**Spectromicroscopy with Atomically Confined Light**

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Plasmonic nanojunctions can be used to effectively confine light on the Å scale, surpassing the diffraction limit by four orders of magnitude, and opening the atomistic limit in optical microscopy. Seeing an atom, a single chemical bond, imaging the vibrational normal modes inside one molecule, and seeing sound are among the recent observations made in our laboratory under the rubric of tip-enhanced Raman spectro-microscopy (TERS). I will use these examples to expand on the unusual properties and multiple facets of atomistically confined plasmons and their applications. As light, the momentum uncertainty associated with spatial confinement gives visible photons the wavelength of x-rays, which allows the simultaneous energy and momentum matching conditions required to see dispersive acoustic phonons, to see sound. As fields, the dramatic enhancement through confinement accesses the strong-field limit and allows detection of the feeble Raman effect from individual molecules. This gives access to the electro-mechanical machinery of individual molecules for sensing and device applications, such as the recently demonstrated single molecule scanning electrometer. As picocavity photons, superpositions of only two Fock states can be prepared and maintained. And in the quantum tunneling limit required for atomistic resolution, phototunneling current of confined electrons provides a more natural description of the local, time harmonic electro-magnetic fields and associated observables. There is rich photophysics to be harnessed at plasmonic nanojunctions.