

Plenary Session

Nov. 30 (8:20-12:15) 4 th Floor, Hall 401-406		
Hosts: Chenglin Yan, Zongping Shao, Zhengming Sun		
Time	Speaker	Topic
8:20-8:35	Changming Li, Qinfen Shi, Victor Bykov, Shuling Xu	Opening Ceremony - Welcome Speeches
8:35-9:10	Yongfang Li , Professor Institute of Chemistry, Chinese Academy of Sciences Soochow University	Recent research progress of photovoltaic materials for polymer solar cells
9:10-9:45	Changming Li , Professor Suzhou University of Science and Technology Southwest University	Delicately tuning pore structures of electrodes for high performance energy devices
9:45-10:20	Héctor D. Abruña , Professor Cornell University	Energy conversion and storage: novel materials and operando methods
Tea Break 10 min		
10:30-11:05	Jiujun Zhang , Professor Shanghai University	Electrocatalytic CO ₂ reduction to produce low-carbon chemicals/fuels: challenges and perspectives
11:05-11:40	Hasuck Kim , Professor Daegu Gyeongbuk Institute of Science and Technology (DGIST)	Smart materials as ORR catalysts for PEMFCs and metal/O ₂ batteries
11:40-12:15	James F. Stubbins , Professor University of Illinois at Urbana-Champaign, Kyushu University	Materials challenges in advanced nuclear reactor systems

Parallel Sessions

Session A Devices and Technology for Clean Fuel Production and Utilization

Convenors: Zongping Shao, Nanjing Tech University;
Lixian Sun, Guilin University of Electronic Technology; Feng Yan, Soochow University

Nov. 30 (13:30-18:15) 2 nd Floor Hall 202			
Hosts: Zongping Shao, Xiaoqiang Cui			
Time	No.	Speaker	Topic
13:30-13:55	A-1	Dominic F. Gervasio , Associate Professor University of Arizona in Tucson, USA	Fuel cells revisited: lost in space or finally down to earth? (Keynote)
13:55-14:20	A-2	Peikang Shen , Professor Guangxi University	Structural and morphological effects on the activity and durability of the electrocatalysts (Keynote)
14:20-14:45	A-3	Jun Yang , Professor Institute of Process Engineering, Chinese Academy of Sciences	Selective electrocatalysts toward direct methanol fuel cells using high-concentration methanol as fuel (Keynote)
14:45-15:05	A-4	Hongbin Yang , Professor, Suzhou University of Science and Technology	Heteroatom-doped carbon materials for electrocatalysis (Invited)
Tea Break 10 min			
Hosts: Peikang Shen, Yuanhong Xu			
15:15-15:40	A-5	Zongping Shao , Professor Nanjing Tech University	Boosting the performance of oxygen electrode for protonic ceramic fuel cells (Keynote)
15:40-16:00	A-6	WooChul Jung , Associate Professor Korea Advanced Institute of Science and Technology, Korea	A measure of metal-oxide interfaces for high-temperature heterogeneous catalysis (Invited)
16:00-16:20	A-7	Liyong Chen , Associate professor Dalian University of Technology	Engineering multi-component catalysts by surface modification for high-performance photocatalytic production of clean fuel
16:20-16:40	A-8	Jiexi Wang , Associate professor Central South University	Energy storage materials enabled by spray pyrolysis
Tea Break 10 min			
Hosts: Jun Yang, Jiexi Wang			
16:50-17:15	A-9	Moses O. Tadé , Professor Curtin University, Australia	Role of Micro-Modelling in the Optimisation of Solid Oxide Fuel Cell (SOFC) Microstructures (Keynote)
17:15-17:35	A-10	Yuanhong Xu , Professor Qingdao University	High-performance electrocatalytic conversion of N ₂ to NH ₃ based on Ti ₃ C ₂ T _x MXene derived nanohybrids (Invited)
17:35-17:55	A-11	Yong Zhang , Associate professor Chang'an University	Research of spinel coatings on surface of metal interconnect for SOFCs
17:55-18:15	A-12	Wenping Sun , Doctor University of Wollongong, Australia	Interface and surface engineering of 2D material-based electrocatalysts

