

# Syntheses and Structures of Cyclopentadienyl Arsenic (III) Compounds Part III<sup>a</sup>: Tetraisopropylcyclopentadienyl Arsenic (III) Dibromide and Tetraisopropyl- cyclopentadienyl Arsenic (III) Diiodide (TipCpAsBr<sub>2</sub>, TipCpAsI<sub>2</sub>)

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*Dedicated to Prof. Dr. B. Kadenbach on the occasion of his 65<sup>th</sup> birthday*

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Arsenic, Arsenic Halides, Cyclopentadienyl Arsenic Compounds, Crystal Structure

1,2,3,4-Tetraisopropylcyclopenta-2,4-dien-1-yl arsenic (III) dihalides, *viz.* TipCpAsX<sub>2</sub> (**1** X = Br, **2** X = I), have been prepared by direct metathesis reaction between the corresponding arsenic (III) trihalides with one equivalent of TipCpK at low temperature in good yields. Alternatively, **2** has been prepared via halogen exchange reaction between TipCpAsCl<sub>2</sub> (**3**) and KI. New compounds have been characterised by spectroscopic methods (<sup>1</sup>H, <sup>13</sup>C NMR, EI-MS) and elemental analyses. The crystal structures of **1** and **2** have been determined by X-ray diffraction methods. The AsX<sub>2</sub>-moiety in **1** and **2** occupies an allylic position neighbouring to an isopropyl substituent. The arsenic fragment is σ-bound to the cyclopentadienyl ligand, indicating remarkable π-interactions with the diene part of the cyclopentadienyl ring.

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