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SYNTHESIS AND CHARACTERIZATION OF $\text{XeOTeF}_5^+\text{Sb}(\text{OTeF}_6)^-$

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The XeOTeF_5^+ cation has been characterized previously as the AsF_6^- and $\text{Sb}_2\text{F}_{11}^-$ salts, however investigation of the chemistry of XeOTeF_5^+ has been limited by the insolubility of these two salts in inert solvents.

The new salt, $\text{XeOTeF}_5^+\text{Sb}(\text{OTeF}_6)^-$, has been synthesized and represents the first example of a salt containing both an OTeF_5 substituted cation and anion. The compound is a stable pale-orange solid and has been characterized by ^{129}Xe , ^{121}Sb and ^{19}F NMR and Raman spectroscopy.

The high solubility of $\text{XeOTeF}_5^+\text{Sb}(\text{OTeF}_6)^-$ in inert low-polarity solvents affords new possibilities for investigating the chemistry of the XeOTeF_5^+ cation. The Lewis acid properties of XeOTeF_5^+ will be described.