Dec. 1 (8:30-12:10) 2 nd Floor Hall 202			
Hosts: Lixian Sun, Yun Wang			
Time	No.	Speaker	Topic
8:30-8:55	A-13	Ryan O' Hayre , Professor Colorado School of Mines, USA	Engineering defect chemistry in doped perovskite and perovskite-related oxides for high temperature clean energy conversion applications (Keynote)
8:55-9:20	A-14	Feng Yan , Professor Soochow University	Imidazolium-type polymer membranes for alkaline anion exchange membrane fuel cells (Keynote)
9:20-9:45	A-15	Xiaoqiang Cui , Professor Jilin University	Interface engineering of two-dimensional materials for biosensing and electrochemical catalysis (Keynote)
9:45-10:05	A-16	Minghui Yang , Professor, Ningbo Institute of Industrial Technology of Chinese Academy of Sciences	Metal nitrides of earth abundant metals as electrocatalysts (Invited)
10:05-10:25	A-17	Xiujun Fan , Professor Shanxi University	Chemistry of electrocatalytic CVD materials
Tea Break 15 min			
Hosts: Feng Yan, Minghui Yang			
10:40-11:05	A-18	Yun Wang , Professor University of California, Irvine	Fundamental and material aspects of porous materials in PEM fuel cell development (Keynote)
11:05-11:30	A-19	Lixian Sun , Professor Guilin University of Electronic Technology	Improved hydrogen storage by doping catalysts and nanoconfinement and database study (Keynote)
11:30-11:50	A-20	Zhiming Cui , Professor South China University of Technology	High performance intermetallic catalysts: controllable synthesis, stabilization mechanism and applications (Invited)
11:50-12:10	A-21	Si Cheng , Professor Soochow University	2D Pd-based nanomaterials for high efficient electrocatalyst

Session B Materials and Technology for Nuclear Power Generation

Convenors: Guangnan Luo, Institute of Plasma Physics, Chinese Academy of Sciences;
Zhangjian Zhou, University of Science and Technology Beijing; Bin Long, China Institute of Atomic Energy;
Di Yun, Xi'an Jiaotong University; Chengliang Li, China Nuclear Power Engineering Co., Ltd

Nov. 30 (13:30-18:15) 1 st Floor Hall 87			
Hosts: Guangnan Luo, Bin Long			
Time	No.	Speaker	Topic
13:30-13:55	B-1	Jean-Bernard Vogt , Professor University of Lille, France	Mechanical reliability of T91 and 316L steels in liquid lead and liquid lead-bismuth eutectic (Keynote)
13:55-14:20	B-2	Tongde Shen , Professor Yanshan University	New concept nuclear materials - nanocrystalline austenitic steels (Keynote)
14:20-14:40	B-3	Zhangjian Zhou , Professor, University of Science and Technology Beijing	Survey of composition design strategies of ODS ferritic alloy for engineering application in fusion reactors (Invited)
14:40-15:00	B-4	Laima Luo , Professor Hefei University of Technology	Mass preparation W-Y ₂ O ₃ materials and its characteristics wet-chemical method (Invited)
Tea Break 10 min			
Hosts: Tongde Shen, Di Yun			
15:10-15:35	B-5	Jarir Aktaa , Professor, Karlsruhe Institute of Technology (KIT), Institute for Applied Materials	Toward qualification of RAFM steels for fusion applications (Keynote)
15:35-16:00	B-6	Bin Long , Professor China Institute of Atomic Energy	Structural materials selection and main problems for LBE-cooled fast reactor (Keynote)
16:00-16:20	B-7	Chonghong Zhang , Professor Institute of Modern Physics (IMP) of the Chinese Academy of Sciences	Irradiation resistance of oxide-dispersion- strengthened ferritic steels candidate to structural components of advanced nuclear reactors (Invited)
16:20-16:40	B-8	Qiang Qi , Doctor Institute of Plasma Physics, Chinese Academy of Sciences	Tritium fuel recovery from promising tritium breeding materials in fusion reactor
Tea Break 10 min			
Hosts: Chonghong Zhang, Zhangjian Zhou			
16:50-17:15	B-9	Suk-Ho Hong , Professor National Fusion Research Institute	An overview of K-DEMO reactor (Keynote)
17:15-17:35	B-10	Di Yun , Professor Xi'an Jiaotong University	Improvement of corrosion resistance in zirconium alloy by pulsed laser processing and surface coating (Invited)
17:35-17:55	B-11	Xiaochun Li , Associate Professor Institute of Plasma Physics, Chinese Academy of Sciences	Molecular dynamics simulation of hydrogen and helium behavior in tungsten as a fusion reactor material
17:55-18:15	B-12	Weiwei Yu , Senior Engineer Suzhou Nuclear Power Research Institute	Probing the mechanisms of thermal-aging induced fatigue resistance enhancement in a cast duplex stainless steel by real-time in situ neutron diffraction

