

High Pressure Raman Investigation on Few Layered WS₂

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Layered Transition Metal Dichalcogenides (TMDs) such as WS₂, WSe₂, MoS₂, MoSe₂ have attracted the attention of researchers due to their distinctive and varied properties. These materials exhibit indirect band gap in their bulk form but direct band gap in their single layered form. High pressure resistivity measurement on bulk MoS₂, MoSe₂, WS₂ have showed metallization of the above materials around 25-32 GPa. In our High Pressure Laboratory in IISER Kolkata we have investigated high pressure Raman behavior of few layered WS₂ up to 50 GPa using Diamond Anvil Cell (DAC) which will be discussed in details in this poster. We will also discuss about layer dependent Photoluminescence effect of WS₂ in our poster.