

Surface Enhanced Raman Spectroscopy for Neurotransmitter Detection

US researchers Amber Moody and Bhavya Sharma are working on sensitive bio sensing for early disease detection and better understanding of biological processes. Here they show detection of neurotransmitters like melatonin, dopamine and others. They use surface enhanced Raman spectroscopy (SERS) where the Raman signal is enhanced using metal nanoparticles. The Raman spectrum gives a clear fingerprint spectral signature. The researchers systematically study the effects of Au and Ag nanoparticles as well as different excitation wavelength and perform PCA analysis to establish the best conditions to achieve the lowest possible limits of detection. Sensitive spectroscopy systems provide resolution and sensitivity necessary for doing their measurements.

Featured Paper/ Publication: [Multi-metal, Multi-wavelength Surface-Enhanced Raman Spectroscopy Detection of Neurotransmitters.](#)
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Products used: [Isoplaner](#), [PIXIS](#)