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Understanding the Low-Energy Dynamics of Inorganic Fullerene-Like WS_2 Nanoparticles R.D. LUTTRELL, S. BROWN, J. CAO, J.L. MUSFELDT, University of Tennessee, R. ROSENTSVEIG, R. TENNE, Weizmann Institute of Science — Inorganic fullerene-like nanoparticles are attracting attention due to their outstanding solid-state lubricating behavior. We present the vibrational response of inorganic fullerene-like WS_2 nanoparticles and discuss the effects of local strain and effective charge on the dynamics of this material. We compare these results to those of the chemically identical (but morphologically different) layered solid.

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