

Abstract Submitted
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Raman imaging of MoS₂ HONGYUAN LI, Texas AM University, DMITRI VORONINE, ALEXANDER SINYUKOV, ZHENRONG ZHANG, ALEXEI SOKOLOV, Texas AM University and Baylor University, MARLAN SCULLY, Texas AM University, Baylor University and Princeton University, IQSE TEAM — Molybdenum disulfide is an important type of metal dichalcogenide which is of great significance in chemical and electronic engineering. The monolayer MoS₂ can be made into transistor or biosensor. Its nano-structure has interesting properties. Here, we report Raman imaging of MoS₂ nanoflakes using 785 nm laser excitation and find that the intensity near the edge of the flake is higher than in the center. This peculiar characteristic is analyzed and compared to the results of resonant Raman(RR) imaging using 660nm laser excitation. Second-order peaks emerge in the RR map. We compare the results obtained by non-resonant and resonant Raman techniques. Our results can help improving the understanding of the 2D nanostructures and develop new applications. abstract body.

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