Dec. 1 (8:30-12:00) 1 st Floor Hall 87			
Hosts: Wenyue Zheng, Chengliang Li			
Time	No.	Speaker	Topic
8: 30-8: 55	B-13	Zhongwen Yao , Professor Queen's University	Investigation of irradiation effects in nano-particles-strengthened nuclear structure materials (Keynote)
8: 55-9: 20	B-14	Chenyang Lu , Professor Xi'an Jiaotong University	Influence of compositional complexity on radiation effects: from pure metal to high entropy alloy (Keynote)
9: 20-9: 40	B-15	Ning Gao , Professor Shandong University	New understanding of interstitial dislocation loop in nuclear materials (Invited)
9: 40-10: 00	B-16	Xinfu He , Doctor China Institute of Atomic Energy	Multiscale modeling of irradiation embrittlement in reactor pressure vessel steels (Invited)
10:00-10: 20	B-17	Qingbo Bao , Engineer China Nuclear Power Design Co., Ltd. (Shenzhen)	Research about the hydrogen removal verification method through porous medium of silver zeolite in nuclear power station
Tea Break 15 min			
Hosts: Zhongwen Yao, Chenyang Lu			
10:35-11: 00	B-18	Wenyue Zheng , Professor University of Science and Technology Beijing	Materials issues facing the design of supercritical water cooled reactors and opportunities for new alloy development (Keynote)
11:00-11: 20	B-19	Chengliang Li , Senior Engineer China Nuclear Power Engineering Co., Ltd	Effects of neutron irradiation on the mechanical properties and microstructure of reactor pressure vessel steel (Invited)
11:20-11: 40	B-20	Liang Cheng , Engineer Institute of Materials, China Academy of Engineering Physics	UO ₂ /Mo core-shell composites for ATF: SPS fabrication, enhanced thermal-mechanical properties and neutron diffraction measurements of residual stress
11:40-12: 00	B-21	Dandan Qu , Assistant Research Fellow Institute of Mechanics, Chinese Academy of Sciences	Design and thermal resistance of fusion first-wall structure

Session C Materials and Technology for Electrochemical Energy Storage

Convenors: Siqi Shi, Shanghai University; Jinli Qiao, Donghua University;
Jixin Zhu, Professor, Nanjing Tech University

