



# ICAFPM2025

## PRELIMINARY PROGRAM of ICAFPM 2025

### 【Forum H】ICAFPM 2025 Gelatinous Fibers and Intelligent Devices 凝胶纤维与智能器件

**Topic: From Gelatinous Material Frontiers to Emerging Intelligent Systems**

**Chairman:** Prof. Xinmin He, University of California, Los Angeles; Prof. Panchao Yin, South China University of Technology; Prof. Feng Yan, Donghua University; Prof. Shuguang Yang, Donghua University.

**Nov. 1, 2025 Afternoon (下午)**

**Venue: Shanghai Hall 上海厅**

| Session H   | Moderator: Shery Huang, Ziliang Wu |                      |                                                                                                                                      |                                                                   |
|-------------|------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 13:30-13:50 | Keynote                            | Shery Huang          | Skin-imperceptible Bioelectronics via Multi-scale Biofabrication                                                                     | University of Cambridge<br>剑桥大学                                   |
| 13:50-14:10 | Keynote                            | Ziliang Wu<br>吴子良    | Room Temperature Phosphorescence Behavior Due to Restricted Segments of Hydrogel Chains                                              | Zhejiang University<br>浙江大学                                       |
| 14:10-14:25 | Invited                            | Xuetong Zhang<br>张学同 | Silica Aerogels: Design, Synthesis and Performance                                                                                   | Suzhou Institute of Nano-Tech and Nano-Bionics<br>中国科学院苏州纳米所      |
| 14:25-14:40 | Invited                            | Di Jia<br>贾迪         | Universal Law of Hierarchical Dynamics in Gels Arising from Confluence of Local Physically Dynamic Bonds                             | Institute of Chemistry, Chinese Academy of Sciences<br>中国科学院化学研究所 |
| 14:40-14:55 | Invited                            | Taolin Sun<br>孙桃林    | Investigation of Variable-Stiffness Intelligent Polymers and Their Actuator Applications                                             | South China University of Technology<br>华南理工大学                    |
| 14:55-15:10 | Invited                            | Mingxin Zhang<br>张明鑫 | Research on Enhancing Water Evaporation Rate on Material Surfaces                                                                    | Hainan University<br>海南大学                                         |
| 15:10-15:25 | Invited                            | Guoqing Zu<br>祖国庆    | Oriented Nanochannel Aerogels for Organic Electrochemical Transistors and Biosensors                                                 | Tongji University<br>同济大学                                         |
| 15:25-15:40 | Invited                            | Liangjiu Bai<br>柏良久  | Cellulose Nanocrystals-Based Self-Healing and Anti-Freezing Hydrogels: Design and Applications                                       | Ludong University<br>鲁东大学                                         |
| 15:40-16:00 | <b>Coffee Break (茶歇)</b>           |                      |                                                                                                                                      |                                                                   |
| Session H   | Moderator: Qian Zhao, Yulan Chen   |                      |                                                                                                                                      |                                                                   |
| 16:00-16:20 | Keynote                            | Qian Zhao<br>赵骞      | Shapeable Acoustic Coupling Material Based on Dynamically Cross-Linked Polymer Fiber Composites                                      | Zhejiang University<br>浙江大学                                       |
| 16:20-16:35 | Invited                            | Yulan Chen<br>陈于蓝    | Mechanically Induced Circularly Polarized Luminescence from Polymers                                                                 | Jilin University<br>吉林大学                                          |
| 16:35-16:50 | Invited                            | Kunpeng Cui<br>崔昆朋   | Deformation and Fracture Behaviors of Tough Plasticized Poly(vinyl butyral)                                                          | University of Science and Technology of China<br>中国科学技术大学         |
| 16:50-17:05 | Invited                            | He Cheng<br>程贺       | The Very Small Angle Neutron Scattering Instrument at China Spallation Neutron Source and Its Applications in Gels and Smart Devices | China Spallation Neutron Source<br>散裂中子源科学中心                      |
| 17:05-17:20 | Invited                            | Xiaolin Lv<br>吕晓林    | Research on the Design and Application of Ionic Conductive Soft Materials                                                            | Fuzhou University<br>福州大学                                         |

