Session 1: Biological systems & biodiversity				
S1-1, October 13, P.M., Taiwan Room		**Chair: Hamed Rajabi**		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Biomimetic on gecko locomotion: adhesive materials and micro-structures for extremely harsh environments	**Keynote**	Zhendong Dai	Nanjing University of Aeronautics and Astronautics, China
16:20-16:35	Rapid manoeuvre of fan worms (Annelida: Sabellidae) through tubes	**Invited**	Jianing Wu	Sun Yat-sen University, Shenzhen, China
16:35-16:50	The plant as teacher - insights from botany for growing devices in functional shape	**Invited**	Ille C. Gebeshuber (Online -6h)	Vienna University of Technology, Austria
16:50-17:00	The case for energy harvesting on honeybee in flight	Oral	Zhiyun Ma	Beijing Institute of Technology, China
17:00-17:10	Honey bee volitional switching feeding method	Oral	Jiangkun Wei	Sun Yat-sen University, Shenzhen, China
17:10-17:20	Bridging with whole-body reaching and adhesion for crossing gaps in tree frogs	Oral	Baowen Zhang	Nanjing University of Aeronautics and Astronautics, China
17:20-17:30	Molecular mechanisms for sensing electric signals under water by fishes	Oral	Chunpeng Guo	Chengdu Institute of Biology, Chinese Academy of Sciences, China

Session 1: Biological systems & biodiversity				
S1-2, October 14, A.M., Taiwan Room		**Chair: Xin Huang**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Biologically inspired system design for sustainability and resilience	**Keynote**	Marc Weissburg	Georgia Institute of Technology, USA
08:50-09:05	Smart use of hinges in insect wings	**Invited**	Hamed Rajabi	London South Bank University, UK
09:05-09:20	Semiochemical regulation of the intraspecific and interspecific behavior of Tomicus yunnanensis and Tomicus minor during the Shoot-Feeding phase	**Invited**	Zhen Zhang	Ecology and Nature Conservation Institute, Chinese Academy of Forestry, China
09:20-09:30	Adaptive attachment: the biological performance and bioinspiration	Oral	Yi Song	Nanjing University of Aeronautics and Astronautics, China
09:30-09:40	Formation of the foulant-free periostracum in the green mussel Perna viridis (Linnaeus)	Oral	Jingliang Huang	Sun Yat-sen University, Zhuhai, China
09:40-09:50	Ultra-sensitive flexible crack strain sensor based on sunflower structure	Oral	Xiuyan Chen	Jilin University, China
09:50-10:00	Bionic explosive propulsion for water-air cross-domain locomotion	Oral	Di Chen	Peking University, China
10:00-10:10	Effects of particle size and thickness of quartz sand on the webbed foot kinematics of mallard (Anas platyrhynchos)	Oral	Hairui Liu	Jiangsu University, China
10:10-10:30	Coffee Break			

S1-3, October 14, A.M., Taiwan Room		Chair: Jianing Wu		
10:30-10:45	Microstructure and wettability of the wing surface of some stink bugs	**Invited**	Mingxia Sun	Tianjin Normal University, China
10:45-11:00	Life-inspired functionalized biomimetic micro-ensemble	**Invited**	Xin Huang	Harbin Institute of Technology, China
11:00-11:15	Research on functional morphology and biomimetics of beetles	**Invited**	Siqin Ge	Institute of Zoology, CAS, China
11:15-11:25	Are melanized bird feathers stronger? Relationship between the structure, melanization and mechanical properties of feather barbs in the pigeon Columba livia domestica	Oral	Rongjie Cheng	Kiel University
11:25-11:35	Controlling the movement: unusually complex muscle sets for the chiton radula	Oral	Chuang Liu	Hohai University, China
11:35-11:45	Novel predation strategies in Cretaceous hell ants deciphered by biomechanical and robot-physical analysis	Oral	Zixin Wang	Sun Yat-Sen University, Shenzhen, China

Session 2: Biofabrication and bioinspired manufacturing

S2-1, October 13, P.M., Macau Room		Chair: Jiankang He, Qian Zhao		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Laser additive manufacturing of bio-inspired multifunctional metallic components	**Keynote**	Dongdong Gu	Nanjing University of Aeronautics and Astronautics, China
16:20-16:40	3D bioprinting: From organ models to tissue repair	**Keynote**	Yong He	Zhejiang University, China
16:40-16:55	Microfluidic based gradient bioprinting to fabricate liver fibrosis model	**Invited**	Liang Ma	Zhejiang University, China
16:55-17:10	Biomanufactured in vitro tissue models for precision medicine	**Invited**	Yuan Pang	Tsinghua University, China
17:10-17:25	Femtosecond laser precision construction of anti-deicing surface and its application	**Invited**	Guoqiang Li	Southwest University of Science and Technology, China
17:25-17:35	The latest application of ZEISS X-ray microscopy in bionics	Oral	Bao Lu	Carl Zeiss (Shanghai) Co. Ltd
17:35-17:45	Femtosecond laser fabrication of bioinspired smart micro/nanomachines	Oral	Zhuo-Chen Ma	Shanghai Jiao Tong University, China
17:45-17:55	Damage tolerant graphene-metal nanolayered composites via chemical vapor deposition	Oral	Kaihao Zhang	The Hong Kong University of Science and Technology (Guangzhou), China

Session 2: Biofabrication and bioinspired manufacturing				
S2-2, October 14, A.M., Macau Room		**Chair: Huawei Chen, Jun Cai**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Micro/nanoscale printing of biomimetic 3D architectures for regulating cell/tissue growth	**Keynote**	Jiankang He	Xi'an Jiaotong University, China
08:50-09:05	Microfluidic flow cytometric printing of single cells and its application in fabrication of liver spheroids	**Invited**	Pengfei Zhang	Beihang University, China
09:05-09:20	3D bioprinting of neural tissue mimics	**Invited**	Jun Yin	Zhejiang University, China
09:20-09:35	3D printing of bio-inspired Fe bone implants with hierarchically pores	**Invited**	Chao Xu	Jilin University, China
09:35-09:45	ARBURG plastic freeforming bring more possibilities for bionic 3D printing	Oral	Brian	ARBURG (Shanghai) Co., Ltd
09:45-09:55	Characterization of bionic surface structure by laser confocal microscopy	Oral	Hong Li	Carl Zeiss (Shanghai) Co. Ltd
09:55-10:05	3D bioprinting process optimization via cell viability and computational fluid dynamics simulation	Oral	Zhihang Zhang	Xi'an Jiaotong University, China
10:05-10:15	Programmable dual-response soft robot for orienteering	Oral	Mengdan Yan	Beijing Institute of Technology, China
10:15-10:30	Coffee Break			
S2-3, October 14, A.M., Macau Room		**Chair: Yong He, Yunhong Liang**		
10:30-10:50	Bioinspired photolithography based on gels crosslinked by dynamic disulfide bonds	**Keynote**	Qian Zhao	Zhejiang University, China
10:50-11:10	Reconfigurable magnetic modular cubes with on-demand self-assembly and disassembly	**Keynote**	Minjun Kim	Southern Methodist University, USA
11:10-11:25	Recent advances in biotemplated magnetic microrobots based on microorganisms	**Invited**	Jun Cai	Beihang University, China
11:25-11:40	A bionic airship inspired by the Physalia physalis	**Invited**	Yueneng Yang	National University of Defense Technology, China
11:40-11:50	Engineering leaf-venation-inspired microfluidic network for organ-on-a-chip	Oral	Mao Mao	Xi'an Jiaotong University, China
11:50-12:00	Chitosan/collagen layer-by-layer deposition for improving the esophageal regeneration ability of nanofibrous mats	Oral	Li Zhang	Wuhan University, China
12:00-12:10	Printing PDMS-based soft composites in a hydrophobic support bath	Oral	Fei Long	University of Nottingham Ningbo China, China
12:10-12:20	Sparking creativity through biomimicry and design: a literature review	Oral	Alice Araujo Marques de Sá (Online - 11h)	University of Brasília, Brazil

