

Resonant Raman Scattering in the few-layer Transition Metal Dichalcogenides

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Transition Metal Dichalcogenides emerged as promising materials for optoelectronic applications. Their properties strongly depend on their thickness and their layered structure makes the fabrication of a few layer structures relatively simple. Raman scattering spectroscopy a technique of choice to study properties of those materials. The effect of layer thickness on the Raman scattering will be reviewed. Results of studies of Raman scattering on few layer molybdenum ditelluride (MoTe_2) will be presented with special focus on resonant effects. It will be shown how the scattering is modified by bringing illumination in resonance with maxima of electronic joint density of states in MoTe_2 .