

Abstract Submitted
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Synthesis and characterization of SnS₂ ARTURO MENDEZ, CINVESTAV, MAURICIO ORTEGA, JORGE CONTRERAS, CINVESTAV, BUAP — Tin disulfide (SnS₂) nanoparticles were successfully prepared by colloidal chemistry using the hot-injection approach, starting of tin(II) chloride, sulfur and oleylamine. The phase composition and morphology were analyzed by X-ray diffraction, Raman spectroscopy and scanning electron microscopy (SEM). The results show that the synthesis produces nearly-spherical SnS₂ nanoparticles around 20-50 nm in size, crystallizing in the hexagonal structure. The elemental analysis carried out by EDAX indicated that the obtained nanoparticles are nearly stoichiometric SnS₂. A representative Raman spectrum reveals a sharp peak at 313 cm⁻¹, which characterizes the hexagonal phase of SnS₂.

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