Session 3: Bioinspired functional structures and surfaces				
S3-1, October 13, P.M., Guanhu Room		**Chair: Qunfeng Cheng, Jianjun Wang**		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Bio-inspired multiscale adhesive interfacial materials	**Keynote**	Shutao Wang	Technical Institute of Physics and Chemistry, CAS, China
16:20-16:40	Bioinspired and multifunctional superamphiphobic coating toward effective anti-adhesion	**Keynote**	Huaiyuan Wang	Tianjin University, China
16:40-17:00	Nature-inspired biomicrofluidics	**Keynote**	Anderson H.C. Shum (Online)	The University of Hong Kong, Hong Kong, China
17:00-17:15	How to achieve robust adhesion of a micro-pillar arrayed surface: a theoretical model	**Invited**	Zhilong Peng	Beijing Institute of Technology, China
17:15-17:30	Gecko inspired reversible adhesion via quantum dots enabled photo-detachment	**Invited**	Quan Xu	China University of Petroleum, Beijing, China
17:30-17:45	Bio-inspired anti-adhesive interfacial materials	**Invited**	Jingxin Meng	Technical Institute of Physics and Chemistry, CAS, China
17:45-18:00	Liquid directional steering on bionic surfaces with asymmetric structures	**Invited**	Shile Feng	Dalian University of Technology, China
18:00-18:10	Application of imagmary contact angles in characterization of hydrophilic materials and adhensive force measurement of subaqueous bubble	Oral	Song Luo	Beijing Dataphys Instruments Co. Ltd.
Session 3: Bioinspired functional structures and surfaces				
S3-2, October 14, A.M., Guanhu Room		**Chair: Xu Deng, Glen McHale**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Bioinspired wettability surfaces: from design to functions	**Keynote**	Yongmei Zheng	Beihang University, China
08:50-09:10	Bioinspired nanocomposites	**Keynote**	Qunfeng Cheng	Beihang University, China
09:10-09:30	Bioinspired composite optical structure materials	**Keynote**	Mingzhu Li	Institute of Chemistry, Chinese Academy of Sciences, China
09:30-09:45	Phase-change materials for anti-icing and icephobic coatings	**Invited**	Sushant Anand (Online -13h)	University of Illinois at Chicago, USA
09:45-10:00	Manipulating phase segregation to create patterned, structured polymer surfaces	**Invited**	Caroline Szczepanski (Online -13h)	Northwestern University, USA
10:00-10:10	Icephobic "liquid-like" polymer brushes	Oral	Jie Liu	Institute of Chemistry, Chinese Academy of Sciences, China
10:10-10:20	Bioinspired anisotropic slippery cilia for stiffness-controllable bubble transport	Oral	Cunming Yu	Beihang University, China
10:20-10:30	Coffee Break			

S3-3, October 14, A.M., Guanhu Room		Chair: Huaiyuan Wang, Yahua Liu		
10:30-10:50	Bio-inspired ice controlling materials	**Keynote**	Jianjun Wang	Technical Institute of Physics and Chemistry, CAS, China
10:50-11:10	Multi-dimensional manipulation of solid/liquid interaction	**Keynote**	Xu Deng	University of Electronic Science and Technology of China
11:10-11:30	Wettability, adhesion and liquid friction	**Keynote**	Glen McHale	The University of Edinburgh, UK
11:30-11:45	Interface mechanical behavior of bioinspired superhydrophobic surfaces and properties control	**Invited**	Chunbao Liu	Jilin University, China
11:45-12:00	Efficient droplet transport on structured surfaces	**Invited**	Yahua Liu	Dalian University of Technology, China
12:00-12:15	Bio-inspired supramolecular semi-convertible hydrogel for lubrication regulation	**Invited**	Wenlong Song	Jilin University, China
12:15-12:25	Superfast, large-area liquid spreading on a bio-inspired surface with hexagonally arranged papillae	Oral	Jie Ju	Henan University, China

Session 3: Bioinspired functional structures and surfaces

S3-4, October 14, P.M., Guanhu Room		Chair: Mingjie Liu, Huan Liu		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Inorganic-nanoparticle-based superhydrophobic colored coatings	**Keynote**	Hyuneui Lim	Korea Institute of Machinery and Materials, South Korea
13:50-14:10	Wrinkle pattern on polymer surface	**Keynote**	Xuesong Jiang	Shanghai Jiao Tong University, China
14:10-14:25	Bioinspired design and fabrication of macroporous materials	**Invited**	Hao Bai	Zhejiang University, China
14:25-14:40	Bioinspired composite membranes for highly efficient separation of oil-in-water emulsions	**Invited**	Jian Li	Northwest Normal University, China
14:40-14:55	Bioinspired smart metasurfaces: sensation, regulation, and protection	**Invited**	Wanbo Li	Shanghai Jiao Tong University, China
14:55-15:10	Bioinspired surfaces for enhanced dropwise condensation: from micro- to nano-hierarchy	**Invited**	Youmin Hou	Wuhan University, China
15:10-15:20	High-resolution large-scale PμSL 3D printing in bio-inspired functional structures and surfaces	Oral	Ying Peng	BMF Precision Tech Inc.
15:20-15:30	Bioinspired wrinkle engineering of 2D materials	Oral	Zengyong Chu	National University of Defense Technology, China
15:30-15:40	Bioinspired durable liquid- and solid-repellent smooth coatings	Oral	Jing Wang	Shanghai Jiao Tong University, China
15:40-15:50	Bioinspired conical needle for ultrafast droplet transportation and fog collection	Oral	Chaolang Chen	Sichuan University, China
15:50-16:00	Coffee Break			

S3-5, October 14, P.M., Guanhu Room		Chair: Xuesong Jiang, Hao Bai		
16:00-16:20	Bio-inspired mechano-functional gels through multi-phase order-structure engineering	**Keynote**	Mingjie Liu	Beihang University, China
16:20-16:40	Bio-inspired controllable liquid transfer: toward high-performance thin-film devices	**Keynote**	Huan Liu	Beihang University, China
16:40-16:55	Functional chips for droplets microarray	**Invited**	Wenqian Feng	Sichuan University, China
16:55-17:10	Toward mimicking the full functionalities of atomic-scale ion channels	**Invited**	Yahui Xue	Southern University of Science and Technology, China
17:10-17:25	Optimization design of surface/interface structure on micro- and macro-scale for improving mechanical performance	**Invited**	Jiliang Mo	Southwest Jiaotong University, China
17:25-17:35	Bioinspired asymmetric interfaces for smart fluid manipulation	Oral	Moyuan Cao	Nankai University, China
17:35-17:45	Flexibility and abrasion tolerance of superamphiphobic coatings with rigid core-shell particles	Oral	Yage Xia	Southeast University, China
17:45-17:55	Self-propelling phenomenon based on extreme wettability surface	Oral	Jinlong Song	Dalian Institute of Technology, China
17:55-18:05	Magnet-responsive pillar arrays for real-time control of droplet adhesion, contact time, and active removal	Oral	Youhua Jiang	Guangdong Technion - Israel Institute of Technology, China
18:05-18:15	The effect of different wetting condition on the corrosion performance of welding zone	Oral	Jiaqi Chen	Changchun University of Science and Technology, China