Nov. 30 (13:30-18:15) 2 nd Floor, Hall 203			
Hosts: Yuping Wu, Xia Lu			
Time	No.	Speaker	Topic
13:30-13:55	C-1	Francesco Ciucci , Associate Professor The Hong Kong University of Science and Technology, China	Modeling the defect chemistry, transport properties, and stability of anti-perovskite materials (Keynote)
13:55-14:20	C-2	Jinli Qiao , Professor Donghua University	Boosting the high performance of primary, rechargeable and flexible Zn-air batteries with transition bimetallic oxides oxygen electrocatalysts and anion exchange membranes (Keynote)
14:20-14:40	C-3	Qiangfeng Xiao , Professor Tongji University	Development of next-generation high-energy storage batteries (Invited)
14:40-15:00	C-4	Weihua Chen , Professor Zhengzhou University	Study of structural design and performance improvement mechanism of low-cost sodium-ion battery key materials
Tea Break 10 min			
Hosts: Jinli Qiao, Yongchong Chen			
15:10-15:35	C-5	Keryn Lian , Professor University of Toronto	Challenges and Rewards in Solid Supercapacitor Research (Keynote)
15:35-16:00	C-6	Chilin Li , Professor Shanghai Institute of Ceramics, Chinese Academy of Sciences	Kinetically activated fluoride based batteries (Keynote)
16:00-16:20	C-7	Xia Lu , Professor Sun Yat-sen University	Package swelling issue in rechargeable $\text{Li}_4\text{Ti}_5\text{O}_{12}$ battery (Invited)
16:20-16:40	C-8	Shuangqiang Chen , Professor Shanghai University	Porous carbon encapsulated metal or metal compounds with high-energy density for Na ion batteries
Tea Break 10 min			
Hosts: Weihua Chen, Qiangfeng Xiao			
16:50-17:15	C-9	Yuping Wu , Professor Nanjing Tech University	Aqueous supercapacitors with high energy density (Keynote)
17:15-17:35	C-10	Yongchong Chen , Professor Institute of Electrical Engineering, Chinese Academy of Sciences	Discussion on the contents and development directions of energy storage battery technology (Invited)
17:35-17:55	C-11	Wei Luo , Professor, Tongji University	Interfacial engineering of solid-state lithium batteries
17:55-18:15	C-12	Jing Fu , Associate Professor Tongji University	Design and development of flexible zinc-air rechargeable batteries

Nov. 30 (13:30-17:45) 1 st Floor, Hall 89			
Hosts: Jian Chen, Ting Yu			
Time	No.	Speaker	Topic
13:30-13:55	C-22	Zhengming Sun , Professor Southeast University	MXene hydrogels with ternary structural design for supercapacitors (Keynote)
13:55-14:15	C-23	Juncai Sun , Professor Dalian Maritime University	Preparation and application of SiO _x /C materials from bio-mass rice husk (Invited)
14:15-14:35	C-24	Yufeng Zhao , Professor Shanghai University	Structure design and electrochemical behavior regulation toward high power energy storage
14:35-14:55	C-25	Muhammad Kashif Aslam , Doctor Southwest University	Kinetically controlled synthesis of MOF nanostructures: single-holed hollow core-shell for ultra-high performance lithium-ion batteries
Tea Break 15 min			
Hosts: Zhengming Sun, Bao Qiu			
15:10-15:35	C-26	Ting Yu , Professor Nanyang Technological University	Controllable design of 2D nanosheets by “chemical scissors” effect: toward fast sodium storage (Keynote)
15:35-15:55	C-27	Jian Chen , Professor Southeast University	Surface control of three-dimensional current collector for lithium metal anode (Invited)
15:55-16:15	C-28	Jian Jiang , Professor Southwest University	Conformal construction of functionalized micro/nano reactors on electrode actives for superior batteries/pseudocapacitors
16:15-16:30	C-29	Yang Zhang , Ph.D. candidate Shanghai Institute of Ceramics, Chinese Academy of Sciences	Functional additives and artificial conductive interphases for anode protection in lithium metal batteries
Tea Break 15 min			
Hosts: Yufeng Zhao, Juncai Sun			
16:45-17:10	C-30	Yongning Zhou , Professor Fudan University	Phase transition behavior of layer-structured cathode materials for lithium-ion and sodium-ion batteries (Keynote)
17:10-17:30	C-31	Bao Qiu , Associate Professor Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences	Structural metastability and reversibility in anionic redox-based cathode for next-generation high-energy rechargeable battery
17:30-17:45	C-32	Zengkai Jiao , Post graduate Kunming University of Science and Technology	Electrochemical analysis and potential distribution simulation of an energy-saving Pb(1%Ag)/Al layered composite anode

