fe particle exsolution on SrTi0.3Fe0.703 **BREITWIESER Stanislaus**
15:00	355	Unraveling the Role of Polarons and Oxygen Vacancies in Ceria's Giant Electrostriction **Buratto Tinti Victor**
15:15	1873	Oxygen defects in Sr2Fe04-δ (δ:0-0.5): insights from DFT calculations **MASTRIKOV Yuri**
15:30	1134	The redox chemistry of La0.55r0.5Cr0.2Mn0.803-d (L5CrMn) and its application in high capacity anodes of oxygen ion batteries **WAGNER Barbara**
15:45	271	Optimised YSZ thin-film electrolytes with low yttria content via Metal-Organic Chemical Vapour Deposition for SOCs **VERNIER Simon**

Tuesday May 27

KP02 Poster session I

View session abstracts

16:30	01_1680	Sodium titanate nanowires acting as a negative electrode in full sodium-ion batteries **Stanchovska Silva**
16:30	02_1111	Development of Composite Cathodes for IT-SOFCs via Spray Pyrolysis **Çakmak Gülhan**
16:30	03_1750	UHV-based surface science with EXACT control of the oxygen activity of mixed conductors **NENNING Andreas**
16:30	04_1798	Engineering Closed-Pore Hard Carbon for High-Performance K-Ion Batteries: Mechanistic Insights **MANNA Sanchita**
16:30	05_1885	Advances in Battery Material Analysis through Manufacturer-Independent Correlative Microscopy **Benstetter Günther**
16:30	06_1955	Hierarchical micro-nanoflowers of Layered hydroxides and piezoelectric ceramic as Freestanding Binder-Free positrodes and negatrodes for fast charging and durable Asymmetric Supercapacitors **SHARMA Vikas**
16:30	07_1744	Multifunctional electrocatalyst performance of CoB-Modified FeS/FeS_2 Electrodes for water splitting and energy storage applications **Xavier Thatheyus Peter**
16:30	09_2053	Hydrogen evolution reaction efficiency improved by streaming potential in microfluidic electrochemical system **MORIMOTO Masayuki**

16:30	10_2127	Versatile TPU/PEO/LiTFSI Ionic Polymer Layers Coupled with MXene Electrodes for Supercapacitors and Capacitive Sensors **Ulusay Servin Cagil**
16:30	11_2186	Ammonium-ion storage in MoS_2-nanosheets synthesized from recycled industrial waste **Ursino Federico**
16:30	12_2195	Insights into sodium storage mechanism in biowaste-derived hard carbons: EPR monitoring of sodium intercalation and clustering **Kalapsazova Mariya**
16:30	13_2199	Bimetallic nitride based high performance interdigitated micro-supercapacitor for energy storage application **Issar Sheetal**
16:30	14_2220	Unveiling the Intermetallic Chemistry: Design, Performance, and DFT Analysis of Al-Ni Batteries for Energy Storage Applications **Dey Ayan**
16:30	15_2225	Designing of hard carbon with structure facilitating high sodium storage **HARIZANOVA Sonya**
16:30	16_2262	Unleashing the power of antimony: Melt impregnated Ni frameworks for next-generation LIB negative electrodes **Varshney Ghanshyam**
16:30	17_2263	Quantification of Oxygen Vacancies in LSF via Laser-induced Breakdown Spectroscopy **Jung Valentin**
16:30	18_2264	Phase stability of BaCe0.75??Zr?Y0.2502.875 using ab-initio thermodynamics **KIM Jong-Yoon**
16:30	19_2274	Hybrid ElectROchemical Energy Storage in Sustainable Batteries – HEROES - project: Innovating Next-Generation Materials for Clean Energy Solutions **DE PASQUALE Ilaria**
16:30	20_2287	Rational Design of a High Entropy Perovskite Oxide for Energy Storage and Conversion Devices **KALA Jyotsana**
16:30	21_2288	Unveiling the Charge Storage Potential of $Ni(OH)_2/Co_3O_4$ Composite through Experimental and Computational Investigation for Next-Generation Supercapacitors **Hati Gourab**
16:30	22_2330	Oxidized cellulose for binder application in silicon anode materials for lithium-ion batteries **ELMOUHINNI Mohamed**
16:30	24_2358	Large anisotropic proton conductivity in Nb_3O_8 nanosheet membranes **Yuji Asahi**
16:30	25_2373	Study of the influence of variations in the phase composition of ceramics when doped with calcium **KENZHINA Inesh**