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|------------------------------------|---------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 17:20-17:35                        | Invited                               | Guoyin Chen<br>陈国印   | Integrated Dynamic Wet Spinning of Hydrogel Optical Fibers for Photomedicine in Deep Body                                           | Donghua University<br>东华大学                                                                      |
| 17:35-17:43                        | Oral                                  | Yanting Li<br>李彦亭    | Fast Gelation of Multi-Functional Hydrogels for Wearable Sensors and Piezoionic Nanogenerators                                      | Shanghai Jiao Tong University<br>上海交通大学                                                         |
| 17:43-17:51                        | Oral                                  | Sen Ding<br>丁森       | A Human-Machine Interactive Interface Using Eigenfrequency-Dominant Mechanism                                                       | University of Macau<br>澳门大学                                                                     |
| <b>Nov. 2, 2025 Morning (上午)</b>   |                                       |                      |                                                                                                                                     |                                                                                                 |
| <b>Venue: Shanghai Hall 上海厅</b>    |                                       |                      |                                                                                                                                     |                                                                                                 |
| Session H                          | Moderator: Xiangling Gu, Pengfei Song |                      |                                                                                                                                     |                                                                                                 |
| 8:30-8:50                          | Keynote                               | Ximin He<br>贺曦敏      | Designing Fiber Materials from Polymer Network Control                                                                              | University of California, Los Angeles<br>加州大学洛杉矶分校                                              |
| 8:50-9:05                          | Invited                               | Xiangling Gu<br>顾相伶  | Self-Reinforcing Hydrogel Upon Alcohol-Out Effect                                                                                   | Dezhou University<br>德州学院                                                                       |
| 9:05-9:20                          | Invited                               | Pengfei Song<br>宋鹏飞  | Construction of Natural Polymer-based Intelligent Gel Fibers for Flexible Devices and Controlled Drug Release                       | Northwest Normal University<br>西北师范大学                                                           |
| 9:20-9:35                          | Invited                               | Kun Dai<br>代坤        | Fabrication and Strain-Sensing Properties of Polymer-Based Conductive Composite Fibrous Mats                                        | Zhengzhou University<br>郑州大学                                                                    |
| 9:35-9:50                          | Invited                               | Yanan Ye<br>叶亚楠      | Ultra-Low Hysteresis Under Large Deformation Enabled by Fast Chains Relaxation in Highly Competitive Dynamic Hydrogen Bond Networks | University of Science and Technology of China<br>中国科学技术大学                                       |
| 9:50-10:05                         | Invited                               | Bencai Lin<br>林本才    | Chemical Structure Design and Performance Study of Alkaline Anion Exchange Membranes                                                | Changzhou University<br>常州大学                                                                    |
| 10:05-10:25                        | <b>Coffee Break (茶歇)</b>              |                      |                                                                                                                                     |                                                                                                 |
| Session H                          | Moderator: Dongsheng Liu, Ji Liu      |                      |                                                                                                                                     |                                                                                                 |
| 10:25-10:45                        | Keynote                               | Dongsheng Liu<br>刘冬生 | Nucleic Acid Supramolecular Hydrogel                                                                                                | The Hong Kong Polytechnic University<br>香港理工大学                                                  |
| 10:45-11:00                        | Invited                               | Ji Liu<br>刘吉         | Functional Hydrogels-based Biointerfacing Technologies                                                                              | Southern University of Science and Technology<br>南方科技大学                                         |
| 11:00-11:15                        | Invited                               | Jun Fu<br>付俊         | Fiber-reinforced Anisotropic Hydrogels for Smart Devices                                                                            | Sun Yat-sen University<br>中山大学                                                                  |
| 11:15-11:30                        | Invited                               | QiuHong Zhang<br>张秋红 | Sliding-ring Gels                                                                                                                   | Nanjing University<br>南京大学                                                                      |
| 11:30-11:45                        | Invited                               | Shuo Bai<br>白硕       | Development of Intelligent Hydrogel Devices for Human-machine Interface                                                             | Technical Institute of Physics and Chemistry of the Chinese Academy of Sciences<br>中国科学院理化技术研究所 |
| 11:45-12:00                        | Invited                               | Qingyun Guo<br>郭庆云   | Mesostructured Materials: Precision Macromolecular Synthesis, Self-Assembly, and Functionalities                                    | Donghua University<br>东华大学                                                                      |
| <b>Nov. 2, 2025 Afternoon (下午)</b> |                                       |                      |                                                                                                                                     |                                                                                                 |
| <b>Venue: Shanghai Hall 上海厅</b>    |                                       |                      |                                                                                                                                     |                                                                                                 |