Dec. 1 (8:30-11:55) 2 nd Floor, Hall 203			
Hosts: Siqi Shi, Shaofei Wang			
Time	No.	Speaker	Topic
8:30-8:55	C-13	Huamin Zhang , Professor Dalian Institute of Chemical Physics, Chinese Academy of Sciences	Non-perfluorinated ion conducting membranes with high selectivity, high conductivity and low cost for flow battery application (Keynote)
8:55-9:15	C-14	Jixin Zhu , Professor Nanjing Tech University	Carbon hybrids for Li ion storage (Invited)
9:15-9:35	C-15	Chu Liang , Associate Professor Zhejiang University of Technology	Green synthesis of nanocarbons towards high-performance energy storage
9:35-9:55	C-16	Jingjing Tang , Associate Professor Central South University	Strategy for resource recycling of spent lithium ion batteries
9:55-10:15	C-17	Xinghua Chang , Associate Professor Central South University	Silicon-aluminum based anode materials for lithium ion batteries
Tea Break 15 min			
Hosts: Huamin Zhang, Jixin Zhu			
10:30-10:55	C-18	Siqi Shi , Professor Shanghai University	Multiscale calculation and design of electrochemical energy storage materials (Keynote)
10:55-11:15	C-19	Shaofei Wang , Associate Professor Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), Chinese Academy of Sciences	Resolving lattice and grain boundary impedance of solid electrolytes
11:15-11:35	C-20	Jianlong Xu , Associate Professor Soochow University	Flexible, transparent and breathable supercapacitors toward wearable electronics: freestanding metallic mesh based electrodes
11:35-11:55	C-21	Junchao Zheng , Professor Central South University	Boosting cell performance of Ni-rich cathode material via surface structure design

Session D Photovoltaic Materials and Technology

Convenors: Yu Yang, Yunnan University; Yonghua Chen, Nanjing Tech University;
Wei Chen, Huazhong University of Science and Technology; Xudong Yang, Shanghai Jiao Tong University

Nov. 30 (13:30-18:15) 1 st Floor, Hall 86			
Hosts: Jianjun Tian, Chuanjiang Qin			
Time	No.	Speaker	Topic
13:30-13:55	D-1	Wei Chen , Professor, Huazhong University of Science and Technology	Interfacial engineering towards efficient and stable perovskite solar cells (Keynote)
13:55-14:15	D-2	Yonghua Chen , Professor Nanjing Tech University	Ionic liquid perovskite solar cells (Invited)
14:15-14:35	D-3	Chong Wang , Professor Yunnan University	Origin of luminescent centers in low-dimensional lead halide perovskites: controversies, challenges and our approaches
14:35-14:55	D-4	Gongqiang Li , Professor Nanjing Tech University	High efficient hole transporting materials designed via flexible core with tunable conformation strategy for perovskite solar cells
Tea Break 15 min			
Hosts: Wei Chen, Ze Yu			
15:10-15:35	D-5	Xudong Yang , Professor Shanghai Jiao Tong University	Toward efficient and stable perovskite solar cells (Keynote)
15:35-15:55	D-6	Chuanjiang Qin , Professor Changchun Institute of Applied Chemistry, Chinese Academy of Sciences	Intrinsic degradation mechanism of perovskite solar cells (Invited)
15:55-16:15	D-7	Fuzhi Huang , Professor Wuhan University of Technology	Flexible perovskite solar cells
16:15-16:35	D-8	Bo Wu , Professor South China Normal University	Electron-lattice interactions in lead and lead-free perovskites for photovoltaic applications
Tea Break 15 min			
Hosts: Xudong Yang, Yonghua Chen			
16:50-17:15	D-9	Jianjun Tian , Professor, University of Science and Technology Beijing	Colloidal perovskite quantum dots for stable and high efficiency photovoltaics (Keynote)
17:15-17:35	D-10	Ze Yu , Associate Professor Dalian University of Technology	Dopant-free hole-transport materials for perovskite solar cells (Invited)
17:35-17:55	D-11	Wanchun Xiang , Associate Professor Wuhan University of Technology	Element doping strategy for stable and highly efficient inorganic perovskite solar cells
17:55-18:15	D-12	Fengying Zhang , Instructor Southwest Petroleum University	Photogenerated carrier properties of all inorganic lead halide perovskite nanocrystals