16:30	26_2458	The influence of cation disorder on oxygen diffusion in the $La_2Ce_2O_7$ system **Dißmann Bianca**
16:30	27_2459	Potassium Alloy Reference Electrodes for Potassium-Ion Batteries **JAGGER Ben**
16:30	30_2760	Magnetron sputtering deposition of rare-earth-doped ceria interlayers to enhance long-term performance of solid oxide electrolysis cells **CUMIA ESPINOSA DE LOS MONTEROS María De La Paz**
16:30	31_2808	A self-generated nanocomposite as a standalaone thin film air electrode for solid oxide cells **BAIUTTI Federico**
16:30	32_2816	Enabling Sustainable Energy: Studying Microwave-Driven Redox Reactions and Conductivity Enhancement in Solid-State Ionic Materials **Bacete Lucía**
16:30	33_2865	Synthesis of anode material for the Na-ion batteries and its enhancement by doping **Alpysbayev Aibar**
16:30	34_2866	Nitrogen Doping Methods for Electrochemical Optimization of Hard Carbon in Sodium-Ion Batteries **Abduakhitov Dilshat**
16:30	36_2543	Phase Identification in LaSrCoO SOFC Films Using DFT Based EXAFS **Sahiner Mehmet Alper**
16:30	37_2677	HMF valorization through electrocatalytic transformations **Mejuto Carmen**
16:30	39_2352	Investigation of the effect of binders in silicon/carbon-based anodes on the performance of all-solid-state lithium-ion batteries **Pham Thanh-Tuan**
16:30	08_1297	First principles study of advanced phosphors Cs_2SiF_6 and K_2SiF_6: Critical comparison of pure and Mn doped materials **L.L. RUSEVICH, G. ZVEJNIEKS, E.A. KOTOMIN, M.G. BRIK**
16:30	23_3142	Identification of the operating mechanisms and limitations of electroshyntetic redox reactions **FABREGAT-SANTIAGO Francisco**
16:30	28_499	Direct Recycling of Prussian White for Sodium-Ion Batteries **S. SAMANTA, B. LIU, E. KENDRICK, P. SLATER**
16:30	29_516	Peri-annulated naphthalimides - latest contender in bipolar organic materials for rechargeable battery electrodes **D. MARINOVA, L. BORISLAVOV, S. STANCHOVSKA, M. MUTOVSKA, Y. ZAGRANYARSKI, R. STOYANOVA**
16:30	35_751	Attractive interaction forces within molecular nanopockets visualized with three-dimensional scanning atomic force microscopy in liquid **M. OGASAWARA, M. MORIMOTO, H. ASAKAWA**
16:30	38_802	Valuated recycled carbon fibres through sodium-ions capacitor **H. MAZOYER, C. DOUARD, O. CROSNIER, L. ATHOUËL, J. CESAR DE LUCA, Y. AMOSSE, T. BROUSSE, A. BELKHIRI**

Wednesday May 28

K09 Protonic/fundamentals

Chairperson(s): CIUCCI Francesco

WEISS Maximiliam

View session abstracts

08:30	2657	Reaction Mechanism of PCFC/EC Air Electrode Investigated by Using Patterned Thin Film Model Electrodes **AMEZAWA Koji (Invited)**
09:00	367	Porous triple-conducting air electrodes on protonic electrolytes: Proton and oxygen vacancy transport co-determine the active zone width **MERKLE Rotraut**
09:15	379	Sulfonated Poly (Phenylen-sulfone) Membranes for PEM-fuel Cells and Electrolyzers: Controlling Solubility and Swelling by Tailoring their Sulfonation Sequence **KREUER Klaus-Dieter**
09:30	1406	Precise thickness control of nanoparticle catalytic layers for improved bipolar membrane electrolyzers **DABBOUS Ali**
09:45	1935	Highly Stable and Flexible All-Sputtered Solid-State Electrochromic Devices with Ta-Doped Li2O Electrolytes for Energy-Efficient Smart Windows **PARK Seung-Hoon**

