# iSHES'2026

## iSHES'2026 Conference Program

### November 23 (Monday)

Venue: Conference Hall, 3rd Floor, Building D, Hostel In Grove

| Opening Ceremony | | | |
|---|---|---|---|
| 8:50-9:00 | Opening | | |
| **Chairpersons: Hai-Wen Li, Zhigang Hu** | | | |
| **Time** | **Presentation Title** | **Speaker** | **Affiliation** |
| 9:00-9:20 | Applications of Green Fuels in High-Temperature Manufacturing Industries | Yibing Cheng | Foshan Xianhu Laboratory |
| 9:20-9:40 | Ammonia Coordination and Liquefaction Behavior of Borohydrides and Ammonium Compounds | Takayuki Ichikawa | Hiroshima University |
| 9:40-10:00 | Hydride ion batteries for hydrogen storage under ambient condition | Ping Chen | Dalian Institute of Chemical Physics, Chinese Academy of Sciences |
| 10:00-10:20 | Cracking the future using lightbulb reactor | Ning Yan | National University of Singapore |
| 10:30-11:00 (Group Photo & Break) | | | |
| **Chairpersons: Ning Yan, Jianmei Huang** | | | |
| 11:00-11:20 | CNRS's international research activities: a focus on the hydrogen domain | Fermin Cuevas | CNRS Representative Office in China |
| 11:20-11:40 | Confinement, Ionic Packing, and Hydridic Surfaces: New Directions in Hydrogen Materials | Yaroslav Filinchuk | Université catholique de Louvain |
| 11:40-11:55 | The Application of Plasma-Assisted Ball Milling Technology in the Preparation of Energy Materials | Liuzhang Ouyang | South China University of Technology |
| 11:55-12:15 | Sorption, Electrochemistry and Catalysis: Twenty Years of Carbon Materials Innovation for Hydrogen Systems | Stephen Lyth | University of Strathclyde |
| 12:15-12:27 | Advancing MOF-based hydrogen storage materials and systems towards low-altitude economy | Zhigang Hu | Shanghai Jiao Tong University |
| 12:30-14:00 | Lunch | | |
| **Chairpersons: Liuzhang Ouyang, Yigang Yan** | | | |
| 14:00-14:20 | Advanced Measurement and Evaluation Technologies in Hydrogen Energy industry | Ruiming Zhang | Foshan Xianhu Laboratory |
| 14:20-14:40 | Crystal structure and hydrogenation properties of $Ti_{20-x}Zr_xV_{35}Cr_{15}Ni_{10}Mn_{20}$ High-Entropy Alloys (x = 0, 4, 8, 12, 16, and 20) | Jacques Huot | Universite of Quebec at Trois-Rivieres |
| 14:40-14:55 | Sorption kinetics, reversibility, and air stability of $La_{0.6}Ce_{0.4}Ni_5$ encapsulated into hydrogen permeable polymer | Rapee Utke | Suranaree University of Technology |

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| 14:55-15:10 | Applications of Neutron Scattering in Hydrogen Energy | Junrong Zhang | Institute of High Energy Physics, Chinese Academy of Sciences |
| 15:10-15:22 | Burst Effect of Dehydrogenation in Mg-Based Hydrogen Storage Materials | Weijie Yang | North China Electric Power University |
| 15:30-16:00 (Break) | | | |
| **Chairpersons: Fangqin Guo, Weijie Yang** | | | |
| 16:00-16:20 | Towards sustainable batteries: new approaches to materials and processing | Duncan Gregory | University of Glasgow |
| 16:20-16:40 | New solid state battery materials | Torben René Jensen | Aarhus University |
| 16:40-17:00 | Ionic Transport in Compounds Containing $B_xH_y$ Units | Zbigniew Łodziana | The Henryk Niewodniczański Institute of Nuclear Physics, Polish Academy of Sciences |
| 17:00-17:15 | Engineering Ir-based catalysts for PEM water electrolysis | Lifeng Liu | Dongguan Institute of Materials Science and Technology, Chinese Academy of Sciences |
| 17:15-17:27 | Development of Vanadium-based Alloys toward Applications for Hydrogen Storage | Yigang Yan | Sichuan University |
| 17:27-17:39 | Hydrogen Purification and Storage Integration Technology based on Metal Hydrides | Zhen Wu | Xi'an Jiaotong University |
| 18:00-19:30 | Dinner | | |