Dec. 1 (8:30-12:15) 1 st Floor, Hall 89			
Hosts: Yu Yang, Kuan Sun			
Time	No.	Speaker	Topic
8: 30-8: 55	D-22	Yuwu Zhong , Professor Institute of Chemistry, Chinese Academy of Sciences	Light-harvesting nanocrystals of photofunctional metal complexes (Keynote)
8: 55-9:15	D-23	Xiuxia Zhang , Professor North Minzu University	Nanometer self-cleaning photovoltaic power generation and remote control research (Invited)
9:15-9:35	D-24	Shirong Lu , Professor Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences	Recent research progress on all-small-molecule solar cells (Invited)
9:35-9:55	D-25	Shaohui Zheng , Professor Southwest University	On the effects of axial halogen substitutions of subphthalocyanines on charge transfer in subPC/C60 solar cells: a theoretical study
9:55-10:15	D-26	Jianlin Chen , Associate Professor Changsha University of Science & Technology	Influence of ZnO nano-array on charge transfer performance enhancement for quantum dot sensitized solar cells
Tea Break 10 min			
Hosts: Shirong Lu, Xiuxia Zhang			
10:25-10:50	D-27	Oleg Pchelyakov , Professor Institute of Semiconductor Physics, Russian Academy of Sciences	Prospects for the production of high-performance solar cells in space flight of the international space station (Keynote)
10:50-11:15	D-28	Yu Yang , Professor Yunnan University	Highly conductive and wettable PEDOT:PSS for simple and efficient organic/c-Si planar heterojunction solar cells (Keynote)
11:15-11:35	D-29	Kuan Sun , Professor Chongqing University	Machine learning assisted material evaluation for organic photovoltaics (Invited)
11:35-11:55	D-30	Ru Zhou , Associate Professor Hefei University of Technology	Constructing high performance quantum dot solar cells
11:55-12:15	D-31	Lin Song , Professor Institute of Flexible Electronics (IFE), Northwestern Polytechnical University (NPU)	Unraveling morphology-performance correlation of hybrid solar cells using advanced scattering techniques

Dec. 1 (8:30-12:00) 1 st Floor, Hall 86			
Hosts: Dewei Zhao, Shufang Zhang			
Time	No.	Speaker	Topic
8:30-8:55	D-13	Yongsheng Liu , Professor Nankai University	Application of organic molecular materials in perovskite solar cells (Keynote)
8:55-9:20	D-14	Fangyang Liu , Professor Central South University	Interface engineering in kesterite Cu ₂ ZnSnS ₄ thin film solar cells (Keynote)
9:20-9:40	D-15	Wei Li , Professor Wuhan University of Technology	Transmission electron microscope analysis for electron beam sensitive CH ₃ NH ₃ PbI ₃ organic-inorganic hybrid perovskite
9:40-10:00	D-16	Jinjin Zhao , Professor Shijiazhuang Tiedao University	Resolving the role of ferroic domains and ionic migration in perovskite solar cells
10:00-10:20	D-17	Qianli Chen , Assistant Professor Shanghai Jiao Tong University	Illumination direction matters: surface potential characterization on perovskite light absorbers
Tea Break 15 min			
Hosts: Yongsheng Liu, Fangyang Liu			
10:35-11:00	D-18	Dewei Zhao , Professor Sichuan University	Efficient perovskite-perovskite tandem solar cells (Keynote)
11:00-11:20	D-19	Yong Peng , Professor Wuhan University of Technology	Fabricating wide bandgap perovskite solar cells through thermal evaporating method
11:20-11:40	D-20	Jing Zhang , Professor Ningbo University	Pb-reduced and Pb-less perovskite solar cells
11:40-12:00	D-21	Shufang Zhang , Professor Ludong University	Stabilization of α -phase CsPbI ₃ perovskite for efficient and stable photovoltaic devices

