

DP 03

A LOW TEMPERATURE DRY-WAY SYNTHESIS OF CERIUM SULFIDE

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In this paper is reported the synthesis of cerium sulfide. The reactional system is highly active, the reagents undergo chemical reaction at low temperature, in a dry-way fashion. The sulfide supplier is solid thiourea. Cerium carbonate and cerium oxide were tested for the synthesis. Laboratory scale experiments were carried out at 2 to 5 gram level.

The influence of reaction time, temperature and the ratio of reagents was studied. The prepared sulfide was characterized by x-ray diffraction, thermal analysis and UV spectroscopy. The cerium sulfide obtained exhibited some fluorescence under the UV light.

The procedure is very clean, no smell of hydrogen sulfide being observed.