# Program

## Venue arrangement

Data	Time	Classification	Торіс
December 10 (Saturday)	08:40-08:50	Main venue	Opening ceremony
	08:50-09:40		Plenary lectures
	09:40-09:45		Photo time (on line)
	09:45-11:25		Plenary lectures
	14:00-17:50	Session-1	New material and structural design of flexible electronics
		Session-2	Novel devices and unconventional fabrication of flexible electronics
		Session-3	Emerging applications and performances of flexible electronics
	17:30-19:00		Poster
December 11 (Sunday)	08:30-11:50	Session-1	New material and structural design of flexible electronics
		Session-2	Novel devices and unconventional fabrication of flexible electronics
		Session-3	Emerging applications and performances of flexible electronics
	13:30-15:10	Main venue	Plenary lectures
	15:10-16:25		Editors' section
	16:25-16:45		Closing ceremony

### Main venue

Zoom Conference No.: 825 7243 5285 Password: 653295			
Saturday, December 10, 2022 (Beijing time)			
	08:40-08:50	Opening ceremony, chair: Xue Feng	
	Plenary lecture, chair: Yonggang Huang		
	08.50 00.40	John A. Rogers, Northwestern University	
	08:50-09:40	Flexible electronics as bioelectronic medicines	
Momina	09:40-09:45	Photo time (online)	
Morning	Plenary lecture, chair: Xue Feng		
	00.45 10.25	Zhenan Bao, Stanford University	
	09:45-10:55	Skin-inspired organic electronics	
	10.25 11.25	Wei Yang, Zhejiang University	
	10:35-11:25	Materials and manufacturing for soft electro-mechanical devices	
	Sunday	, December 11, 2022 (Beijing time)	
		Plenary lectures, chair: Xiaodong Chen	
	12.20 14.20	Takao Someya, University of Tokyo	
	15:50-14:20	Electronic skins for robotics and healthcare applications	
		Yongfang Li, Institute of Chemistry CAS	
	14:20-15:10	Recent research progress of photovoltaic materials for polymer solar cells	
	Editors' section, chair: Yihui Zhang		
	15:10-15:25	Xiaodong Chen, Nanyang Technological University	
		Publishing in ACS Nano and Beyond	
Afternoon	15.05 15.40	Xin Li, Nature Materials	
	15:25-15:40	Pushing for flexibility – inside Nature Materials	
	15:40-15:55	Lu Shi, Wiley	
		Publishing advanced Materials Science	
	15:55-16:10	Jing Feng, Science China Information Sciences	
		Development of Science China Information Sciences	
	16:10-16:25	Jie Yang, Science China Technological Sciences	
		Publishing in Science China	
	16:25-16:45	Closing ceremony, chair: Xue Feng	

### **Session-1**

#### New material and structural design of flexible electronics

Zoom Conference No.: 825 7243 5285 Password: 653295

Saturday, December 10, 2022 (Beijing time)			
	Keynote lectures, chair: Jiangyu Li		
	14.00-14.30	<b>Runwei Li,</b> <i>Ningbo Institute of Materials Technology &amp; Engineering CAS</i>	
		Flexible magnetic functional materials and magnetic sensors	
	Invited lectures, chair: Jiangyu Li		
	14:30-14:50	Youfan Hu, Peking University	
		Carbon nanotube-based epidermal electronic systems	
		Chi Zhang, Institute of Nanoenergy and Nanosystem CAS	
A 64	14:50-15:10	Flexible triboelectric nanogenerators and self-powered microsystems	
Afternoon		Xian Huang, Tianjin University	
	15:10-15:30	Flexible bioelectronics and soft electromechanical systems based on permanent magnetic composites and structures	
	Keynote lectures, chair: Xian Huang		
	15.20 16.00	Jiangyu Li, Southern University of Science and Technology	
	15:30-16:00	Freestanding oxide films for flexible electronics	
	16:00-16:30	Ni Zhao, Chinese University of Hong Kong	
		New generation medical devices enabled by hybrid and nanostructured semiconductors	
	17:30-19:00	Poster	
Sunday, December 11, 2022 (Beijing time)			
		Keynote lectures, chair: Cunjiang Yu	
	08:30-09:00	Chi Hwan Lee, Purdue University	
		Clinical needs-driven engineering of flexible electronics for wearable healthcare	
	09:00-09:30	Yong Zhu, North Carolina State University	
Morning		New development in silver nanowire based soft electronics: Material, structural design and manufacturing	
	Invited lectures, chair: Cunjiang Yu		
	09:30-09:50	Renee Zhao, Stanford University	
		Multifunctional magnetic origami robots	

	09:50-10:10	Xiaoyue Ni, Duke University
		A dynamically reprogrammable surface with self-evolving shape morphing
		Keynote lectures, chair: Yong Zhu
	10:10-10:40	Cunjiang Yu, The Pennsylvania State University
		Rubbery electronics: electronic devices and circuits entirely based on rubbers
	10:40-11:10	Daniel Preston, Rice University
		Textile-based wearable assistive robots with integrated fluidic control and energy harvesting
		Invited lectures, chair: Yong Zhu
	11:10-11:30	<b>Yiwei Liu</b> , Ningbo Institute of Materials Technology and Engineering, CAS
		Flexible strain sensitive materials, devices and applications
	11:30-11:50	Ke Liu, Peking University
		Passive and active construction of curved surfaces