Wednesday May 28

K10 Alternative Battery Chemistries - Featured by the Christian Doppler Laboratory for Oxygen Ion Batteries at TU Wien

Chairperson(s): MERKLE Rotraut

TARANCON Albert

View session abstracts

10:30	61	Meeting the flexibility demand of the future energy system **ZAUNER Rudolf (Invited)**
11:00	1713	Rechargeable oxygen ion batteries based on mixed conducting oxides **HUBER Tobias**
11:15	1060	Fe and Mn-based fluorides as cathode materials for fluoride-ion batteries **VALENTIN Jules**
11:30	2541	Characterisation of Novel Powder-Based Oxygen Ion Batteries **VIERNSTEIN Alexander**
11:45	1095	Investigating the Potential of VPO4 Cathodes for Zinc-Ion Batteries: A Density Functional Theory Analysis **EL KACEMI Zineb**

Wednesday May 28

K11 Solid State Li-Ion Batteries

Chairperson(s): AMEZAWA Koji

KENDRICK Emma

View session abstracts

13:45	1098	Enabling scalable processing of halides with high Li conduction **AGUADERO Ainara (Invited)**
14:15	1413	Multicomponent Li-Garnets as Electrolytes in Solid-State Batteries: Synthesis and Characterization **ZIMMERMANN Benjamin**
14:30	1837	Structure - transport correlations in W-substituted K_3SbS_4 as K+-conducting solid electrolytes **HARTMANN Matthias**
14:45	1132	Operando characterisation of defects and interfaces in solid-state batteries using a single-crystal LLZO **AVADANII Diana**
15:00	772	Recycling of Solid State Batteries - Challenges and Opportunities **CLEMENS Oliver (Invited)**

Thursday May 29

K12 Catalysts

Chairperson(s): SIEBENHOFER Matthäus

View session abstracts

08:30	1242	Catalyst Interfacial Transformations: Keys to Decipher the Oxygen Evolution Reaction **FABBRI Emiliana (Invited)**
09:00	1562	Complexity versus simplicity: strategies for the next generation of solid oxide cell air electrodes **BUCHER Edith**
09:15	2850	Electrocatalytic Hydrogenation and Dehydrogenation of Nitriles and Amines: Progress in Liquid Organic Hydrogen Carrier Technology **MAS-MARZA Elena**
09:30	1619	Dynamic Transformation of Ni-based Oxygen Evolution Electrocatalysts: Frustrated Phase Stabilization and Intercalation Effects **Roldan Cuenya Beatriz (Invited)**

Thursday May 29

K13 Li-ion battery cathodes

Chairperson(s): AGUADERO Ainara

MARBELLA Lauren

View session abstracts

10:30	2776	Direct recycling of NMC cathodes - influence of pre-treatment and re-lithiation method on electrochemical performance of recovered electrodes **WILAMOWSKA-ZAWLOCKA Monika (Invited)**
11:00	1209	Towards disentangling the site-specific charge transition levels of manganese in spinels **PICKEL Gero**
11:15	283	Exploration of Nax(Mn-Ni-Al)O_2 System for High-Performance Cathodes for Na-ion Batteries **KUMAR Sunil**
11:30	1507	Revealing redox pathways and structural evolution in cation-disordered Li_2MnO_2F via operando X-Ray Absorption Spectroscopy **COLIN Jean-Francois**
11:45	1086	Nanoscale investigations of metal fluoride conversion cathodes in thin-film solid-state batteries **MORZY Jedrzej**

