

Halogenido derivatives of metallophthalocyanines of metals of the 15th group

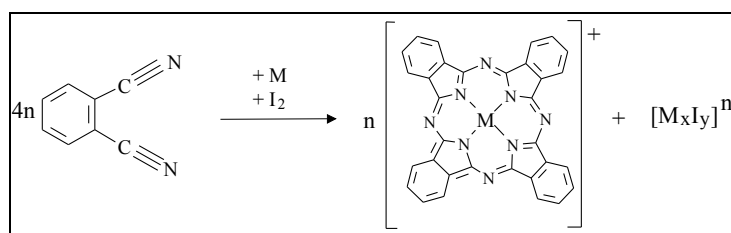
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Numerous metallophthalocyaninato complexes with halides have been synthesized and structurally characterized. Especially, the large class of such materials has been obtained with iodine. In accordance to the known chemical flexibility of iodine, it may be present as an anionic part in the crystalline network of metallophthalocyaninato complexes in versatile forms. For example as polyiodide chains – usually symmetric and disordered I₃⁻ anions, or as more or less complicated metalloiodine complex – M_xI_y, containing different polyhedra that are joined together via the I-bridges, or as individual ions joined directly to the central metal ion of metallophthalocyanines. Many of these materials exhibit interesting physicochemical properties and are important as charge carriers and sensors, and therefore they are still intensively investigated.

The iodine derivatives of metallophthalocyanines in crystalline form have been synthesized by the direct reaction of definite powdered metal with 1,2-dicyanobenzene under a stream of iodine:



The metallophthalocyaninato complexes with the metal of the 15th group of the periodic system are relatively less investigated [1]. The stereochemical aspect of the subclass containing versatile halogenido units in the crystalline network or halogenido derivatives of metallophthalocyanines will be presented. These metallophthalocyaninato complexes are classified according the type of metallophthalocyaninato unit, the type of the halogenido units and the type of the interactions between the metallophthalocyaninato and halogenido units in the crystalline network.

[1] Janczak, J. and Perpétuo, G.J., *Acta Cryst.* **C62**, m45 (2006) and references cited therein.

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