

Untersuchungen über Iodomercurate: Kristallstrukturen von Bis-tetramethylammonium-tetraiodomercurat(II), Tetramethylammoniumpentaiododimercurat(II) und Bis[di(12-krone-4)lithium]-decaiodotetramercurat(II)

Investigations on Iodomercurates: Crystal Structures of Bis-tetramethylammonium tetraiodomercurate(II), Tetramethylammonium pentaiododimercurate(II) and Bis[di(12-crown-4)lithium] decaiodotetramercurate(II)

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Crystals of $[\text{Me}_4\text{N}]_2[\text{HgI}_4]$ (**1**) and $[\text{Me}_4\text{N}][\text{Hg}_2\text{I}_5]$ (**2**), were obtained from solutions of stoichiometric amounts of HgI_2 and Me_4NI in EtOH or acetone, resp., while crystals of $[\text{Li}(12\text{-crown-4})_2]_2[\text{Hg}_4\text{I}_{10}]$ (**3**) formed upon interdiffusion of methanolic solutions of HgI_2 , LiI and of the auxiliary ligand. The crystal structures of the compounds were determined. The $[\text{Hg}_2\text{I}_5]^-$ ion in (**2**) has a polymeric sheet structure, built up from $[\text{Hg}_2\text{I}_6]$ units bridged by $[\text{HgI}_4]$ groups sharing common apices. The $[\text{Hg}_4\text{I}_{10}]^{2-}$ ion in **3** consists of four $[\text{HgI}_4]$ tetrahedra sharing common edges. A short survey on the iodomercurate(II) anions known up to now is given and a classification is proposed.

Key words: Mercury, Iodomercurate(II) Anions, Pentaiododimercurate, Decaiodotetramercurate, Crystal Structures