Thursday May 29

K14 Li & Na-ion batteries

Chairperson(s): CLEMENS Oliver

WILAMOWSKA-ZAWLOCKA Monika

View session abstracts

13:45	988	Linking structure to function at electrochemical interfaces: Li-ion and beyond **MARBELLA Lauren (Invited)**
14:15	2534	Biomass-derived carbon for sustainable catholytes in semi-solid LiO_2 flow batteries **SCARAMUZZO Martina**
14:30	1794	Enhancing High-Rate Performance Hard Carbon Anode in Sodium-Ion Batteries: Interplay Between Storage Mechanism and SEI Kinetics in Ether Electrolytes **MANNA Sanchita**
14:45	1244	Lanthanum niobium perovskite thin film as high power electrode for micro-batteries **TOURE Oumar**
15:00	1010	Investigating Crystal Growth in Liquid Metal in Its Natural State **WIDJAJANA Moonika**

15:15	1948	Exploring the Layered Structure and Electrochemical Properties of the Na_2-xLixMn$_3O_7$.yH_2O **YADAV Jaya**
15:30	3213	Towards new approaches for current energy demands: Na-ion and Li metal batteries **GONZALO Elena**
15:45	1751	Conversion Mechanism-Driven Lithium Storage in Sr_2CoMoO_6 Double Perovskite for High-Performance Anode **ATIF Shahan**

Thursday May 29

KP04 Poster session II

View session abstracts

16:30	01_1025	Synergistic promotion of sodiophilicity and conductivity by in-situ growth of $CuGa_2$ on the 3D conductive host for stable sodium metal batteries **TAO Wei**
16:30	02_11	Graphene-Intercalated P4Se3@CNF Hybrid Electrode for Sustainable Energy Storage Solution: Enabling High Energy Density and Ultra-long Cyclic Stability **Rani Daya**
16:30	03_1114	Investigation of Spark Plasma Sintered Lanthanum-Doped Sodium Niobate as a Promising Solid Oxide Electrolyte **Kaneria Deepanshu**
16:30	04_1137	Hydration behavior of 50 mol% lanthanum doped cerium oxide thin films **Freidzon Daniel**
16:30	05_1192	Synergistic Co-solvent Water-in-Salt Electrolytes for Flexible and Ultra-Stable Aqueous Rechargeable Zinc-Ion Batteries **ROY Rahuldeb**
16:30	06_1256	Iono-Optic Impedance Spectroscopy (I-OIS): A Model-LessTechnique for In Situ Electrochemical Characterization of Mixed Ionic Electronic Conductors **CHIABRERA Francesco**
16:30	07_1391	Proton Uptake Process in Oxygen Electrode for Protonic Ceramic Cells **JI Ho-Il**
16:30	08_1416	Synergistic promotion of sodiophilicity and conductivity by in-situ growth of $CuGa_2$ on the 3D conductive host for stable sodium metal batteries **TAO Wei**
16:30	09_1439	Vanadium Pentoxide Mediated Redox Electrolyte for Activated Carbon-based Supercapacitor Application **Achayalingam Ramesh**
16:30	10_1478	Tuning ZnO nanostructures for energy storage applications **Russo Daniela**