Session 3: Bioinspired functional structures and surfaces

S3-6, October 14, P.M., Macau Room		Chair: Zuoqi Zhang, Han Zhou		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Nature-inspired micro/nanomotors	**Keynote**	Longqiu Li	Harbin Institute of Technology, China
13:50-14:05	Optothermally programmable liquids with spatiotemporal precision and functional complexity	**Invited**	Lingxiang Jiang	South China University of Technology, China
14:05-14:20	Programmable and reprogrammable actuations of magnetic micropillar arrays	**Invited**	Zhengzhi Wang	Wuhan University, China
14:20-14:35	Synthesis and spectral properties of eco-friendly Mg/Al-LDH pigments composited with chlorophyll copper sodium salts and acid yellow 23	**Invited**	Zhiming Liu	Academy of Military Science, China
14:35-14:50	Nature inspired mechano-biocidal surface with high-efficiency and long-term activities	**Invited**	Jie Zhao	Jilin University, China
14:50-15:00	Wood-inspired polypyrrole/cellulose aerogel for efficient interfacial solar evaporation	Oral	Qingye Lu	University of Calgary, Canada
15:00-15:10	Jumping performance of jerboa on sand and its bionic application	Oral	Rui Zhang	Jilin University, China
15:10-15:20	Artificial ion-selective channels based on novel porous crystalline materials	Oral	Jun Gao (Online)	Qingdao Institute of Bioenergy and Bioprocess Technology, CAS, China
15:20-15:30	Wisdom on bionic super-sensitive knowledge vortex-induced vibration	Oral	Qingqing Xin	Jilin University, China
15:30-15:40	Bio-inspired low-adhesion surfaces for anti-icing and de-icing applications	Oral	Xiaolin Liu	Beihang University, China
15:40-15:50	Bioinspired superwettability on 3D-printed re-entrant microstructures	Oral	Xiaojiang Liu	Southeast University, China
15:50-16:00	Coffee Break			

S3-7, October 14, P.M., Macau Room		Chair: Longqiu Li, Zhilong Peng		
16:00-16:15	Bioinspired enhanced surfaces to improve phase change cooling systems for industrial and military applications	**Invited**	Ana Sofia Moita (Online -7h)	University of Lisbon, Portugal
16:15-16:30	Effects of cohesive zone on the peeling behaviors of bio-inspired heterogeneous thin films	**Invited**	Zuoqi Zhang	Wuhan University, China
16:30-16:45	Bioinspired photonic thermal radiative regulation metamaterials	**Invited**	Han Zhou (Online)	Shanghai Jiao Tong University, China
16:45-17:00	Bionic positioning sensor based on adjusting stress field of Scorpion slit sensilla	**Invited**	Junqiu Zhang	Jilin University, China
17:00-17:10	Coral-inspired antifouling coatings	Oral	Huichao Jin	Jilin University, China
17:10-17:20	Galvanic-replacement-assisted surface-initiated atom transfer radical polymerization for functional polymer brush engineering	Oral	Daheng Wu	Ningbo Institute of Materials Technology and Engineering, CAS, China
17:20-17:30	Curvature adjustable liquid transport on anisotropic microstructured elastic film	Oral	Yan Li	Institute of Mechanics, Chinese Academy of Sciences, China
17:30-17:40	Citrus-peel-like durable slippery surfaces	Oral	Xing Han	Sun Yat-Sen University, Shenzhen, China
17:40-17:50	Biomimetic heterogeneous wettability for liquid manipulation and manufacturing technology	Oral	Huizeng Li	Institute of Chemistry, Chinese Academy of Sciences, China
17:50-18:00	Light-controlled switchable wettability smart surfaces and their applications	Oral	Hanpeng Gao	Yanshan University, China

Session 3: Bioinspired functional structures and surfaces

S3-8 October 14, P.M., Hongkong Room		Chair: Shujun Zhang, Junqiu Zhang		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Bioinspired hydrogels and applications	**Keynote**	Ximin He (Online -15h)	University of California, Los Angeles, USA
13:50-14:05	The trail-tracking capabilities of seal whisker arrays	**Invited**	Xingwen Zheng (Online +1h)	University of Tokyo, Japan
14:05-14:20	Bionic adhesive materials and their industrialization in harsh environment	**Invited**	Keju Ji	Nanjing University of Aeronautics and Astronautics, China
14:20-14:35	Rapid and continuous regulating adhesion strength by mechanical micro-vibration	**Invited**	Langquan Shui	Wuhan University, China
14:35-14:45	Functional biomimetic design of 3D printed polyether-ether-ketone flexible chest wall reconstruction Implants Aiming to Restore the Respiration	Oral	Changning Sun	Xi'an Jiaotong University, China
14:45-14:55	Research and application of low adhesive continuous 3D printing system	Oral	Lei Wu	Institute of Chemistry, Chinese Academy of Sciences, China
14:55-15:05	Surface wettability competition between liquids and air	Oral	Guoyong Wang	Jilin University, China
15:05-15:15	Preparation and antifouling behavior of hard coatings from zwitterionic precursor and antibacterial agent	Oral	Shuxue Zhou	Fudan University, China
15:15-15:25	Programming multiphase media superwetting states	Oral	Yihan Sun, Zhiguang Guo*	Lanzhou Institute of Chemical Physics, CAS, China
15:25-15:35	Liquid transport with direction guidance and speed enhancement from gradient and magnetized micro-cilia surface	Oral	Guang Liu	Hebei University of Science and Technology, China
15:35-15:45	Construction and water-collection mechanism of patterned surfaces with bioinspired structures	Oral	Rui Feng	Northwestern Polytechnical University, China
15:45-16:00	Coffee Break			

