1-77

TiCl(OCH₃)(SO₃Cl)(OSO₂F)-CHLORO(CHLOROSULFATO)(FLUOROSULFATO)-METHOXYTITANIUM(IV) — ASYMMETRIC TITANIUM(IV) COMPOUND

Michael Laska and Ramesh C. Kumar*

Baldwin-Wallace College, Chemistry Department, Berea, Ohio 44017 (U.S.A.)

A stable titanium(IV) compound with four different kinds of ligands, $TiCl(OCH_3)(SO_3Cl)-(SO_3F)$, results when $TiCl_2(OCH_3)(SO_3F)$ is refluxed with HSO_3Cl using CH_2Cl_2 as the solvent. It is an off-white solid and decomposes around $125^{\circ}C$. The powder X-ray diffraction studies of the title compound will be discussed along with other physical and chemical properties.

I-78

CRYSTAL STRUCTURE OF: FLUOSILICATE TETRAHYDRATE OF LEAD

P. Charpin*, M. Lance, D. Vigner and E. Soulié

Division d'Etudes de Séparation Isotopique et de Chimie Physique, DPC/SCM, Centre d'Etudes Nucléaires de Saclay, 91191 Gif-sur-Yvette, Cedex (France)

The crystal structure of Pb SiF₆, 4H₂O, first observed by Marignac (1860) has been solved and refined from single crystal X-ray data. The compound crystallizes in the monoclinic space group P 2 1/c with the following cell parameters: a = 7.839(1); b = 7.998(2); c = 12.650(2)Å; β = 91.54(1)° Z = 4; ρ_{calc} = 3.530(5) Mg m-3.

This structure is a new one among fluosilicate hydrates of divalent metals with a marked unidimensionnal character. The metal has a mixed environment of fluorine atoms and water molecules in a bicapped square antiprism arrangement.