

NQR Investigation of Intercalates and Complexes of Cadmium and Lead Iodides with Pyridine, Aniline, and Piperidine

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¹²⁷I and ¹⁴N NQR have been investigated in two cadmium iodide – pyridine compounds, the intercalate CdI₂·5.9 pyridine and the CdI₂Py₂ complex. In the intercalate, iodine is mainly ionic and nitrogen like in pure pyridine; in the complex, iodine exhibits 30% covalency while nitrogen, coordinated to the central cadmium atom of the complex, and presents coupling constants e^2Qq and η smaller than in pure pyridine. The difference between the two compounds is also revealed by the thermal coefficient of the quadrupole coupling constants and the relaxation. Results on the other title compounds are also given.

Key words: Cadmium Iodide; Layered Structure; Intercalation; Pyridine; Nitrogen-14 NQR.