Sensors Research Interest Group (RIG) aims to connect researchers and users of sensor materials, technologies, middleware and applications, and to provide an interface between academic and industrial research.

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**DIFFERENTIAL SENSING OF MITOGEN ACTIVATED PROTEIN KINASES ISOFORMS**

20th November, 2020  
12:00 - 12:30pm

Mitogen activated protein kinases (MAPKs) regulate a series of cellular functions, and individual MAPK isoform has different contributions to specific cellular malfunctions. Thus, the detecting tools for the individual isoform activity are important to the development of MAPK profiling. Instead of using highly selective biosensors in combination with inhibitors for off-target kinases for one single isoform, our group developed differential sensing techniques to detect several isoforms. An array of peptide-based biosensors with unique cross-reactivity was developed to detect and distinguish the MAPK isoforms simultaneously in a single assay. The obtained fingerprints of kinase identity and activity were depicted using machine learning tools.

Zoom link:  
https://utexas.zoom.us/j/6856470958

YouTube live link:  
https://youtu.be/tnf-JFKleSo

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**LINGYU ZENG**  
DEPARTMENT OF CHEMISTRY  
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Dr. Lingyu Zeng is a post-doctoral fellow in the Department of Chemistry. She completed her B.S. in Chemical Biology (2013) and Ph.D. in Analytical Chemistry (2018) at Wuhan University. In 2016, she joined Eric V. Anslyn's research group as a visiting scholar, and then continued her post-doctoral research till now. Dr. Zeng's research interests mainly focus on developing differential sensing arrays and performing chemical data analysis using machine learning techniques.