

The invention relates to chemistry, particularly to the nanotechnologies. The process for preparation of nanocrystalline powders of wolfram dichalcogenides comprises their synthesis. The synthesis of nanocrystalline powders of wolfram dichalcogenides with a layered structures of 2H type is carried out by powders of wolfram elements and chalcogens in stoichiometric ratio of 1:2 at a temperatures of 650-670 K with a further burning of obtained nanocrystalline powders of wolfram dichalcogenides with a layered structures of 2H type at a temperatures of 650-1080 K. The use of invention allows obtaining powders of wolfram dichalcogenides of small sizes without admixtures of secondary phases.