

## **Surface enhanced spectra of chiral molecules by nanostructures**

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Chiral molecules are pervasive in natural world. Molecular chirality determines their physical and chemical properties. Detection and characterization of these chiral enantiomers are of considerable importance for biochemical and pharmaceutical industries. In this talk, the speaker will systematically discuss various methods of enhancing the sensitivities of spectroscopies of chiral molecules with nanostructures. Specifically, he will introduce the capabilities of plasmonic nanoparticles, silicon nanoparticles with high refractive indices and dielectric photonic crystal slabs in enhancing the intensities and the signal-to-noise ratios of various kinds of chiral spectra. Besides, the possibility of using orbital angular moment beams to probe chiral molecules will also be discussed.