Optical Two Dimensional Fourier Transform Spectroscopy of Layered Metal Dichalcogenides


— Nonlinear two-dimensional Fourier transform (2DFT) measurements were used to study the mechanism of excitonic dephasing and probe the electronic structure of the excitonic ground state in layered metal dichalcogenides. Temperature-dependent 2DFT measurements were performed to probe exciton-phonon interactions. Excitation density dependent 2DFT measurements reveal exciton-exciton and exciton-carrier scattering, and the lower limit for the homogeneous linewidth of excitons on positively and negatively doped samples.

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