S3-9, October 14, P.M., Hongkong Room		Chair: Keju Ji, Langquan Shui		
16:00-16:20	AI and its profound effects on scientific research: ChatGPT for bionics engineering	**Keynote**	Shujun Zhang	University of Gloucestershire, UK
16:20-16:35	Nanotubular structures by soft-template electropolymerization with hydrophobicity and water adhesion comparable to rose petals or gecko foot	**Invited**	Thierry Darmanin (Online -6h)	Université Côte d'Azur, France
16:35-16:50	Topological optimisation with ACO for multi-level truss problems	**Invited**	Michael Nwaki (Online -7h)	University of Gloucestershire, UK
16:50-17:00	Molecular dynamics simulation of droplet wettability and repellency on fluorinated lubricant-infused surfaces	Oral	Bei Li*, Kaixuan Li	Wuhan University of Technology, China
17:00-17:10	Multi-bioinspired superhydrophobic coatings for radiative cooling	Oral	Chaohua Xue	Shaanxi University of Science & Technology, China
17:10-17:20	Tannic acid induced in-situ growth of underwater superoleophobic ZIF-8 nylon composite membrane for emulsion separation	Oral	Hao Yang	Wuhan Institute of Technology, China
17:20-17:30	Photochromism in the solid-state	Oral	Dongsheng Wang	University of Electronic Science and Technology of China
17:30-17:40	Bioinspired water harvesting materials: from foundation to application	Oral	Xikui Wang	Guizhou University, China
17:40-17:50	Superhydrophobic Cu-Zn-CeO_2 coating functionalized with organic adsorbates on steel substrate for anti-scaling	Oral	Hao Li	Shandong University of Science and Technology, China
17:50-18:00	Interface reinforcement design of carbon fiber composites inspired by marine mussel	Oral	Jialue Sun	Jilin University, China

Session 4: Biomaterials and bioinspired materials				
S4-1, October 13, P.M., Shanghai Room		**Chair: Yan Liu, Chaoji Chen**		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Mechanics and bionics of chiral materials	**Keynote**	Xiqiao Feng	Tsinghua University, China
16:20-16:35	Natural structures in energy-water devices	**Invited**	Chaoji Chen	Wuhan University, China
16:35-16:50	Engineering biointerface mechanics	**Invited**	Bin Li	Technische Universität München, Germany
16:50-17:05	Seeking brightness from nature: biomass-derived luminescent materials	**Invited**	Zhijun Chen	Northeast Forestry University, China
17:05-17:20	Bioinspired water lubrication materials	**Invited**	Shuanhong Ma	Lanzhou Institute of Chemical Physics, CAS, China
17:20-17:35	Castor oil-based elastomers with mechanoresponsive and autonomic self-healing properties	**Invited**	Zhongkai Wang	Anhui Agricultural University, China

Session 4: Biomaterials and bioinspired materials				
S4-2, October 14, A.M., Shanghai Room		**Chair: Liping Wen, Yong Zhao**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Fabrication of bioinspired functional surfaces and its application	**Keynote**	Yan Liu	Jilin University, China
08:50-09:10	Broadband perfect transmission with bioinspired meta-matching layer	**Keynote**	Yu Zhang	Xiamen University, China
09:10-09:25	Vapor-liquid transition-based broadband light modulation for self-adaptive thermal management	**Invited**	Dehui Wang	University of Electronic Science and Technology of China
09:25-09:40	Extreme mechanical properties of carbon nanotubes and their bionic composites	**Invited**	Yunxiang Bai	National Center for Nanoscience and Technology, CAS, China
09:40-09:55	Development of bioinspired eco-friendly marine antifouling materials	**Invited**	Cunguo Lin, Mingxian Sun*	Luoyang Ship Material Research Institute, Qingdao, China
09:55-10:05	Hierarchical biomimetic integrated assembly for photoreflectance-based vapor response	Oral	Zhengzhi Mu	Jilin University, China
10:05-10:15	Plant inspired ion responsive hydrogels with in situ whiteness adjustment	Oral	Haoyang Tian	Beijing Institute of Technology, China
10:15-10:30	Coffee Break			

S4-3, October 14, A.M., Shanghai Room		Chair: Bin Li, Zhijun Chen		
10:30-10:50	Bioinspired micro-nanoporous membrane: new opportunity for clean energy and ion extraction	**Keynote**	Liping Wen	Technical Institute of Physics and Chemistry, CAS, China
10:50-11:10	Nanocellulose-based biocomposite films for packaging applications	**Keynote**	Mohd Sapuan Salit	Universiti Putra Malaysia, Malaysia
11:10-11:25	Bio-inspired multi-structured nanofibers: precise preparation and applications	**Invited**	Yong Zhao	Beihang University, China
11:25-11:40	Biomimetic confined self-assembly of chitin nanocrystals	**Invited**	Peiwen Liu	Huazhong Agricultural University, China
11:40-11:55	Digital printing of shape-morphing natural biomass materials	**Invited**	Ze Zhao	Wuhan University, China
11:55-12:05	Introduction of NEOSCAN desktop micro-CT and application in bionic materials	Oral	Steven Ma	Phenom Scientific Instruments (Shanghai) Co., Ltd.
12:05-12:15	Bio-inspired porous nanomaterials from monomicelles super-assembly	Oral	Liang Peng	City University of Hong Kong, Hong Kong, China
12:15-12:25	Interfacial reinforced carbon fiber composites inspired by biological interlocking structure	Oral	Yufei Zhang	Jilin University, China

Session 4: Biomaterials and bioinspired materials

S4-4, October 14, P.M., Shanghai Room		Chair: Jiaxi Cui, Yijun Zheng		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Bionic hydrogels for articular cartilage and bone regeneration	**Keynote**	Chengwei Wu	Dalian University of Technology, China
13:50-14:05	Bioinspired lubricated biomaterials for biomedical applications	**Invited**	Hongyu Zhang	Tsinghua University, China
14:05-14:20	Bio-inspired multiscale ionic neuromorphic devices	**Invited**	Kai Xiao	Southern University of Science and Technology, China
14:20-14:35	The self-assembly of lignin hollow nanoparticles for sustained release	**Invited**	Yanming Han	Research Institute of Wood Industry, Chinese Academy of Forestry, China
14:35-14:50	Mussel-inspired adhesive hydrogels for biomedical application	**Invited**	Lu Han	Ocean University of China, China
14:50-15:00	Aplication of atomic force micros copy to biomaterials	Oral	Rong Li	Wuhan Ready Technology Co., Ltd.
15:00-15:10	Biohybrid stem cell microrobots with endoluminal delivery	Oral	Ben Wang	Shenzhen University, China
15:10-15:20	Design of bioinspired nanopillar surface for intelligent responsive antibacterial actions	Oral	Yaozhen Yi	Jilin University, China
15:20-15:30	The usage of decellularized biomaterials for tissue engineering applications	Oral	Huaqiong Li	Wenzhou Institute, University of Chinese Academy of Sciences, China
15:30-15:40	Snail-inspired smart adhesive patch with unique antibacterial performance base on liquid metal	Oral	Quan Liu	Zhejiang University, China
15:50-16:00	Coffee Break			
S4-5, October 14, P.M., Shanghai Room		**Chair: Liming Bian, Kai Xiao**		
16:00-16:20	Wet adhesion strategies inspired from tree frog and grasshopper	**Keynote**	Huawei Chen	Beihang University, China
16:20-16:35	Self-growing polymer materials	**Invited**	Jiaxi Cui	University of Electronic Science and Technology of China
16:35-16:50	Programming hydrogels with complex transient behaviors via autocatalytic cascade reactions	**Invited**	Yijun Zheng	Shanghai Tech University, China
16:50-17:00	Strong and tough chitinous biological composites	Oral	Wei Huang	Huazhong University of Science and Technology, China
17:00-17:10	Bionic gas-permeable and stretchable epidermal electronics inspired by the bifacial leaf structure	Oral	Boya Chen	Jinlin University, China
17:10-17:20	Nature-inspired tough adhesive for wet surfaces	Oral	Yang Gao	Xi'an Jiaotong University, China
17:20-17:30	Biomimetics 4D printing of programmable dynamic materials	Oral	Guiwei Li	Jilin University, China