16:30	11_148	Enhanced Oxygen Evolution Reaction Performance via Transition Metal Oxide Heterostructures Supported on Carbon Nanotubes **Mhin Sungwook**
16:30	12_149	Improved redox activity in sulphonated Ti_3C_2Tx MXene via intercalation of Ni/ $CoFe_2O_4$ perovskite for energy storage applications. **PANI Jitesh**
16:30	13_353	Nitrogen abundant covalent organic framework constructed by an irreversible reaction as promising cathode material in lithium-ion battery **KAR Korak**
16:30	14_729	Self-selective hysteresis in amorphous/nanocrystalline lanthanum nickelate **Koroleva Aleksandra**
16:30	15_1534	Tuning the Band Gap of $Na_3V_2(PO_4)_3$ through Iron Doping for Enhanced Electrochemical Performance in Sodium-Ion Batteries **Sharma Saurabh**
16:30	16_1620	Effect of PDC-derived porous carbon on the electrocatalytic performance of spinel and perovskite oxides for enhanced OER activity **Sanket Kumar**
16:30	17_1627	Exploring the Potential of Ni2V2O7 Nanorods Anchored on Electrophoretically Deposited Carbon Black for High-Performance Lithium-ion Battery Anodes **Anand Rohit**
16:30	18_1645	Slurry Additive Approach for High Performance Lithium-Ion Battery Applications **Cheng Yajun**
16:30	19_175	Pt-Nanostructures supported on MoO_3 for Electrochemical Energy Conversion and Storage Applications **Barman Sudip**
16:30	20_199	Sustainable supercapacitor with natural rubber and sodium salt-based solid polymer electrolyte and reduced graphene oxide electrodes **BALAKRISHNAN Nilanthy**
16:30	21_360	Multi-metal oxide electrocatalysts and magnetic field assistance for high-performance Lithium oxygen batteries **CHEN Yimin**
16:30	22_426	Low-temperature synthesis of battery grade artificial graphite: Insights on practical prospects for lithium ion batteries **Garlapati Kiran Kumar**
16:30	23_494	Ni-Dewetting on Doped Ceria Electrodes Upon Redox-Cycling: An In-Situ Surface Spectro-Microscopic Analysis via Electrochemical Oxygen Activity Control (EXACT) **MELCHER Christian**
16:30	25_65	Enhanced capacitance of nickel ferrite decorated laser-induced graphene nanocomposite for symmetric supercapacitor device **DHIMAN Gargi**

16:30	26_662	Rashba Assisted HER Activity Enhancement on Non-centrosymmetric $CeNbN_3$ **MOHANTY Prajna Parimita**
16:30	27_7	Nickel Substituted Cobalt Ferrites via Ceramic Rout Approach: Exploration of Structural, Optical, Dielectric and Electrochemical Behavior for Pseudo-capacitors. **ZEESHAN Talat**
16:30	28_775	Synergistic $MnCo_2O_4$/Exploited Graphite Nanocomposites: Unlocking High Energy Density Supercapacitors **Mittal Shivam Kumar**
16:30	29_795	Proton migration in doped and undoped BaFeO3-d: insights from DFT calculations **GRYAZNOV Denis**
16:30	30_815	Towards understanding defect properties in the multivalent A-site perovskite $Na_{1/2}Bi_{1/2}TiO_3$-6$BaTiO_3$ **HU Pengcheng**
16:30	31_825	Oxidized cellulose for binder application in silicon anode materials for lithium-ion batteries **ELMOUHINNI Mohamed**
16:30	32_845	Monitoring redox properties of transition metals in spinel type structures for improved oxygen exchange kinetics **Guillonneau Simon**
16:30	33_847	Ultrathin perovskite oxide freestanding membranes as novel platform for high resolution TEM imaging **Peer Jakob**
16:30	34_915	Electrochemcial evaluation of lithium cobalt oxide ($LiCoO_{2}$) synthesized from end of life (EoL) batteries for Li-ion battery cathode applications **KUMAR Rajesh**
16:30	35_955	Features of of Two Different Devices: Eco-Friendly Cs_2TiBr_6- Based Perovskite Solar Cells and Na_2O Doped Solid State Battery Electrolytes: An Aspect of New Materials for sustainable energy **Bhattacharya Sanjib**
16:30	36_979	Influence of hydrogen on vanadium dioxide's metal-insulator transition **Abejón-Arribas David**
16:30	37_2561	Realization of two-dimensional yttrium nitride as energy material: A incite to its electronic and thermoelectric properties **SANGEETA Sangeeta**
16:30	38_2593	Photocatalytic performance of spinel oxide semiconductors varying with the amount of Li atoms in the lattice **HUSEYNZADE Fatima**
16:30	39_2672	Tailoring the Material Properties of Sputtered NiO? for Efficient and Stable Perovskite Solar Cells **Lee Hanseul**
16:30	40_2766	Novel Two-dimensional Titanium Carbide (MXene) as an effective electrocatalyst for hydrogen evolution reaction **SOLANGI Muhammad Yameen**