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ON THE SYNTHESSES OF SOME XENON(VI) FLUOROPLUMBATES(IV) AND FLUOROSTANNATES(IV)

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So far, the reactions of xenon hexafluoride with Group IV'A' tetrafluorides have been reported only for germanium and tin [1,2]. During a systematic study of the system $\text{XeF}_6 - \text{SnF}_2$, besides the known $4\text{XeF}_6 \cdot \text{SnF}_4$ (1), the compounds $2\text{XeF}_6 \cdot \text{SnF}_4$, $4\text{XeF}_6 \cdot 3\text{SnF}_4$, $3\text{XeF}_6 \cdot 4\text{SnF}_4$ and $\text{XeF}_6 \cdot 4\text{SnF}_4$ were also isolated. Recently the study was extended to the system $\text{XeF}_6 - \text{PbF}_2$ where three new compounds, $4\text{XeF}_6 \cdot \text{PbF}_4$, $3\text{XeF}_6 \cdot 4\text{PbF}_4$ and $\text{XeF}_6 \cdot 4\text{PbF}_4$ were isolated. On the basis of Raman and IR spectra, the 4 : 1 compounds could be confidently formulated as $(\text{Xe}_2\text{F}_{11}^+)$ salts, while the other compounds, with the exception of $2\text{XeF}_6 \cdot \text{SnF}_4$ could be formulated as XeF_5^+ salts with polymeric anions. The differences between published Raman spectra of the XeF_5^+ ion in its complexes with monomeric anions and its Raman spectra in the complexes with polymeric anions will be discussed.

1 K.E. Pullen, G.H. Cady, *Inorg. Chem.*, **5**, 2057 (1966)2 K.E. Pullen, G.H. Cady, *Inorg. Chem.*, **6**, 1300 (1967)