

Habib Rostami (IPM, Iran):

Title: "Valley Zeeman effect in monolayer MoS₂"

Abstract: In this talk, I will briefly review some recent experimental studies on magnetic manipulation of valley index in monolayer of the transition metal dichalcogenide electronic systems. Then, I will report our results which are calculated using the tight binding and semiclassical methods to understand this effect. We study the induced valley Zeeman effect via the coupling between perpendicular magnetic field and the orbital magnetic moment in monolayer MoS₂. Moreover, we investigate the transport properties of the system by calculating the spin-valley-resolved conductance using the recursive Green's function technique.