Excited-state Structure of a Platinum Complex by X-ray Analysis

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Irradiating a crystal of \([\text{NiCl}_2]_2[\text{Pt}(\text{POP})][\text{POP}]\)
(pop = pyrophosphate) with a xenon lamp, the structure was analyzed by X-rays at low temperatures. The unit-cell volume and the Pt–Pt distance became significantly smaller than the corresponding ones without irradiation. The Pt–Pt bond shortening is due to the formation of the excited molecules in the crystal, although the amount of the excited molecules may be about 5%.