

【Forum G】Hybrid Materials and Artificial Intelligence

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Chairman:

- 1. Liangbing Hu, Yale University;
- 2. He Jia, CASC Fifth Academy;
- 3. Jin Wen, Donghua University;
- 4. Chao Jia, Donghua University

Nov. 1, 2025 Afternoon Venue: Room 7, Floor 3

Moderators: Jiayu Wan 万佳雨; Wentao Gan 甘文涛

Time	Type	Speaker	Title	Affiliation
13:30-13:50	Invited	Bin Zhu 朱斌	Design and Application of Radiative Cooling Materials 辐射制冷材料的设计及其应用	Nanjing University 南京大学
13:50-14:10	Invited	Jianwei Song 宋建伟	Aramid Fiber-Based Nanofluidic Materials and Sensor Design 芳纶纤维基纳流体材料及传感器设计	Xi'an Jiaotong University 西安交通大学
14:10-14:30	Invited	Lei Li 李磊	Intelligent Fiber Composite Materials for Thermal Safety Management of Power Batteries 动力电池热安全管理用智能纤维复合材料	Beijing Institute of Technology 北京理工大学
14:30-14:50	Invited	Fengjuan Chen 陈凤娟	Resource Recovery and Treatment of Wastewater in Non-Ferrous Metallurgy Industry 有色冶金行业废水资源化治理	Lanzhou University 兰州大学
14:50-15:10	Invited	Wentao Gan 甘文涛	Hybridization and Application Exploration of Wood and Magnetic Materials 木材与磁性材料的杂化交叉与应用探索	Northeast Forestry University 东北林业大学
15:10-15:25	Coffee Break			
15:25-15:45	Keynote	Weihoa Li 李卫华	AI-Assisted Study on Phase Separation Structures and Properties of Polymers AI 辅助的聚合物相结构和性能研究	Fudan University 复旦大学
15:45-16:05	Keynote	Siqi Shi 施思齐	Domain-knowledge-embedded generative models empowering the design of solid electrolytes 领域知识嵌入的生成式模型赋能固态电解质设计	Shanghai University 上海大学
16:05-16:25	Invited	Liquan Wang 王立权	Genetic Engineering of Resin Materials for Composite Materials 复合材料用树脂材料基因工程	East China University of Science and Technology 华东理工大学
16:25-16:45	Invited	Xiaozheng Duan 段晓征	AI-Assisted Ionic Polymer Materials Simulation and Design AI 辅助的离子型高分子材料模拟与设计	Changchun Institute of Applied Chemistry, Chinese Academy of Sciences 中国科学院长春应用化学研究所
16:45-17:05	Invited	Hujun Qian 钱虎军	Multi-Scale Physics-Informed Embedded Contrastive Learning Model for Polymers 面向高分子的多尺度物理信息嵌入对比学习模型	Jilin University 吉林大学
17:05-17:25	Invited	Jiayu Wan 万佳雨	AI-accelerated Battery Research under Data Sparsity 数据稀疏性下的人工智能加速电池研究	Shanghai Jiao Tong University 上海交通大学
17:25-17:45	Invited	Chaoji Chen 陈朝吉	Wooden substance structure reconstruction and value-added utilization Reconstructing lignocellulosic biomass for value-added applications	Wuhan University 武汉大学
17:45-17:50	Invited	Hongpeng Li 李鸿鹏	Introduction to XFUSION Product Solutions 超聚变产品解决方案介绍	xFusion Digital Technologies Co., Ltd. 超聚变数字技术有限公司
17:50-18:00	Invited	Yuyang Wu 吴宇扬	Data-Driven Materials Science Research in the Era of Artificial Intelligence 人工智能时代下的数据驱动材料科学研究	Reed Elsevier Information Technology (Beijing) Co., Ltd. 励德爱思唯尔信息技术（北京）有限公司
18:00-18:10	Invited	Weiyao Zhu 朱炜垚	Computing Power as the Foundation: Innovative Practice of Connecting the Future AI Computing Power Network 算力筑基，联通未来 AI 算力网络创新实践	China United Network Communications Group Co., Ltd. 中国联通

