The NaCl Adduct of the Iron-Indium Compound

Fe$_2$(CO)$_6$(µ-CO)(µ-InR)$_2$ [$R = C(SiMe_3)_3$] – a One-Dimensional Coordination Polymer with Sodium Oxygen Bridges

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Z. Naturforsch. 58b, 385 – 388 (2003); received December 12, 2002

The organoindium subhalide [R(Cl)In-In(Cl)R]$_2$ [$R = C(SiMe_3)_3$] 1 reacts with Na$_2$[Fe$_2$(CO)$_8$] to form an iron-indium coordination compound which was isolated as the sodium choride adduct [Na(THF)$_4$][Fe$_2$(CO)$_6$(µ-CO)(µ-InR)$_2$Cl] 2. The iron atoms of 2 are bridged by a CO ligand and two InR groups, the indium atoms of which are further connected by the µ$_2$-bridging chlorine atom. Four THF molecules and two oxygen atoms of terminal CO ligands of different anions span the coordination sphere of the sodium cations to give a one-dimensional coordination polymer in the solid state.

Key words: Indium, Iron, Coordination Compound