

UCSD NANOENGINEERING/CHEMICAL ENGINEERING  
**Distinguished Seminar**  
Wednesday, January 10th, 2024  
Seminar Presentation: 10:00am - 11:00am  
**EBU1 Qualcomm Conference Center**

*“Decoding the Essence of Materials Chemistry in Bio-interfaced Electronics”*



**Dr. Xiaodong Chen, PhD**

*Innovative Centre for Flexible Devices (iFLEX), School of Materials Science and Engineering, Nanyang Technological University, Singapore; E-mail: [chenxd@ntu.edu.sg](mailto:chenxd@ntu.edu.sg)*

**Abstract:** In the digital and big data era, electronic devices are crucial for addressing societal challenges and enhancing life quality. However, the rigid nature of traditional electronics limits their applicability. Flexible electronic devices emerge as a solution, offering seamless integration with various environments and human experiences. Despite considerable progress in research, the market adoption of flexible sensors remains limited. This talk delves deep into the fundamental materials chemistry questions within flexible electronics, aiming for a clearer and deeper understanding of its core principles. Additionally, I will explore the principles of conformal sense digitalization, its applications, and the challenges ahead in unlocking its full potential.

**Biosketch:** Professor Xiaodong Chen holds the President's Chair Professorship in Materials Science and Engineering at Nanyang Technological University (NTU), Singapore, with courtesy appointments in both Chemistry and Medicine. His research interests span mechanomaterials science and engineering, flexible electronics technology, sense digitalization, cyber-human interfaces and systems, and carbon-negative technology. Prof. Chen's outstanding scientific contributions have been recognized with numerous awards, including the Singapore President's Science Award, Singapore National Research Foundation (NRF) Investigatorship and NRF Fellowship, the Friedrich Wilhelm Bessel Research Award, Dan Maydan Prize in Nanoscience and Nanotechnology, Winner of Falling Walls, and Kabiller Young Investigator. He is a member of the Singapore National Academy of Science and the Academy of Engineering Singapore, and a fellow of the Royal Society of Chemistry and the Chinese Chemical Society. Prof. Chen also serves on the editorial advisory boards of numerous esteemed international journals, including *Advanced Materials*, *Small*, and *Nanoscale Horizons*. Currently, he is the Editor-in-Chief of *ACS Nano*, a flagship journal in nanoscience and nanotechnology.