



## **Analytical Chemistry Seminar**

**Tuesday, February 22, 2022  
3:30 PM**

**Via Virtual Zoom Link Only:**

<https://purdue-edu.zoom.us/j/99453969623?pwd=Z01Tczc0S3FLVE53dHJyQm9oc2pSUT09>

Meeting ID: 994 5396 9623  
Passcode: 437702

***“Application of Single Cell Raman Technology to Life Science”***



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### **Abstract:**

Single cell Raman spectra (SCRS) provide label-free biochemical profiles of individual cells, and such intrinsic ‘fingerprints’ can be regarded as single cell phenotype, reflecting gene expression and metabolic functions, and revealing spatial and temporal relationships of cells. Sorting cells based on SCRS would link phenotypes to genomics and transcriptomics and proteomics at the single cell level. SCRS is able to use natural Raman biomarker of cells or stable isotope probing (SIP) to reveal metabolism and physiology of cells. We demonstrate that Raman biomarkers and Raman activated cell sorting (RACS) to medicine (disease diagnosis, microbiome and test of antimicrobial resistance) and microbiology (cell cultivation and single cell genomics analysis).