

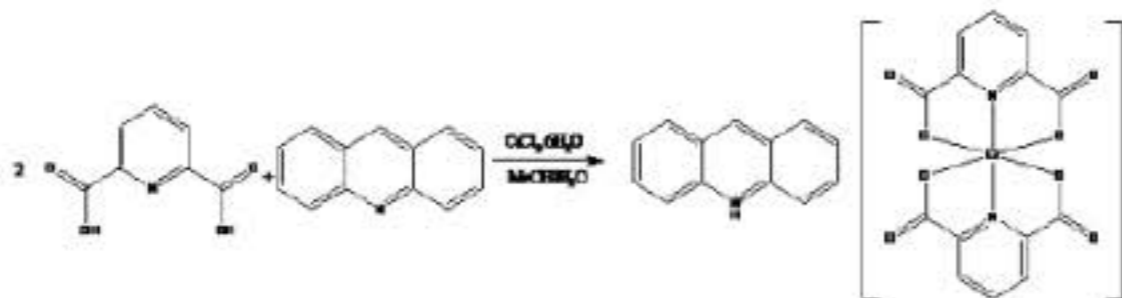
A new coordination compound built upon symmetric dicarboxylate ligand and huge fused aromatic ring derivated of pyridine as counter ion

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Acridine is structurally related to anthracene wherein one of the central CH groups is replaced by nitrogen. Acridines are found to have a wide range of biological activity, such as mutagenic, antitumor and antibacterial properties. The ability of acridine to interact with DNA is also established. In addition, acridine compounds are considered to be efficient drugs for the treatment of Alzheimer's disease [1-4]. On the other hand, pydcH₂ as a symmetric ligand with different coordination modes has been attracted attention by scientists of synthetic chemistry [5]. In this contribution, The new coordination compound, (acr)[Cr(pydc)₂].H₂O, (in which acr and pydcH₂ are short of acridine and pyridine-2,6-dicarboxylic acid, respectively) have been synthesized in normal condition in good yield and characterized with routine methods such as melting point, elemental analyses, IR, UV as well as structure determination by single crystal x-ray diffraction. The obtained data show that the anionic complex contained two almost perpendicular tridentate fully deprotonated (pydc)²⁻ with distorted octahedron geometry around Cr(III). The coordination mode for carboxylate group of (pydc)²⁻ can be recognized by infrared spectroscopy, too. The difference between symmetric and asymmetric stretching frequencies related to COO⁻ is shown that carboxylate group act as monodentate.



Reference

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