

I-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(OCH₃)(SO₃Cl)-(SO₃F), results when TiCl₂(OCH₃)(SO₃F) is refluxed with HSO₃Cl using CH₂Cl₂ as the solvent. It is an off-white solid and decomposes around 125°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 Mariqnac (1860) has been solved and refined from single crystal X-ray data. The compound crystallizes in the monoclinic space group P 2₁/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.