Session 4: Biomaterials and bioinspired materials				
S4-6, October 14, P.M., Taiwan Room		**Chair: Zhaoyong Zou, Shuanhong Ma**		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Living materials programmed by life	**Keynote**	Chao Zhong	Shenzhen Institutes of Advanced Technology, CAS, China
13:50-14:05	Bioinspired liquid crystalline smart materials	**Invited**	Ling Wang	Tianjin University, China
14:05-14:20	Bioinpired crystallization of guanine	**Invited**	Yurong Ma	Beijing Institute of Technology, China
14:20-14:35	Generation of megapascal contractile stresses by intrafibrillar collagen mineralization	**Invited**	Hang Ping	Wuhan University of Technology, China
14:35-14:45	Optically functional biogenic crystalline purine and pteridine	Oral	Gan Zhang	Lanzhou University, China
14:45-14:55	An ingenious composite structure of mantis shrimp appendage in resisting impact	Oral	Xiao Yang	Hangzhou Dianzi University, China
14:55-15:05	Novel self-assembling peptides derived from a block copolymer-like 19 kDa barnacle cement protein	Oral	Chao Liang	National University of Defense Technology, China
15:05-15:15	Superior performances of a novel smart-polymer actuator based on nanodispersed CNT/Pd composite interfacial electrodes	Oral	Jie Ru	Huaibei Normal University, China
15:15-15:25	Additive manufacture of square rod-shaped ionic polymer-metal composite actuators using fused deposition modeling	Oral	Guoxiao Yin	Nanjing University of Aeronautics and Astronautics, China
15:25-15:35	Bionic fibrous solar evaporator for salt-resistant solar desalination	Oral	Xiangyang Dong	Wuhan University, China
15:35-15:45	Gecko-inspired switchable adhesion on curved surfaces	Oral	Zhekun Shi	Institute of ZheJiang University-Quzhou, China
15:45-16:00	Coffee Break			
S4-7, October 14, P.M., Taiwan Room		**Chair: Chao Zhong, Ling Wang**		
16:00-16:15	Additives control the stability and crystallization pathway of amorphous calcium carbonate	**Invited**	Zhaoyong Zou	Wuhan University of Technology, China
16:15-16:30	Structural and mechanical characteristics of fish scales for the bioinspired design of flexible body armors	**Invited**	Deju Zhu	Hunan University, China
16:30-16:45	Silk fibroin hydrogel ionotronic skin	**Invited**	Shengjie Ling	ShanghaiTech University, China
16:45-16:55	A feather-inspired interleaf for enhanced interlaminar fracture toughness of carbon fber	Oral	Shengjie Ling	Jilin University, China
16:55-17:05	Enzyme-powered artificial swimmers towards environmental remediation	Oral	Lei Wang	Harbin Institute of Technology, China
17:05-17:15	Evidence for a material gradient in the wing membrane of the honeybee	Oral	Li Yu	Beijing Institute of Technology, China
17:15-17:25	Fabrication and testing of bioinspired cement-polymer composites with normally oriented prismatic rods	Oral	Shahbaz Mahmood Khan (Online -12h)	Virginia Polytechnic Institute and State University, USA

Session 5: Bionic intelligent device and system				
S5-1, October 13, P.M., Wuhan Room		**Chair: Yu Tian, Zhihui Qian**		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Gecko-inspired adhesive structures: fabrication and application	**Keynote**	Jinyou Shao	Xi'an Jiaotong University, China
16:20-16:40	Aerial-aquatic robots capable of crossing the air-water boundary and hitchhiking on surfaces	**Keynote**	Li Wen	Beihang University, China
16:40-17:00	Magnetic larvabot: a soft miniature robot with controlled wiggling motion	**Keynote**	Li Zhang	The Chinese University of Hong Kong, Hong Kong, China
17:00-17:15	A snake-inspired layer-driven continuum robot	**Invited**	Aihong Ji	Nanjing University of Aeronautics and Astronautics, China
17:15-17:30	Bioinspired smart adhesive materials and actuators	**Invited**	Feilong Zhang	Technical Institute of Physics and Chemistry, CAS, China
17:30-17:45	Designer architected microrobots with bioinspired hierarchical anisotropy	**Invited**	Pingan Zhu	City University of Hong Kong, Hong Kong, China
17:45-18:00	Active switchable bio-inspired adhesive	**Invited**	Qingsong He	Nanjing University of Aeronautics and Astronautics, China

Session 5: Bionic intelligent device and system				
S5-2, October 14, A.M., Wuhan Room		**Chair: Jinyou Shao, Zhigang Wu**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Bioinspired design and control of highly maneuverable swimming robots	**Keynote**	Junzhi Yu	Peking University, China
08:50-09:10	Measurement of spatial-temporal distribution of contact stress and its application in human-inspired robotic dexterous grasping	**Keynote**	Yu Tian	Tsinghua University, China
09:10-09:30	Advances in biomechanics of insect-inspired flight systems	**Keynote**	Hao Liu	Chiba University, Japan
09:30-09:45	Morphological intelligence in biological and bionic flow sensing	**Invited**	Yonggang Jiang	Beihang University, China
09:45-10:00	A biomimetic drosera capensis with adaptive predation behavior	**Invited**	Huaping Wu	Zhejiang University of Technology, China
10:00-10:10	Flexible smart skin for flight parameter evaluation based on dual-sensor information fusion	Oral	Yu Gao	Beihang University, China
10:10-10:20	Gecko-inspired robot with a bendable body and hybrid soft-rigid adhesive feet for agile and versatile gecko-like locomotion	Oral	Donghao Shao	Nanjing University of Aeronautics and Astronautics, China
10:20-10:30	Coffee Break			
S5-3, October 14, A.M., Wuhan Room		**Chair: Li Wen, Yonggang Jiang**		
10:30-10:50	Inorganic-nanoparticle-based superhydrophobic coloured coatings for the sustainability	**Keynote**	Joseph Ashby, Iain Anderson*	University of Auckland, New Zealand
10:50-11:10	Bionics for soft robot practice: from body imitation to functional and behavioral imitation	**Keynote**	Zhigang Wu	Huazhong University of Science and Technology, China
11:10-11:25	Bioinspired intervertebral disc with multidirectional stiffness prepared via multimaterial additive	**Invited**	Zhihui Qian	Jilin University, China
11:25-11:40	Highly sensitive hydrodynamic pressure sensors inspired by cavefish lateral line system	**Invited**	Zhiqiang Ma	City University of Hong Kong, Hong Kong, China
11:40-11:55	Bionic aerial vehicles and bionic propulsion systems	**Invited**	Chengchun Zhang	Jilin University, China
11:55-12:10	Particle-encased liquid reactors with openness and plasticity	**Invited**	Xiaoguang Li	Northwestern Polytechnical University, China
12:10-12:20	Design of the flexibility of flapping wing	Oral	Dong Xue	Northwestern Polytechnical University, China
12:20-12:30	Analysis on the mechanism of rover subsidence and the strategy of bionic peristalsis	Oral	Zhen Chen	Jilin University, China

