

Abstract Submitted  
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**Stimulated and coherent Raman spectroscopy with 0? pulses**

SUMAN DHAYAL, YURI ROSTOVTSEV, University of North Texas — We developed a new variant of stimulated and coherent Raman spectroscopy with shaped short pulses, applicable to multi-scattering media. The technique is based on the spectral modulation of the laser pulse due to the Raman scattering. Using discrete dipole approximation we modeled the scattering from nanoparticles and calculated response from molecules in vicinity of nanoparticles to demonstrate the effects of 0?-short laser pulses. The obtained results may have a broad range of applications from spectroscopy and pathogen detection to microscopy.

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