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Twisted MoS2 Bilayers¹ MOHAMMAD GANI, YUDISTIRA VIRGUS, CHRISTOPHER TRIOLA, ENRICO ROSSI, Physics Department of William and Mary College — Research interest in novel two-dimensional materials has grown rapidly recently because of their potential use for electronic and spintronic applications. Two-dimensional transition metal dichalcogenides are promising compounds for these applications since they possess a bandgap and a strong spin orbit interaction. One of the dichalcogenides that has been studied extensively is MoS2. In this talk I will present the results of our theoretical study of the electronic structure of twisted MoS2 bilayers formed by two single MoS2 layers stacked with a relative twist angle. Our results suggest that the twist angle can be used effectively to tune the electronic properties of MoS2.

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