| Session A   | Moderator: Kan Yue, Guanghui Gao      |                      |                                                                                                |                                                          |
|-------------|---------------------------------------|----------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 13:30-13:50 | Keynote                               | Kan Yue<br>岳衍        | Ion-Conducting Polymer Gels                                                                    | South China University of Technology<br>华南理工大学           |
| 13:50-14:05 | Invited                               | Guanghui Gao<br>高光辉  | An Integrated All-fiber-based Sensing System for Monitoring Humidity Physiological Signals     | Changchun University of Technology<br>长春工业大学             |
| 14:05-14:20 | Invited                               | Renhua Deng<br>邓仁华   | Printable Nano-composite Superlattice Materials and Floating Gate Memory                       | Huazhong University of Science and Technology<br>华中科技大学  |
| 14:20-14:35 | Invited                               | Xiaokong Liu<br>刘小孔  | Hydrogen-Bond-Mediated Polymers: Mechanical Properties, Sustainability, and Functionality      | Jilin University<br>吉林大学                                 |
| 14:35-14:50 | Invited                               | Lipeng Zhai<br>翟黎鹏   | Lithium Batteries: Structural Design of Covalent Organic Frameworks                            | Zhengzhou University<br>郑州大学                             |
| 14:50-15:05 | Invited                               | Jiaqing Xiong<br>熊佳庆 | Advanced Fiber Materials toward Soft Intelligent Systems                                       | Donghua University<br>东华大学                               |
| 15:05-15:20 | Invited                               | Haisong Qi<br>祁海松    | Cellulose Based Materials for Sensors                                                          | South China University of Technology<br>华南理工大学           |
| 15:20-15:35 | Invited                               | Meng Gao<br>高萌       | Printing Fabrication and Adhesive Interface Control Strategies for Flexible Electronic Devices | Tianjin University of Science and Technology<br>天津科技大学   |
| 15:35-15:55 | Coffee Break (茶歇)                     |                      |                                                                                                |                                                          |
| Session A   | Moderator: Shuguang Yang, Weizheng Li |                      |                                                                                                |                                                          |
| 15:55-16:15 | Keynote                               | Shuguang Yang<br>杨曙光 | Time-Humidity-Temperature Equivalence of Polymer Complex Fibers                                | Donghua University<br>东华大学                               |
| 16:15-16:30 | Invited                               | Weizheng Li<br>李维政   | High-strength and Tough Ionogel Elastomer Material                                             | Soochow University<br>苏州大学                               |
| 16:30-16:45 | Invited                               | Panchao Yin<br>殷盼超   | The Diffusive Dynamics of Nano-Rod Under Nano-Confinement                                      | South China University of Technology<br>华南理工大学           |
| 16:45-17:00 | Invited                               | Jia Wei<br>韦嘉        | Molecular Design and Structural Tuning of Photodeformable Polyimides                           | Fudan University<br>复旦大学                                 |
| 17:00-17:15 | Invited                               | Jingqiang Cui<br>崔景强 | The Application of Flexible sensors in Medical devices                                         | Tuoren Medical Device Group Co., Ltd.<br>驼人控股集团有限公司      |
| 17:15-17:30 | Invited                               | Weijie Wang<br>王伟杰   | Nanofibrous Structured Hydrogels and Their Biological Applications                             | University of Health and Rehabilitation Sciences<br>康复大学 |
| 17:30-17:38 | Oral                                  | Ming Lei<br>雷铭       | Optimization of Wearable and Flexible Pressure Sensors Based on Carbon-Based Microstructures   | University of Macau<br>澳门大学                              |
| 17:38-17:46 | Oral                                  | Hao Huang<br>黄浩      | The Dynamic Relaxation Behavior of Polyelectrolyte Complex Fiber Under Multi-Fields Coupling   | Donghua University<br>东华大学                               |
| 17:46-17:54 | Oral                                  | Cong Yu<br>俞聪        | Electroluminescent Fibres with Exceptional Environmental Stability                             | Donghua University<br>东华大学                               |