

SUPPORTING INFORMATION

Divalent and Trivalent Gas-Phase Coordination Complexes of Californium: Evaluating the Stability of Cf(II)

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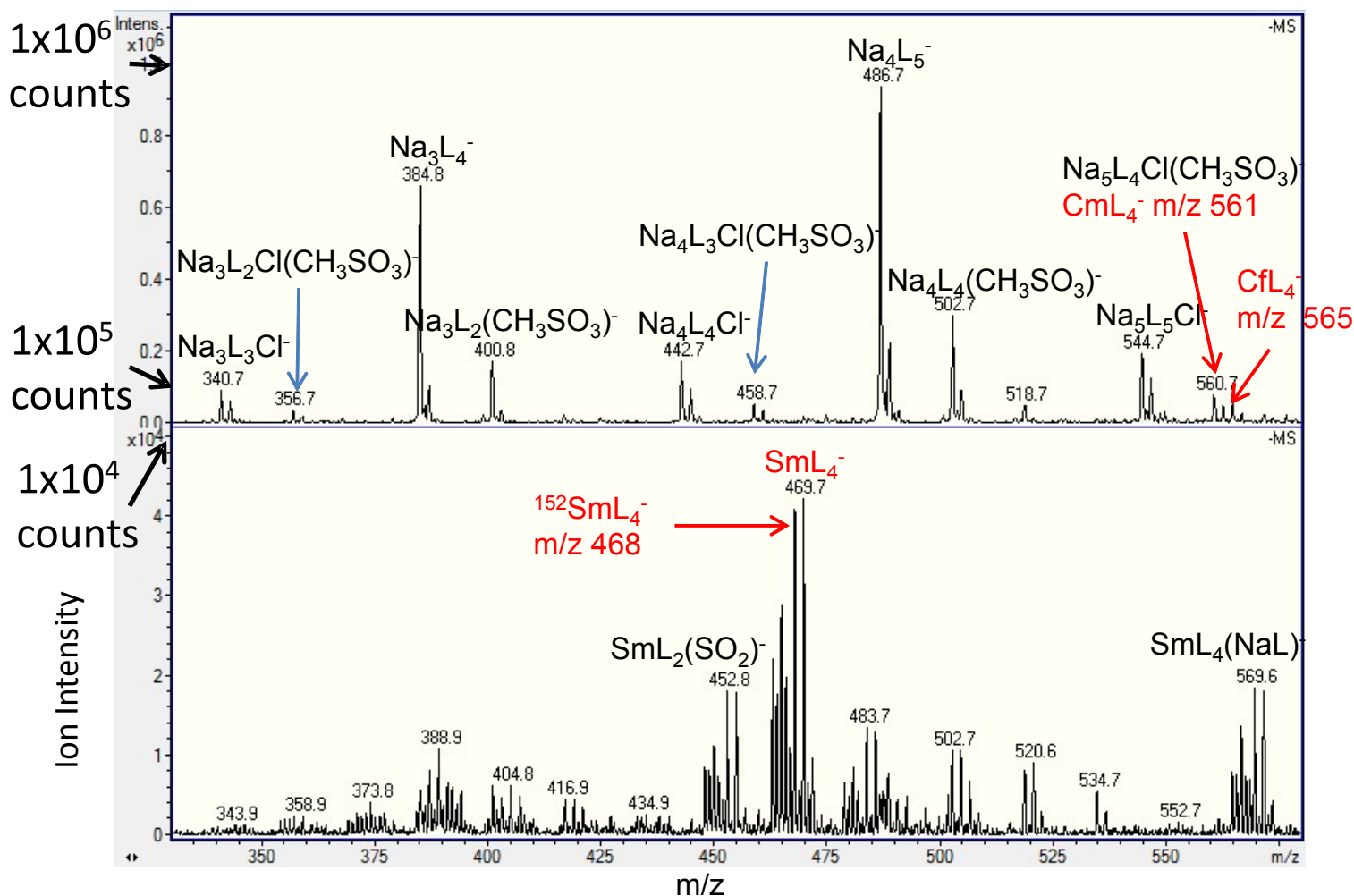


Figure S1. ESI mass spectra of the Cf³⁺/Cm³⁺ (top) and Sm³⁺ (bottom) solutions (L = CH₃SO₂). As discussed in the experimental section, sodium clusters were particularly abundant for the Cf³⁺/Cm³⁺ solution due to the necessity to add a large excess of NaCH₃SO₂.