Nov. 2, 2025 Morning Venue: Room 7, Floor 3

Moderators: Ying Zhang 张莹 ; Chunhong Ye 叶春洪

08:30-08:50	Keynote	Hui Wu 伍晖	Air-Spinning Fabrication and Application of Ultrafine Fibers 超细纤维的气纺丝制造与应用	Tsinghua University 清华大学
08:50-09:10	Keynote	Linge Wang 王林格	Structural Regulation and Property Study of Colorless Polyimide-Based Films for Flexible Electronics 柔性电子用无色聚酰亚胺基膜的结构调控与性能研究	South China University of Technology 华南理工大学
09:10-09:30	Invited	Shangzhi Chen 陈尚志	Application of Conductive Polymer Composites in Terahertz Regulation and Dynamic Infrared Camouflage 导电聚合物复合材料在太赫兹调控和动态红外伪装中的应用	University of Electronic Science and Technology of China 电子科技大学
09:30-09:50	Invited	Chunhong Ye 叶春洪	Plasmonic Chiral Optical Materials and Their Dynamic Regulation 等离子体手性光学材料及其动态调控	Shanghai University of Science and Technology 上海科技大学
09:50-10:10	Invited	Jinling Gao 高金翎	Microscopic Characterization Methods of Fibers Under Extreme Environments 极端环境下的纤维微观表征方法	Nanjing University of Aeronautics and Astronautics 南京航空航天大学
10:10-10:25	Coffee Break			
10:25-10:45	Invited	Yajing Sun 孙雅静	Explainable Deep Learning-Enabled Design and Development of Organic Functional Materials 可解释深度学习赋能有机功能材料设计研发	Tianjin University 天津大学
10:45-11:05	Invited	Baiquan Liu 刘佰全	Colloidal Quantum Well Light-Emitting Diodes 胶体量子阱发光二极管	Sun Yat-sen University 中山大学
11:05-11:25	Invited	Ying Zhang 张莹	Study on Polymers with Intelligent Response to Battery Thermal Risks 智能响应电池热风险的聚合物研究	Institute of Chemistry, Chinese Academy of Sciences 中国科学院化学研究所
11:25-11:45	Invited	Liang Gao 高梁	Deep Learning-Assisted Design of Molecule Structures of Organic Photovoltaic Materials 深度学习辅助的有机光伏材料分子结构设计	East China University of Science and Technology 华东理工大学
11:45-12:05	Invited	Pengfei Zhang 张朋飞	Phase Separation of Polymers in Mixed Solvents: Co-solvency and Co-nonsolvency Effects 混合溶剂中聚合物的相分离：共溶与共不溶效应	Donghua University 东华大学

Nov. 2, 2025 Afternoon Venue: Room 7, Floor 3

Moderators: Yiju Li 李一举 ; Haolun Wang 王浩伦

Time	Type	Speaker	Title	Affiliation
13:30-13:50	Invited	Shuaiming He 何帅明	Creation of Green and Low-Carbon Lignocellulosic Materials via Multi-Scale Structural Regulation 多尺度结构调控创制绿色低碳木质纤维材料	Central South University of Forestry and Technology 中南林业科技大学
13:50-14:10	Invited	Ziqi Tian 田子奇	Machine Learning-Enabled Design of Ruthenium Dioxide-Based Electrocatalytic Oxygen Evolution Materials 机器学习助力的二氧化钌基电催化析氧材料设计	Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences 中国科学院宁波材料技术与工程研究所
14:10-14:30	Invited	Dapeng Wang 王大鹏	Artificial Intelligence Optimization of Polymer Dynamics 高分子动力学的人工智能优化	Changchun Institute of Applied Chemistry, Chinese Academy of Sciences 中国科学院长春应用化学研究所

14:30-14:50	Invited	Kai Huang 黄凯	Development and Controllable Preparation of High-Efficiency Flexible Flexible Electromagnetic Shielding Materials 高效柔性电磁屏蔽材料的开发与可控制备	Beijing University of Posts and Telecommunications 北京邮电大学
14:50-15:10	Invited	Yuci Xu 徐玉赐	Theoretical study on the phase behavior of polymer blends 聚合物共混物相行为的理论研究	Ningbo University 宁波大学
15:10-15:25	Coffee Break			
15:25-15:45	Invited	Nian Ran 冉念	Intelligent Design and Synthesis of Catalytic Materials 催化材料智能设计与合成	Shanghai Institute of Ceramics, Chinese Academy of Sciences 中国科学院上海硅酸盐研究所
15:45-16:05	Invited	Tingting Liu 刘婷婷	New Progress in the Design and Manufacturing of Complex and Multifunctional Structures 复杂多功能结构设计制造新进展	Nanjing University of Science and Technology 南京理工大学
16:05-16:25	Invited	Chengwei Zhang 王成威	High-Temperature High-Throughput Screening of Inorganic New Materials and Their Applications in Energy Devices 无机新材料的高温高通量筛选及在能源器件中的应用	University of Science and Technology of China 中国科学技术大学
16:25-17:45	Invited	Yiju Li 李一举	Development of Polymer-Based Solid-State Electrolyte Materials for High-Energy-Density Lithium-Metal Batteries 面向高比能锂金属电池聚合物基固态电解质材料开发	Southern University of Science and Technology 南方科技大学
17:45-18:05	Invited	Ruimin Xie 谢锐敏	Research on Intelligent Manufacturing of the Entire Fiber Processing Process 纤维加工全过程智能制造研究	Donghua University 东华大学
18:05-18:15	Oral	Shuanglei Wei 魏双磊	Multiscale Modeling of Polymer Dissolution for Fiber Formation under High Temperature and Pressure 高温高压下纤维成型用聚合物溶解的多尺度建模	Donghua University 东华大学