Uncovering structure-function relationships at heterojunction interfaces

Interfaces are critical regions in both materials and biological systems that often define the functionality of the system. Our research is aimed at unraveling complex heterogeneity in a variety of novel materials to obtain molecular level structure-function relationships necessary for controlling interfacial processes. We use a combination of spectroscopic techniques to probe interfaces such as single molecule emission and Raman spectroscopy that are also highly amenable for studying biological systems.