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A SEARCH FOR NEW PHOTOPHYSICS AND PHOTOCHEMISTRY WITH METAL COMPLEXES

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Ruthenium(II) polypyridine complexes are widely known class of luminophores with diverse applications ranging from lighting and solar energy conversion to phototherapy and synthetic photochemistry. The low-spin $4d^6$ valence electron configuration of Ru^{II} combined with energetically low-lying π -antibonding orbitals on the polypyridine ligands are the key to the favorable photophysical and photochemical properties of this compound class. Mo^0 is isoelectronic to Ru^{II} and can be stabilized by diisocyanide chelate ligands,^{1,2} resulting in complexes that exhibit similar metal-to-ligand charge transfer (MLCT) luminescence and photo-reactivity.^{3,4} The photophysical properties and photochemical applications of new Mo^0 and Cr^0 diisocyanide complexes will be discussed against the background of related research on photoactive Fe^{II} complexes.^{5,6}

Referencias Bibliográficas

- 1) Nagoshi, K., Yamashita, S., Yagi, M., Kaneko, M., *J. Mol. Catal. A Chem.*, **1999**, 144, 71-76.
- 2) Sens, C., Romero, I., Rodríguez, M., Llobet, A., Parella, T., Benet-Buchholz, J., *J. Am. Chem. Soc.*, **2004**, 126, 7798-7799.