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# ENERGETICS AND MECHANISMS OF TRIFLUOROMETHYL EXCHANGE IN URANYL BiS(HEXAFLUOROACETYLACETONATE) ADDUCTS

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The title compounds have the four oxygen atoms of the β diketones and the basic atom of the adduct in an approximately pentagonal disk around and perpendicular to the uranyl moiety. Each β-diketone therefore has two non-equivalent trifluoromethyl groups. The chloride, bromide, azide, fluoborate, perchlorate and tetrahydrofuran adducts were prepared. From fluorine magnetic resonance studies it was shown that trifluoromethyl averaging occurs by both intramolecular and intermolecular adduct migration. Correlations of the energy barriers to exchange and the crystal structures of the adducts will be presented.