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Topic of the Speech:
Ionogel Electroactive Materials and Wearable Devices

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Professor Wei Chen is now a Professor and National High-Level Talent at Zhejiang Sci-Tech University. He obtained PhD degree in Condensed Matter Physics from Chinese Academy of Sciences in 2001. From 2001 to 2006, he worked as postdoctoral research fellow at University of Science and Technology of China, and The Hong Kong Polytechnic University respectively. From 2006 to 2018, he was a Professor of Materials Science at Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences. From 2018 to 2023, he was a Full Professor of Wearable Technology at The Hong Kong Polytechnic University. In June 2023, Professor Chen joined Zhejiang Sci-Tech University.

Professor Chen is internationally recognized for his leading research work in nanotechnology based soft intelligent materials and devices, including artificial muscle actuators, artificial skin sensors, flexible supercapacitors, electricity generators and these functional devices and systems for wearable applications. He has published more than 150 SCI papers in high-impact international scientific journals including Nature Communications, Advanced Materials, ACS Nano, Advanced Functional Materials, Angewandte Chemie International Edition, Materials Science and Engineering: R: Reports, Progress in Polymer Science, Nano Lett., JACS, and etc. The papers have been cited totally more than 15,000 times, h-index = 59. He also has been selected into the list of the world's top 2% scientists (lifetime scientific influence), and the 2023 National Overseas High-Level Talent Program.

ABSTRACT SUBMISSION
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Ionogel Electroactive Materials and Wearable Devices

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ABSTRACT (NO MORE THAN 500 WORDS:)

Wearable systems that can monitor human physiological activity, store data, deliver feedback and therapy are the next frontier in personalized medicine and healthcare. System-level planning and design for innovative materials research is becoming increasingly important. In order to build such a sensing & responsive system for wearable application, in this talk I will focus on our lab's bottom-up approach to designing, fabricating and enabling performance breakthrough in novel ionogel materials and electroactive devices. Representative examples of these versatilities include low-voltage-driven muscle-like fast actuators, active medical catheters, passive physiological sensors, dynamic thermal camouflage and low-grade energy harvesting and others, providing new approaches and ideas to the design smart wearable systems that combine advanced materials science and engineering.