Session E Materials and Technology with Multi-disciplinary Energy Applications

Convenors: Xing Lu, Huazhong University of Science and Technology;
Xuchun Wang, Anhui Science and Technology University

Nov. 30 (13:30-18:15) 2 nd Floor, Hall 201			
Hosts: Xing Lu, Haoming Chen			
Time	No.	Speaker	Topic
13:30-13:55	E-1	Victor Bykov , Professor NT-MDT Spectrum Instruments Companies' Group	Analytical methods for control the properties of materials and technologies for clean energy base on modern AFM and nanospectroscopy technic (Keynote)
13:55-14:20	E-2	Jun Li , Professor Kansas State University	Enhancing electrical energy storage and conversion using a hierarchical nanostructure based on vertically aligned carbon nanofibers (Keynote)
14:20-14:45	E-3	Anatoli Korin , Adjunct Professor Nano and Giga Solutions, Inc., St Paul, Minnesota	Computational approach to materials for renewable energy application: from quantum chemistry to artificial intelligence (Keynote)
14:45-15:05	E-4	Shuai Yuan , Professor Shanghai University	Preparation and application of multifunctional separator
Tea Break 10 min			
Hosts: Jun Li, Yi Wang			
15:15-15:40	E-5	Haoming Chen , Professor Taiwan University, China	Operando X-ray spectroscopy probing the behaviors of metal centers during the chemical reactions (Keynote)
15:40-16:05	E-6	Qiaoliang Bao , Associate Professor Monash University	Light-matter interactions in 2D materials and low energy consumption device applications (Keynote)
16:05-16:25	E-7	Zhisong Lu , Professor Southwest University	Textile-supported energy harvesting and storage systems for wearable applications (Invited)
16:25-16:45	E-8	Jia Lin , Professor, Shanghai University of Electric Power	Structures, phase transitions, and properties of new type of halide perovskite materials
Tea Break 10 min			
Hosts: Qiaoliang Bao, Shuai Yuan			
16:55-17:20	E-9	Xing Lu , Professor Huazhong University of Science and Technology	Fullerene-derived micro/nanostructures for energy applications (Keynote)
17:20-17:40	E-10	Yi Wang , Professor Donghua University	Smart photothermal hotspots for solar-driven interfacial water evaporation and photothermal supercapacitor
17:40-18:00	E-11	Ming Li , Professor, Hubei University	2D polymeric materials: synthesis and applications
18:00-18:15	E-12	Aiming Bu , Ph.D.candidate Beijing Institute of Technology	Plasma electrolysis spraying SiO ₂ /SiC coating on carbon fiber fabric

