

PRODUCTION OF MoS₂ NANOSTRUCTURES THROUGH
FEMTOSECOND PULSED LASER DEPOSITION

by

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ABSTRACT

Production of MoS₂ inorganic fullerenes using femtosecond pulsed laser deposition (PLD) is demonstrated. This approach shows promise as a means of creating a large mass fraction of octahedral MoS₂ fullerenes. To date, exploration of this nanoparticle's properties has been limited due to difficulties in producing significant amounts of material. This work demonstrates a new pathway to efficient particle production, producing suitable amounts of material enabling new studies with these structures. We also demonstrate that after depositing these nanoparticles on a glass substrate a collective response can be seen using both second and third harmonic generation microscopy.

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