Session 5: Bionic intelligent device and system				
S5-4, October 14, P.M., Wuhan Room		**Chair: Shikuan Yang, Poramate Manoonpong**		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Light-steered multigait motions of nanocomposite hydrogels	**Keynote**	Ziliang Wu	Zhejiang University, China
13:50-14:10	3D printed bio-inspired anisotropic smart hydrogel devices with integrated actuations and sensing	**Keynote**	Jun Fu	Sun Yat-sen University, China
14:10-14:25	Bionic underwater acoustic communication using cetacean sounds: a review	**Invited**	Songzuo Liu	Harbin Engineering University, China
14:25-14:40	lonic flexible sensors: bioinspired preparation method and sensing performance	**Invited**	Yanjie Wang	Hohai University, China
14:40-14:55	Nature-inspired artificial skins for human-machine interaction	**Invited**	Yanchao Mao	Zhengzhou University, China
14:55-15:05	Design and simulation of bionic quadruped obstacle-overcoming robot	Oral	Chenyang Zhang	Beijing Institute of Technology, China
15:05-15:15	Biomimetic human eyes with nanowire arrays retina	Oral	Leilei Gu	Shanghai Jiao Tong University, China
15:15-15:25	Machine learning-augmented motion identification from self-powered human-machine interface	Oral	Jianxiong Zhu	Southeast University, China
15:25-15:35	Highly-integrated stretchable electronic systems based on stacked bioinspired multilayer networks	Oral	Honglie Song	Tsinghua University, Beijing, China
15:35-15:45	Bioinspired flexible composite films based on 2D materials and their applications	Oral	De Gong	Beihang University, China
15:45-16:00	Coffee Break			
S5-5, October 14, P.M., Wuhan Room		**Chair: Ziliang Wu, Songzuo Liu**		
16:00-16:20	An overview of ADIUTOR upper-limb rehabilitation device	**Keynote**	Giuseppe Carbone (Online -6h)	University of Calabria, Italy
16:20-16:40	Research on bionic localization algorithm for underwater positioning system based on joint active-passive electrolocation	**Keynote**	Jiegang Peng	University of Electronic Science and Technology of China
16:40-16:55	Neural control, plasticity, and memory for bio-inspired machine intelligence	**Invited**	Poramate Manoonpong	Vidyasirimedhi Institute of Science & Technology (VISTEC), Thailand
16:55-17:10	Bioinspired surfaces/structures improved SERS sensing performance	**Invited**	Shikuan Yang	Zhejiang University, China
17:10-17:25	Diverse bionic-locomotion emerges in an active gel driven by internal chemical signals	**Invited**	Lin Ren	Wenzhou University, China
17:25-17:35	Design, fabrication, and validation of a bionic electronic nose system for soil pesticide residue detection	Oral	Hongyang Jin	Jilin University, China
17:35-17:45	Perception of static and dynamic forces with a bio-inspired tactile fingertip	Oral	Longhui Qin	Southeast University, China
17:45-17:55	Biomimetic morphing dorsal fin system enhances the swimming performance of a free-swimming tuna robot	Oral	Hongbin Huang	Xiamen University, China
17:55-18:05	Self-sensing intelligent soft pneumatic actuator achieved through the induced voltages of soft magnetic	Oral	Wei Xiao	East China Jiaotong University, China
18:05-18:15	Biomimetic soft actuators based on conductive polymer ionogel and their electrochemomechanical modeling	Oral	Hongwei Hu	Jiangsu University, China
18:15-18:25	Complex behavioral pattern recognition on footprints by deep learning	Oral	Qin Chen	Chengdu Institute of Biology, CAS, China
18:25-18:35	An ultrasound-activated multifunction watch for closed-loop acute myocardial infarction (AMI) emergency	Oral	Xiao Yang	Hong Kong Centre for Cerebro-Cardiovascular Health Engineering

Session 6: Nature inspired energy system				
S6-1, October 13, P.M., Guangzhou Room		**Chair: Mingyue Ding, Xu Hou**		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Solar powered carbon and oxygen production from carbon dioxide	**Keynote**	Dihua Wang	Wuhan University, China
16:20-16:40	Bioinspired multi-scale pore/channel systems	**Keynote**	Xu Hou	Xiamen University, China
16:40-16:55	Bioinspired photoenzymatic reduction of CO_2 at three-phase interface	**Invited**	Jian Liu (Online)	Qingdao Institute of Bioenergy and Bioprocess Technology, CAS, China
16:55-17:10	Bio-inspired interface with their energy conversion and mass transfer	**Invited**	Meng Li	Chongqing University, China
17:10-17:25	Keratin, collagen and silk fibers from mechanical and thermal properties to catching water droplets biomimetics based on electrospun meshes	**Invited**	Urszula Stachewicz (Online -6h)	AGH University of Science and Technology, Poland
17:25-17:35	Bio-inspired synthetic trees as passive pump	Oral	Weiwei Shi	Duke Kunshan University, China
Session 6: Nature inspired energy system				
S6-2, October 14, A.M., Guangzhou Room		**Chair: Kang Liu, Yuying Yan**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Syngas converting directly to high-value chemicals with low CO_2 emission	**Keynote**	Mingyue Ding	Wuhan University, China
08:50-09:10	Developing bioinspired self-healing materials via tunable intermolecular interactions	**Keynote**	Hongbo Zeng (Online -14h)	University of Alberta, Canada
09:10-09:25	Bioinspired 3D nanoporous membrane for salinity gradient energy harvesting	**Invited**	Yahong Zhou	Technical Institute of Physics and Chemistry, CAS, China
09:25-09:40	Depinning of multiphase fluids using light	**Invited**	Lei Zhao	Dalian University of Technology, China
09:40-09:55	Ionic energy conversion systems based on bioinspired micro-nanopore materials	**Invited**	Zhen Zhang	University of Science and Technology of China
09:55-10:05	Towards regenerative cities through biomimetic strategies applied to the anthropogenic system in Panama city	Oral	Andrea Quintero (Online -13h)	Universidad Tecnologica de Panama, Panama
10:05-10:20	Coffee Break			
S6-3, October 14, A.M., Guangzhou Room		**Chair: Jian Liu, Yahong Zhou**		
10:20-10:40	Advances in using nature inspired solutions to enhance heat transfer and energy system	**Keynote**	Yuying Yan	University of Nottingham, UK
10:40-10:55	Bio-inspired passive heat dissipation with hygroscopic hydrogel	**Invited**	Kang Liu	Wuhan University, China
10:55-11:05	Interface and defect regulation by ion beam technology and its water splitting catalyst application	Oral	Dong He	Wuhan University, China
11:05-11:15	Research on the design and application of flexible self-powered bioinspired sensors	Oral	Yang Zou	Beijing Institute of Technology, China
11:15-11:25	Bionic multifunctional ultra-linear strain sensor, achieving underwater motion monitoring and weather condition monitoring	Oral	Jianhao li	Jilin University, China

Session 7: Bionic healthcare science and engineering				
S7-1, October 13, P.M., Zhuhai Room		**Chair: Zhou Li, Xuemin Du**		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Bioinspired adaptive lubrication	**Keynote**	Feng Zhou	Lanzhou Institute of Chemical Physics, CAS, China
16:20-16:40	Analysis and detection based on solid nanopore/channel	**Keynote**	Fan Xia	China University of Geosciences, Wuhan, China
16:40-16:55	Photocontrol of droplets on light-induced charged surfaces	**Invited**	Xuemin Du	Shenzhen Institutes of Advanced Technology, CAS, China
16:55-17:10	High-performance artificial muscles fibers	**Invited**	Jiangtao Di	Suzhou Institute of Nano-Tech and Nano-Bionics, CAS, China
17:10-17:25	Bioinspired fatigue-resistant hydrogels	**Invited**	Ji Liu	Southern University of Science and Technology, China
17:25-17:40	Integrative bionics in motion intelligence: from nature to machines and back	**Invited**	Xiaofeng Xiong (Online -6h)	University of Southern Denmark, Denmark
17:40-17:50	Characterization for structure-property relationship of bioinspired materials	Oral	Yueteng Wei	Bruker (Beijing) Scientific Technology Co., Ltd.