Dec. 1 (8:30-12:00) 2 nd Floor, Hall 201			
Hosts: Yan Wang, Baohua Jia			
Time	No.	Speaker	Topic
8:30-8:55	E-13	Haitao Huang , Professor Department of Applied Physics, The Hong Kong Polytechnic University, China	One dimensional nanostructured electrodes for electrochemical energy conversion and storage (Keynote)
8:55-9:20	E-14	Xianbao Wang , Professor Hubei University	Solar steam generation: structural design and device assembly of photothermal materials (Keynote)
9:20-9:40	E-15	Xuchun Wang , Professor Anhui Science and Technology University	The research and application of manganese and silicon as energy storage materials
9:40-10:00	E-16	Yan Wang , Associate Professor Hefei University of Technology	Cryo-mediated exfoliation of nanosheets for energy storage and catalysis
10:00-10:20	E-17	Jia Fu , Associate Professor Xi'an Shiyou University	Electronic structure, elasticity, Debye temperature and anisotropy of cubic KCaF ₃ from first-principles
Tea Break 15 min			
Hosts: Haitao Huang, Xuchun Wang			
10:35-11:00	E-18	Akichika Kumatani , Associate Professor Tohoku University	Recent progress on electrochemical imaging by scanning electrochemical cell microscopy (Keynote)
11:00-11:25	E-19	Baohua Jia , Professor Swinburne University of Technology	Graphene metamaterials for clean energy harvesting (Keynote)
11:25-11:45	E-20	Biao Gao , Associate Professor Wuhan University of Science and Technology	Design, preparation and lithium storage performance of porous micro silicon
11:45-12:00	E-21	Lei Wu , Engineer, Xi'an University of Architecture and Technology	Metal sulfide assisted coal catalytic hydrogenated microwave pyrolysis

Poster Session

No.	Contributor	Topic
1	Yuehan Cao , PhD Candidate Southwest Petroleum University	B-O bond in ultrathin boron nitride nanosheets to promote photocatalytic carbon dioxide conversion
2	Qianli Chen , Assistant Professor Shanghai Jiao Tong University	Influence of phonons on the proton conductivity of perovskites
3	Xiaoju Gao , Associate Professor No. 52 Institute of China North Industry Group	Dynamic compression performance of reaction sintering SiC/B ₄ C composite
4	Hao Guo , Postgraduate Yunnan University	Preparation of the carbon nanotubes/PEDOT:PSS composites film for PEDOT:PSS/Si solar cell
5	Lan Guo , Postgraduate Southwest Petroleum University	Co-S bond in Co/CdS to promote charge carriers transfer for enhancing photocatalytic reduction of CO ₂
6	Dongze Li , Postgraduate Yunnan University	Research progress of silicon nanowire-based solar cells
7	Na Liang , Engineer China Institute of Atomic Energy	Compatibility of nitriding coating material with sodium at high temperature(550°C)
8	Minghong Luo , Associate Professor Nanchang Normal University	Preparation of a functionalized graphene-composite-film-supported Pt catalyst and its electrocatalytic activity for methanol oxidation
9	Zhangshun Ruan , Postgraduate China Institute of Atomic Energy	Corrosion of CN-1515 austenitic stainless steel and T91 F/M steel in liquid lead-bismuth eutectic (LBE) at 450°C~600°C
10	Shumin Tang , Postgraduate Yunnan University	Enhanced luminescence stability of perovskite CsPbBr ₃ -CsPb ₂ Br ₅ composite by water-assistant method
11	Caichao Wan , Associate Professor Central South University of Forestry and Technology	A geologic architecture system-inspired micro-/nano-heterostructure design for high-performance energy storage
12	Yanxuan Wen , Professor Guangxi University	Structure and lithium storage properties of metal ion doped MnO
13	Dajun Wu , Associate Professor Changshu Institute of Technology	Fabrication of MnCo ₂ O ₄ @MnO ₂ nanocomposites on carbon cloth as high performance supercapacitor
14	Chunlin Xie , Postgraduate Central South University	Optimized porous Si/SiC composite spheres as high-performance anode material for lithium-ion batteries
15	Wenwen Xie , Postgraduate Southwest Petroleum University	Effect of platinum on photocatalytic production of peroxydisulfate over WO ₃
16	Tao Yang , Postgraduate Central South University of Forestry and Technology	Structural characterization and thermal properties analysis of nano-SiO ₂ mineralized wood
17	Jiaming Zhang , PhD Candidate Central South University	Sn-Co nanoalloys encapsulated in N-doped carbon hollow cubes as a high-performance anode material for lithium-ion batteries
18	Yujuan Zhang , Associate Professor University of Science and Technology Beijing	First-principles study on the mechanical properties of W-Lu alloys