

THERMAL DECOMPOSITION STUDIES ON THE ADDUCTS $\text{MF}_2 \cdot 2\text{SbF}_5$
(M = Mg, Cr, Fe, Co, Ni, Cu, Zn, Cd, Pb)

D. Gantar and J. Maček

Department of Chemistry and Chemical Technology and 'Jožef Stefan'
Institute, 'E. Kardelj' University, Ljubljana (Yugoslavia)

In earlier studies thermal decomposition of $\text{MF}_2 \cdot 2\text{AsF}_5$ has provided a useful route for the preparation of compounds with the formulae $2\text{MF}_2 \cdot 3\text{AsF}_5$, $\text{MF}_2 \cdot \text{AsF}_5$ and $2\text{MF}_2 \cdot \text{AsF}_5$ [1].

The analogous adducts with SbF_5 , $\text{MF}_2 \cdot 2\text{SbF}_5$ (M=Mg, Cr, Fe, Co, Ni, Cu, Zn, Cd, Pb) prepared by the reaction of metal difluorides with SbF_5 in anhydrous HF at room temperature [2] have, therefore, been investigated by TG and DTG measurement.

The thermal decomposition studies have shown that the compounds $\text{MF}_2 \cdot 2\text{SbF}_5$ decompose when heated in a dry argon atmosphere in one (M=Cu, Pb) or more steps into the metal difluorides. On the basis of the observed weight loss for the separate steps, the nature of the intermediates has been determined.

- 1 B.Frlec, D.Gantar and J.H.Holloway, *J.Fluorine Chem.*, **20**, 217 (1982).
2. D.Gantar, I.Leban, B.Frlec and J.H.Holloway, *J.Chem.Soc. Dalton Trans.*, 2379 (1987).