### **Session-2**

#### Novel devices and unconventional fabrication of flexible electronics

Zoom Conference No.: 852 0641 1371 Password: 565551

	Saturday, December 10, 2022 (Beijing time)		
	Keynote lectures, chair: Zhongming Wei		
		Dae-Hyeong Kim, Seoul National University	
	14:00-14:30	Intrinsically-soft conductors for conformal tissue-device interfacing	
		Tae-Woo Lee, Seoul National University	
	14:30-15:00	Stretchable and flexible artificial nerves for neuromorphic neuroprosthetics	
		Invited lectures, chair: Zhongming Wei	
	15.00 15.20	Wei Lan, Lanzhou University	
	15.00-15.20	Flexible bioelectronics for personalized healthcare	
		Chong-an Di, Institute of Chemistry CAS	
	15:20-15:40	Construction of multifunctional organic transistors for artificial perception applications	
Afternoon	Keynote lectures, chair: Wei Lan		
		Yanlin Song, Institute of Chemistry, CAS	
	15:40-16:10	Green printing technology for manufacturing functional devices	
		Benjamin C.K. Tee, National University of Singapore	
	16:10-16:40	Approaches for scalable and self-healing hybrid electronic materials	
		Invited lectures, chair: Wei Lan	
	16:40-17:00	Zhongming Wei, Institute of Semiconductors, CAS	
		Polarization-sensitive photodetector and image sensor based on 2D materials	
	17:00-17:20	Yang Xu, Zhejiang University	
		Broadband graphene-silicon integrated field-effect coupled detectors	
	17:30-19:00	Poster	
	Sunday,	December 11, 2022 (Beijing time)	
		Keynote lectures, chair: Yongfeng Mei	
Morning	08:30-09:00	Li Zhang, Chinese University of Hong Kong	
U		Magnetic-field driven and powered flexible devices for biomedical applications	

	09:00-09:30	Zijian Zheng, Hong Kong Polytechnic University	
		Fibrous conductive materials for wearable electronics	
		Invited lectures, chair: Yongfeng Mei	
	09:30-09:50	Jing Yu, Nanyang Technological University	
		Hydrogel materials for epidermal sweat sensors	
	09:50-10:10	Wubin Bai, University of North Carolina at Chapel Hill	
		3D morphable electronic systems via deterministic microfolding	
	Keynote lectures, chair: Li Zhang		
	10:10-10:40	Lian Duan, Tsinghua University	
		Wide color gamut OLEDs based on TADF sensitized fluorescence	
	10:40-11:10	Yongfeng Mei, Fudan University	
		Smart nanomembranes for reconfigurable electronics and smart dust	
		Invited lectures, chair: Li Zhang	
	11:10-11:30	<b>Zhiyuan Liu</b> , Shenzhen Institute of Advanced Technology, CAS	
		Stretchable soft-rigid interfaces for bio-electrical signal detection: current methods and challenges	
	11:30-11:50	Hangbo Zhao, University of Southern California	
		Compliant 3D frameworks instrumented with strain sensors for characterization of engineered muscle tissues	

### **Session-3**

#### Emerging applications and performances of flexible electronics

Zoom Conference No.: 861 1490 2361 Password: 927093

Saturday, December 10, 2022 (Beijing time)			
	Keynote lectures, chair: Mengdi Han		
	14:00-14:30	Xiaodong Chen, Nanyang Technological University	
		Artificial sense technology	
		Chwee Teck Lim, National University of Singapore	
	14:30-15:00	Flexible and stretchable microfluidic sensors for healthcare and the metaverse	
		Invited lectures, chair: Mengdi Han	
		Qinglei Guo, Shandong University	
	15:00-15:20	Transferable inorganic semiconductor nanomembranes for flexible/transient sensors	
	15:20-15:40	Li Wen, Beihang University	
		Aerial-aquatic robots capable of crossing the air-water boundary and hitchhiking on surfaces	
		Keynote lectures, chair: Yihao Chen	
Afternoon	15:40-16:10	Yang Chai, Hong Kong Polytechnic University	
		Bioinspired in-sensor computing	
		Hongen Liao, Tsinghua University	
	16:10-16:40	Flexible medical robotics for intelligent minimally invasive surgery	
	16:40-17:10	Tingrui Pan, University of Science and Technology of China	
		Aquatic skin: environmentally incorporated wearables enabled by inverse iontronic sensing	
		Invited lectures, chair: Yihao Chen	
	17:10-17:30	Benhui Hu, Nanjing Medical University	
		Devices enabling in-sensor analysis for accurate diagnosis and prosthetics	
	17:30-17:50	Mengdi Han, Peking University	
		Submillimeter-scale multimaterial terrestrial robots	
	17:30-19:00	Poster	

Sunday, December 11, 2022 (Beijing time)			
	Keynote lectures, chair: Xingyu Jiang		
	08:30-09:00	Wei Gao, California Institute of Technology	
		Skin-interfaced wearable biosensors	
	09:00-09:30	Sheng Xu, University of California San Diego	
		Plenty of room under the skin: A wearable's perspective	
		Invited lectures, chair: Xingyu Jiang	
		Xinge Yu, City University of Hong Kong	
	09:30-09:50	Intelligent skin electronics for healthcare monitoring and touch VR	
	09:50-10:10	Changsheng Wu, National University of Singapore	
		Wireless, miniaturized near-infrared-spectroscopy sensors for continuous monitoring of tissue oxygenation	
Morning	Keynote lectures, chair: Wei Gao		
	10:10-10:40	<b>Xingyu Jiang</b> , Southern University of Science and Technology	
		Stretchable bioelectronic interface using liquid metal encapsulated in microfluidics	
	10:40-11:10	Zhou Li, Institute of Nanoenergy and Nanosystem, CAS	
		Self-powered medical devices and electrical stimulation therapy	
	Invited lectures, chair: Wei Gao		
	11:10-11:30	Wei Yan, Nanyang Technological University	
		Fiber electronics for fabric computation	
	11:30-11:50	Enming Song, Fudan University	
		Flexible electronic systems with silicon-nanomembrane transistor array as neural interfaces	