

NANO KOREA 2020

July 1~3, KINTEX, Korea

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EDUCATION

U. of Electron. Sci.&Tech. China	Ph.D	Optical Engineering	2015
Northwestern University	Ph.D	Chemistry	2015
U. of Electron. Sci.&Tech. China	MS	Optical Engineering	2012
U. of Electron. Sci.&Tech. China	BS	Optical Engineering	2009

PROFESSIONAL ACTIVITIES

- Assistant Professor, Department of Biomedical Engineering, City University of Hong Kong, China, August 2018 to Present.
- Research Assistant Professor, Department of Materials Science and Engineering, University of Illinois at Urbana Champaign, November 2017 to July 2018.
- Postdoctoral Fellow, Center for Bio-Integrated Electronics, Northwestern University, November 2016 to July 2018.
- Postdoctoral Fellow, Department of Materials Science and Engineering, University of Illinois at Urbana Champaign, July 2015 to October 2016.

AWARD AND HONORS

- New Innovator of Nano Medicine, IEEE, Gwangju, Korea, 2019
- Distinguished Expert of Sichuan Province, China, 2018
- National Outstanding PhD Thesis Award for Optical Engineering in China (7 persons nationwide), 2017

MAIN SCIENTIFIC PUBLICATION

- **X Yu**, JA. Rogers et al, Skin-Integrated Wireless Haptic Interfaces for Virtual and Augmented Reality, *Nature*, 2019, 575, 473-479.
- **X Yu**, JA. Rogers et al, Needle-shaped ultrathin piezoelectric microsystem for guided tissue targeting via mechanical sensing. *Nature Biomedical Engineering*, 2018, 2, 165-172.
- X Ning[#], **X Yu**[#], JA Rogers et al, Mechanically Active Materials in Three-Dimensional Mesostructures. *Science Advances*, 2018, 4, eaat8313.
- **X Yu**, TJ Marks, A Facchetti, Metal oxides for optoelectronic applications. *Nature Materials*, 2016, 15, 383-396.

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- **X Yu**, TJ Marks, A Facchetti et al, Spray-Combustion Synthesis. Efficient Solution Route to High-Performance Oxide Transistors. *Proceedings of the National Academy of Sciences U.S.A. (PNAS)*, 2015, 112, 3217-3222.
- **X Yu**, TJ Marks, A Facchetti et al, Ultra-Flexible, ‘Invisible’ Thin Film Transistors Enabled by Amorphous Metal Oxide/Polymer Channel Layer Blends. *Advanced Materials*, 2015, 27, 2390-2399.
- Y Liu, **X Yu*** et al, Thin, Skin-Integrated, Stretchable Triboelectric Nanogenerators for Tactile Sensing, *Advanced Electronic Materials*, 2020, 6, 1901174.
- Y Liu, **X Yu*** et al, Skin-Integrated Graphene-Embedded Lead Zirconate Titanate Rubber for Energy Harvesting and Mechanical Sensing, *Advanced Materials Technologies*, 2019, 4, 1900744.
- S Hou, **X Yu*** et al, Phase Separation of P3HT/PMMA Blend Film for Forming Semiconducting and Dielectric Layers in Organic Thin-Film Transistors for High-Sensitivity NO₂ Detection, *ACS Applied Materials & Interfaces*, 2019, 11, 44521.

RESEARCH INTERESTS

- **Skin-integrated electronics.** Skin is the largest organ of human body, which is response for connection our body to environments. We develop soft skin-integrated electronics, also known as “epidermal electronics” for monitoring our health information, such as temperature, activity, ECG etc.
- **Functional soft materials.** We develop high performance materials for flexible electronics and MEMS, from semiconductors, to conductors, to dielectrics, and to piezoelectrics.
- **Novel medical tools.** Diagnosis of diseases highly depend on medical instrument and tools. Due to the soft and time dynamic nature of human tissues (organs), the resolution and accuracy of the current medical tests are still facing challenge. We build the bridge between flexible electronics and human tissues, targeting on future medical tools.