

relative fluorescence intensities are as follows: Y, 1.00; Sm, 0.10; Gd, 0.11; Yb, 0.06; Lu, 0.09.<sup>12</sup> This tendency might result from an inner heavy atom effect.

The RQY of the MV<sup>•+</sup> radical was affected by the kinds of the central metal ions as follows: Y, 1.00; Sm, 0.50; Gd, 0.44; Yb, 0.22; Lu, 0.79.<sup>13</sup> As described above, the intersystem crossing is facily performed by spin-orbit coupling on the central metal

ion. However, in the case of the Sm(III), Gd(III), or Yb(III) ion, the energy transfer from the excited triplet state of the phthalocyanine ring to the excited state of the metal center might occur probably due to the lower energy levels (<5000 cm<sup>-1</sup>) of f orbitals in the metal compared with that (ca. 8000 cm<sup>-1</sup>) of the excited triplet state of the phthalocyanine,<sup>14,15</sup> resulting in the decrease of the quantum yield.

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- (11) The relative quantum yield is estimated as a value relative to that in methanol. Those for the effects of MVCl<sub>2</sub> concentrations and central metal ions are also estimated as values relative to the largest one in the series, respectively.
- (12) The fluorescence intensities at 674 nm are estimated as values relative to the largest one of the PcYAcO complex. If the intensity of the PcYAcO complex is compared with that of the PcZn complex (its fluorescence quantum yield in Me<sub>2</sub>SO is 0.3),<sup>4b</sup> the quantum yield of the PcYAcO complex was estimated to be 0.15 in Me<sub>2</sub>SO.
- (13) To compare the quantum yield for the PcYAcO complex with that for the well-characterized PcZn complex,<sup>4b</sup> the RQY for the PcYAcO complex relative to that for the PcZn complex was measured to be 0.16 in the solvent mixture of Me<sub>2</sub>SO and H<sub>2</sub>O (9:1 v/v).

- (14) Kapinus, E. I.; Tarusina, V. N.; Dilung, I. I. *High Energy Chem. (Engl. Trans.)* **1979**, *13*, 302.
- (15) Vincett, P. C.; Voigt, E. M.; Rieckhoff, K. E. *J. Chem. Phys.* **1971**, *55*, 4231.

## Additions and Corrections

1989, Volume 28

**R. Gerald Keil,\* David W. Johnson, Mark A. Fryling, and James F. O'Brien:** Investigation of Lithium-Water Interactions in Acetonitrile Solutions Using Proton Nuclear Magnetic Resonance, Raman, and Infrared Spectroscopies and Extended Hückel Molecular Orbital Calculations.

Page 2766. In the Molecular Orbital Calculations section, line 11 should read "is due to the  $\sigma$ -bonding interaction." Lines 14 and 15 should read "where the  $\sigma$ -donor orbital is slightly bonding."—R. Gerald Keil

**Novelette Sadler, Susannah L. Scott, Andreja Bakac,\* James H. Espenson,\* and M. S. Ram:** Effect of Steric Crowding on the Rates of Reactions of a Nickel(I) Tetraaza Macrocyclic with Organic Halides and Hydroperoxides.

Page 3952. The caption to Figure 1 should read as follows: Structural formulas of (a) Ni(dmc) and (b) *R,S,R,S*-Ni(tmc).—Andreja Bakac