Session 7: Bionic healthcare science and engineeringBioinspired healthcare engineering				
S7-2, October 14, A.M., Zhuhai Room		**Chair: Chuanfei Guo, Benhui Hu**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Bionic self-powered medical electronics	**Keynote**	Zhou Li	Beijing Institute of Nanoenergy and Nanosystems, CAS, China
08:50-09:10	Intelligent electronic skin for healthcare monitoring and touch VR	**Keynote**	Xinge Yu	City University of Hong Kong, Hong Kong, China
09:10-09:30	E-skins with superhigh sensitivity and tough interfaces	**Keynote**	Chuanfei Guo	Southern University of Science and Technology, China
09:30-09:45	Bionic sensing and detection technology based on biomaterials	**Invited**	Qingjun Liu	Zhejiang University, China
09:45-10:00	Multiscale biomechanical interfaces	**Invited**	Pingqiang Cai	Medical School of Nanjing University, China
10:00-10:15	Bioinspired color-changeable E-skin	**Invited**	Ya-Feng Liu	Southwest University, China
10:15-10:30	Coffee Break			
S7-3, October 14, A.M., Zhuhai Room		**Chair: Xinge Yu, Pingqiang Cai**		
10:30-10:50	Wearable devices based on skin-like soft electronic materials	**Keynote**	Naoji Matsuhisa (Online +1h)	University of Tokyo, Japan
10:50-11:10	Skin-like wearable electronic devices for continuous health monitoring	**Keynote**	Sheng Xu (Online -15h)	University of California San Diego, USA
11:10-11:25	Bionic perception with in-sensor analysis	**Invited**	Benhui Hu	Nanjing Medical University, China
11:25-11:40	Bioinspired bidirectional stiffening soft actuator	**Invited**	Zhao Guo	Wuhan University, China
11:40-11:50	The effects of simulated microgravity on human walking patterns	Oral	Peng Yuan	Shanghai University of Sports, China
11:50-12:00	Fabrication of superhydrophobic, lotus effect microwell arrays for the high-throughput culture of 3D cancer models	Oral	Maria Lopez Cavestany (Online -13h)	Vanderbilt University, USA

Session 7: Bionic healthcare science and engineeringBioinspired healthcare engineering				
S7-4, October 14, P.M., Zhuhai Room		**Chair: Peng Shi, Yanan Du**		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Biomimetic μ-textured surface for regulating cells attachment to orthopaedic implants	**Keynote**	Chaozong Liu	University College London, UK
13:50-14:10	Empowering medical implants with spermidine to reduce inflammation and enhance healing	**Keynote**	Zhenning Liu	Jilin University, China
14:10-14:30	Microfluidic organs-on-chips	**Keynote**	Yuanjin Zhao	Southeast University, China
14:30-14:45	Bioinspired electroactive biomaterials and devices for therapeutic applications	**Invited**	Linlin Li	Beijing Institute of Nanoenergy and Nanosystems, CAS, China
14:45-14:55	Micromechanical modelling of interphase effects on bioinspired stagger-aligned nanocomposites	Oral	Bin Wang (Online)	City University of Hong Kong, Hong Kong, China
14:55-15:05	Development of a bionic multi-muscle driven lower limb exoskeleton	Oral	Delei Fang	Tianjin University of Science & Technology, China
15:05-15:15	Computational structural analysis of an accurate total knee replacement implant using 3D scanned data	Oral	Kanz Ur Rehman (Online -3h)	University of Engineering and Technology Lahore, Pakistan
15:15-15:30	Coffee Break			
S7-5, October 14, P.M., Zhuhai Room		**Chair: Yuanjin Zhao, Zhenning Liu**		
15:30-15:50	Spatial-temporal epigenetic profiling based on high-throughput single cell intracellular biopsy	**Keynote**	Peng Shi	City University of Hong Kong, Hong Kong, China
15:50-16:10	Micro-tissue engineering renovates bio-manufacturing and regenerative medicine	**Keynote**	Yanan Du	Tsinghua University, China
16:10-16:25	Nanoscale biochip for single cell delivery and analysis	**Invited**	Lingqian Chang	Beihang University, China
16:25-16:35	Bio-inspired silane-crosslinked hydrogel coatings for biomedical applications	Oral	Xi Yao	Henan University, China
16:35-16:45	A photonic crystal hydrogel for visualization of glucose	Oral	Yifeng Lei	Wuhan University, China
16:45-16:55	Immune clearance inspired apoptotic camouflaged adipocytes engineering for obesity treatment	Oral	Jiao Yan	Changchun Institute of Applied Chemistry, CAS, China
16:55-17:05	Strong and tough elastomeric hydrogels with biomechanics	Oral	Chenggong Xu	Lanzhou Institute of Chemical Physics, CAS, China
Session 8: Industrial applications of bionics				
S8-1, October 13, P.M., Hongkong Room		**Chair: Shichao Niu, Zhichao Dong**		
Time	**Title**	**Type**	**Speaker**	**Institution**
16:00-16:20	Nature-inspired anti-biofouling and anti-corrosion technology and its application	**Keynote**	Limei Tian	Jilin University, China
16:20-16:35	Bioinspired superspreading	**Invited**	Ye Tian	Technical Institute of Physics and Chemistry, CAS, China
16:35-16:50	Practical application of superhydrophobic coatings	**Invited**	Youfa Zhang	Southeast University, China
16:50-17:05	Multiscale and multidimensional structures for the directional transport of droplet at harsh conditions	**Invited**	Jing Li	City University of Hong Kong, Hong Kong, China
17:05-17:20	Transparent and superhydrophobic FHA-SiO_2 coatings with obvious anti-soiling performance for photovoltaic	**Invited**	Jie Feng	Zhejiang University of Technology, China
17:20-17:30	Phase-field simulation of droplet impacting on superhydrophobic surface	Oral	Lei Xia	Tianjin University, China
17:30-17:40	A gecko-inspired soft adhesive gripper attaches/detaches flat and curved surfaces autonomously	Oral	Liuwei Wang	Nanjing University of Aeronautics and Astronautics, China
17:40-17:50	Feather-inspired heterogeneous interface engineering towards advanced CFRP composites	Oral	Zhengzhi Mu	Jilin University, China

