Photolysis of Naphthol Green B in Aqueous Solution. Photoreduction of Fe(III) Induced by Ligand-to-Metal Charge Transfer Excitation

Horst Kunkely and Arnd Vogler

Institut für Anorganische Chemie, Universität Regensburg, D-93040 Regensburg, Germany

Reprint requests to Prof. Dr. A. Vogler.
E-mail: Arnd.Vogler@chemie.uni-regensburg.de

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The intense long-wavelength absorption of Naphthol Green B at $\lambda_{max} = 712$ nm is assigned to a ligand-to-metal charge transfer (MLCT) transition. LMCT excitation of the complex in aqueous solution leads to the reduction of Fe(III) to Fe(II) with a quantum yield of $\phi = 1.14 \times 10^{-3}$ at $\lambda_{irr} = 577$ nm.

Key words: Photochemistry, Charge Transfer, Iron Complexes, Naphthol Green B