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First-principles study of polarized Raman spectra of few-layer IV-VI compounds (GeS, GeSe, SnS, and SnSe)[1] JIA-AN YAN, LUCAS WEBSTER, DAVID HOUSTON, DANNA DORATOTAJ, Department of Physics, Astronomy and Geosciences, Towson University, 8000 York Road, Towson, MD 21252
— IV-VI compounds such as GeS, GeSe, SnS, and SnSe are layered compounds with weak interlayer interactions and have attracted recent attention due to their interesting thermoelectric and optoelectronic properties. In this talk, we will present our recent comparative study of the polarized Raman spectra of few-layer MX (with M=Ge and Sn, and X=S and Se) based on density-functional theory. Possible effects of strain and phase transitions on the Raman response will be compared with available experimental data.

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