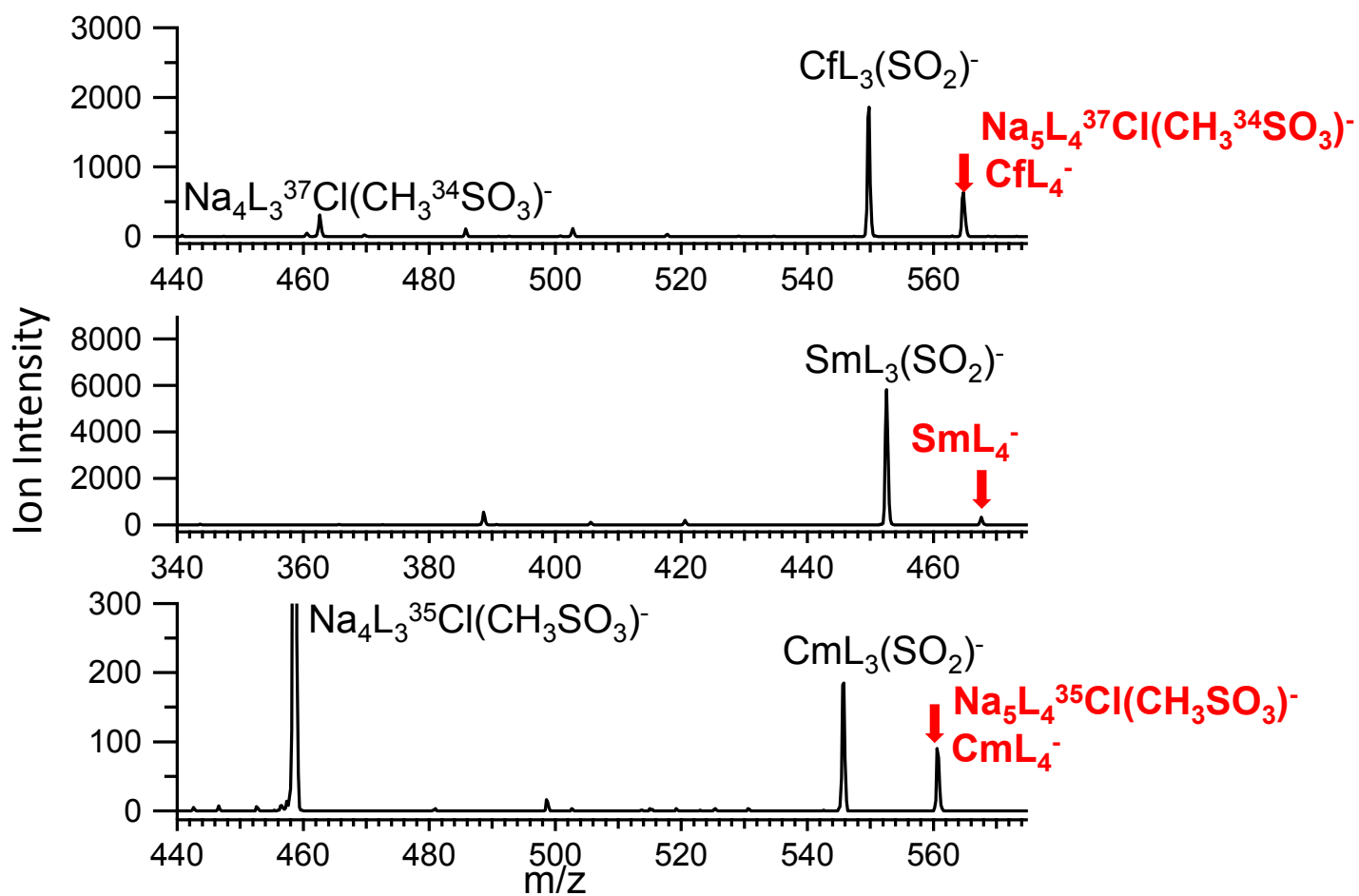


Figure S2. CID mass spectra of m/z values corresponding to the three ML_4^- ($M = \text{Cf}, \text{Sm}, \text{Cm}; L = \text{CH}_3\text{SO}_2$). The CID products reveal particularly substantial isobaric contamination at the mass corresponding to CmL_4^- . The identity of this as a sodium cluster is confirmed by loss of NaL upon CID. In Figure 2 the spectra do not extend down to the m/z values of the impurity products, to emphasize there the chemistry of interest. The intensity of the truncated $\text{Na}_4\text{L}_3^{35}\text{Cl}(\text{CH}_3\text{SO}_2)^-$ peak in the bottom spectrum is ~ 500 .