# iSHES'2026

## November 24 (Tuesday)

Venue: Conference Hall, 3rd Floor, Building D, Hostel In Grove

| Chairpersons: Huaiyu Shao, Yuting Zhuo | | | |
|---|---|---|---|
| **Time** | **Presentation Title** | **Speaker** | **Affiliation** |
| 9:00-9:20 | Research Progress on High-Capacity Lithium-Rich Manganese-Based Cathode Materials | Dongliang Peng | Xiamen University |
| 9:20-9:40 | AI-Enabled for Hydrogen-Thermal-Sensing Materials | Lixian Sun | Guilin University of Electronic Technology |
| 9:40-9:55 | High-Efficiency Hydrogen Energy Technologies and Materials | Haolin Tang | Foshan Xianhu Laboratory |
| 9:55-10:15 | Advanced photocatalysts for hydrogen production by high-pressure torsion | Kaveh Edalati | Kyushu University |
| 10:15-10:27 | Dihydrogen-bonding interactions in ether electrolytes | Yongtao Li | Anhui University of Technology |
| 10:30-11:00 (Break) | | | |
| **Chairpersons: Haolin Tang, Zhen Wu** | | | |
| 11:00-11:20 | Progress in Sustainable and Low-Cost Ammonia Synthesis | Sanping Jiang | Foshan Xianhu Laboratory |
| 11:20-11:35 | Multivalent Ternary Oxide Catalysts Tuned Hydrides for Hydrogen Storage and Li-Ion Anodes | Ankur Jain | Suresh Gyan Vihar University |
| 11:35-11:50 | Numerical Study of Electrolyser and Hydrogen Storage Design and Optimisation | Yuting Zhuo | University of New South Wales |
| 11:50-12:05 | Hydrogen Compression and Poisoning Resistance of TiFe based Hydrogen Storage Alloys | Fangqin Guo | Hiroshima University |
| 12:05-12:17 | Muti-physics instrument (MPI)：a neutron total scattering instrument | Huaican Chen | Institute of High Energy Physics, Chinese Academy of Sciences |
| 12:17-12:27 | Frontiers of the PEM Electrolyzer Industry and Chunhua's Technology Practices | Yinghao Tan | Chunhua Hydrogen Energy Technology (Hunan) Co., Ltd. |
| 12:30-14:00 | Lunch | | |
| 14:00-15:00 | Foshan Xianhu Laboratory Visit | | |
| 15:00-17:00 | Foshan Qingde Hydrogen Energy Company Visit | | |
| 18:30-20:00 | Poster Session | | |

# iSHES'2026

## November 25 (Wednesday)

Venue: Conference Hall, 3rd Floor, Building D, Hostel In Grove

| Chairpersons: Xuezhang Xiao, Liuting Zhang | | | |
|---|---|---|---|
| **Time** | **Presentation Title** | **Speaker** | **Affiliation** |
| 9:00-9:20 | Engineering Metal-Organic Frameworks for Catalysis and Energy | Qiang Xu | Southern University of Science and Technology |
| 9:20-9:40 | An overview of modified aluminium hydride properties for solid-state hydrogen storage material | Mohammad Ismail | Universiti Malaysia Terengganu |
| 9:40-9:55 | Hydrogen vs. Lithium Ion Batteries for Energy Storage -from Mobile to Stationary Applications | Huaiyu Shao | University of Macau |
| 9:55-10:10 | Engineering high entropy alloys for practical hydrogen storage applications | Fei Yang | University of Waikato |
| 10:10-10:22 | Alkali metal pyridinolates for reversible hydrogen storage | Teng He | Dalian Institute of Chemical Physics, Chinese Academy of Sciences |
| 10:22-10:34 | Dual-Atom Catalysis for Hydrogen Storage in Magnesium Hydride | Jianmei Huang | Beihang University |
| 10:34-11:00 (Break) | | | |
| **Chairpersons: Fei Yang, Bogu Liu** | | | |
| 11:00-11:12 | Multi-strategy nanocatalytic engineering to enhance the hydrogen storage performance of $MgH_2$ | Zhiqiang Lan | Guangxi University |
| 11:12-11:24 | Microscopic Scaling Relation of Ti-Based Catalysts for Mg-Based Hydrogen Storage Materials | Yangfan Lu | Chongqing University |
| 11:24-11:36 | Constructing a favorable microenvironment for robust hydrogen storage in $MgH_2$ | Liuting Zhang | Jiangsu University of Science and Technology |
| 11:36-11:48 | Study on the Structure and Property Modulation of Superlattice La–Y–Ni Hydrogen Storage Alloys | Yuyuan Zhao | Baotou Research Institute of Rare Earths |
| 11:48-12:00 | State of the Art and Knowledge Gaps in Rubber Sealing Technology for Hydrogen Equipment | Chilou Zhou | South China University of Technology |
| 12:00-13:30 | Lunch | | |
| 13:30-18:00 | City Tour | | |
| 18:30 | Banquet | | |

# iSHES'2026

## November 26 (Thursday)

Venue: Conference Hall, 3rd Floor, Building D, Hostel In Grove

| Chairpersons: Yangfan Lu, Chengguang Lang | | | |
|---|---|---|---|
| **Time** | **Presentation Title** | **Speaker** | **Affiliation** |
| 9:00-9:10 | Research progress of hydrogen storage materials and devices | Hongyuan Han | Baotou Research Institute of Rare Earths |
| 9:10-9:20 | Performance Optimization and Applications of Metal Hydride Hydrogen Storage Materials | Bogu Liu | North China Electric Power University |
| 9:20-9:30 | Electron-deficient Destabilization Coupled with Mg-philic Catalysis: A Dual-Modulation Strategy for Low-Temperature Dehydrogenation of $Mg(BH_4)_2$ | Shun Wang | Shenzhen MSU-BIT University |
| 9:30-9:40 | Mo-Al Master Alloy Substitution for Ti in Ti-Cr-V-Based BCC Hydrogen Storage Alloys | Houqun Xiao | Gannan University of Science and Technology |
| 9:40-9:50 | Molecular Engineering of Organic Cathodes for Aqueous Zinc-Ion Batteries | Donghong Wang | Anhui University of Technology |
| 9:50-10:00 | Two-Dimensional Fullerene Networks as Electron-Buffering Supports for High-Performance Hydrogen Evolution | Xiang Chen | Anhui University of Technology |
| 10:00-10:30 (Break) | | | |
| **Chairpersons: Shun Wang, Houqun Xiao** | | | |
| 10:30-10:40 | Innovative Magnesium-Based Hydrogenochromic Films for Optical Hydrogen Gas Sensors | Nanxiang Deng | Tianjin Renai College |
| 10:40-10:50 | Cycling Stability of Borohydride Enabled by Anion Tuning | Zhongliang Ma | Fudan University |
| 10:50-11:00 | How can AI effectively enhance scientific research | Rongrong Zhang | Sun Yat-sen University |
| 11:30-13:00 | Lunch & Closing | | |