Session 8: Industrial applications of bionics				
S8-2, October 14, A.M., Hongkong Room		**Chair: Qinghai Yang, Ye Tian**		
Time	**Title**	**Type**	**Speaker**	**Institution**
08:30-08:50	Green printing technology for fabricating functional devices	**Keynote**	Yanlin Song	Institute of Chemistry, Chinese Academy of Sciences, China
08:50-09:10	Fine-structure regulation of biomass fiber self-assembly	**Keynote**	Hongbing Deng	Wuhan University, China
09:10-09:25	Design and manufacture of the bio-inspired anti-reflection surfaces	**Invited**	Shichao Niu	Jilin University, China
09:25-09:40	Optical simulation and bio-inspired study from lepidopteran wings microstructures	**Invited**	Wang Zhang	Shanghai Jiao Tong University, China
09:40-09:55	Flexible tribotronics for bionic tactile sensing	**Invited**	Chi Zhang	Beijing Institute of Nanoenergy and Nanosystems, CAS, China
09:55-10:05	Enhancing PEMFC performance: optimizing flow fields with a lung-inspired hybrid approach	Oral	Guolong Lu	Jilin University, China
10:05-10:15	Bionic design of a flexible spine for wall climbing robot based on pneumatic soft actuator	Oral	Tao Lin	Nanjing University of Aeronautics and Astronautics, China
10:15-10:30	Coffee Break			
S8-3, October 14, A.M., Hongkong Room		**Chair: Hongbing Deng, Wang Zhang**		
10:30-10:50	Surface texture application in the rubber stator of progressing cavity pump	**Keynote**	Qinghai Yang	Research Institute of Petroleum Exploration & Development, PetroChina
10:50-11:05	Preliminary investigation of geotechnical bionics: Innovative pile foundations and root-inspired drilling	**Invited**	Wengang Zhang	Chongqing University, China
11:05-11:20	Biomimetic overflow control materials	**Invited**	Zhichao Dong	Technical Institute of Physics and Chemistry, CAS, China
11:20-11:35	Biomimetic goat walking and track pattern design	**Invited**	Fu Zhang	Henan University of Science and Technology, China
11:35-11:50	Bionic smart responsive marine antifouling coatings	**Invited**	Qinghua Zhang	Zhejiang university, China
11:50-12:00	Hierarchical electronic nose detection technology for the land contaminated with petroleum hydrocarbons	Oral	Xiangyu Luan	Jilin University, China
12:00-12:10	Hydrodynamic performance of period fluctuation with compound waves for the bionic undulating fins	Oral	Qian Yin	Changsha University of Science & Technology, China

Session 9: Special Session for PhD Students				
S9-1, October 14, P.M., Guangzhou Room		**Chair: Luhe Qi, Wenhui Chen, Shiqi Hu**		
Time	**Title**	**Type**	**Speaker**	**Institution**
13:30-13:50	Publishing with Wiley	**Keynote**	Muxian Shen	Wiley
13:50-14:00	Specialized cuticle in hind femora of desert locusts	Oral	Chuchu Li	Kiel University, Germany
14:00-14:10	Facultative feeding modes in Japanese rhinoceros beetles (Trypoxylus dichotomus)	Oral	Hao Yang	Sun Yat-sen University, Shenzhen, China
14:10-14:20	Adaptative maneuverability in a fan worm for filter feeding	Oral	Wei Jiang	Sun Yat-sen University, Shenzhen, China
14:20-14:30	The compressive behavior and shape memory effect of bio-inspired lattice structures fabricated by laser powder bed fusion	Oral	Jianfeng Sun	Nanjing University of Aeronautics and Astronautics, China
14:30-14:40	An electric field-assisted wet-electrospinning tissue-mimic PCL matrix for tendon tissue	Oral	Haoyu Wang	University College London, UK
14:40-14:50	Switchable adhesion of micropillar adhesive on rough surfaces	Oral	Bo Zhu	Wuhan University, China
14:50-15:00	Double cross-linked transparent superhydrophilic coating capable of anti-fogging even after abrasion and boiling	Oral	Shuaisheng Zhao	Southeast University, China
15:00-15:10	Non-fluorinated and self-healable crystalline ‘comb-like’ polymer derived amphiphobic solid-slippery coating	Oral	Manideepa Dhar	Indian Institute of Technology Guwahati, India
15:10-15:20	Accurate magneto-driven multi-dimensional droplet manipulation	Oral	Xueshan Jing	Beihang University, China
15:20-15:30	Enhance fracture toughness and fatigue resistance of hydrogels by reversible alignment of nanofibers	Oral	Danqi Sun	Xi'an Jiaotong University, China
15:30-15:40	Laser processing of bionic functional surface	Oral	Qian Zhang	Changchun University of Science and Technology, China
15:40-15:50	Biohybrid urchin-like ZnO-based microspheres with tunable hierarchical structures	Oral	Hui Zhou	Beihang University, China
15:50-16:00	Coffee Break			
S9-2, October 14, P.M., Guangzhou Room		**Chair: Chuchu Li, Hao Yang, Zhuangzhuang Tian**		
16:00-16:10	Bioinspired design of micro-nano hybrid fibrous network chitosan cryogel and its application	Oral	Luhe Qi	Wuhan University, China
16:10-16:20	Biomimetic design of droplet-shaped stretchable hierarchical piezoceramic polymers for multimodal mechanosensing	Oral	Qianqian Xu	Central South University, China
16:20-16:30	Wires with continuous sabal leaf-patterned micropores constructed by freeze printing for wearable sensor responsible to multiple deformations	Oral	Gang Li	Wuhan University, China
16:30-16:40	A versatile rigid robotic gripper inspired by the Harpegnathos venator ants’ mandibles	Oral	Wei Zhang	City University of Hong Kong, Hong Kong, China
16:40-16:50	Phototunable self-oscillating system driven by a self-winding fiber actuator	Oral	Zhiming Hu	Westlake University, China
16:50-17:00	Light-driven shape memory of 3D-printed peek for programmable actuations	Oral	Yurong Zhang	Wuhan University, China
17:00-17:10	An efficient braided liquid crystal elastomer linear actuator for underwater driving	Oral	Wenhui Chen	Peking University, China
17:10-17:20	Optical-magnetic response helical robot with variable diameter	Oral	Zhuangzhuang Tian	Jilin University, China
17:20-17:30	The plant-inspired GO reinforced chitosan-gelatin bone scaffold with exceptional mechanical and hydrophilic properties	Oral	Chao Wang	Shanghai University, China
17:30-17:40	Multifunctional drug delivery vehicle based on diatomite biosilica for enhanced treatment of allergic rhinitis	Oral	Guanya Peng	Beihang University, China
17:40-17:50	Environmentally friendly three-dimensionally printed multiplexed anticounterfeiting labels	Oral	Shiqi Hu	The Univerisity of Hong Kong, Hong Kong, China
17:50-18:00	A versatile bioinspired sponge with physic-mechanochemical robustness for multitasking separation	Oral	Zhengping Fang	Jilin University, China
18:00-18:10	A double-network strategy for the tough tissue adhesion of hydrogels with long-term stability under physiological environment	Oral	Shuyang Wang	Xi’an Jiaotong University, China
18:10-18:20	Ultrathin broadband subwavelength acoustic metamaterials inspired by moth scales	Oral	Hexuan Yu	Jilin University, China