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PHOTOLUMINESCANT PART FOR MANUSCRIPT OF LORACARBEF AND ITS VARIOUS COMPLEXES

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This research concentrates on the preparation, characterization and the photoluminescence properties of a loracarbef ligand and its Cu^{2+}, Co^{2+}, Fe^{2+} and Ru^{2+} complexes. The loracarbef ligand and the resulting metal complexes gave intense emissions (where λ_{max} = 376 nm) upon irradiation by Ultra-Violet light. The photoluminescence quantum yields and long excited-state lifetimes of the ligand and its complexes were calculated. The loracarbef ligand has photoluminescence quantum yields 52% and long excited-state lifetimes of 4.88 ns. The photoluminescence intensities and quantum yields of metal complexes dramatically reduced with respect to that of the loracarbef ligand upon complexation with various metals. This novel compound and its complexes are of interest as organic emitting material for electroluminescent devices.