

Colloquium Notice

Valery Milner

University of British Columbia

Coherent Spectroscopy with Incoherent Laser Pulses

Contrary to the common belief that noise and decoherence are detrimental to spectroscopic measurements, we propose and experimentally demonstrate a new method of coherent Raman spectroscopy with spectrally broad incoherent laser pulses. Laser induced molecular vibrations are probed by femtosecond laser pulses with intentionally introduced spectral phase noise, and the vibrational resonances are identified through intensity correlations in the noisy spectrum of the scattered photons. Spectral resolution is not limited by the pulse bandwidth, and is not sensitive to the temporal profile quality of the pulses. The method does not require complicated pulse-shaping setups, spectral multiplexing or spatial beam arrangements. It enables full utilization of the broad bandwidth of femtosecond pulses, and quick scanless retrieval of Raman spectra.

Monday

April 23, 2007

Starts at 12:15 PM

Coffee at 12:00 PM

Physics Conference Room, SB B326