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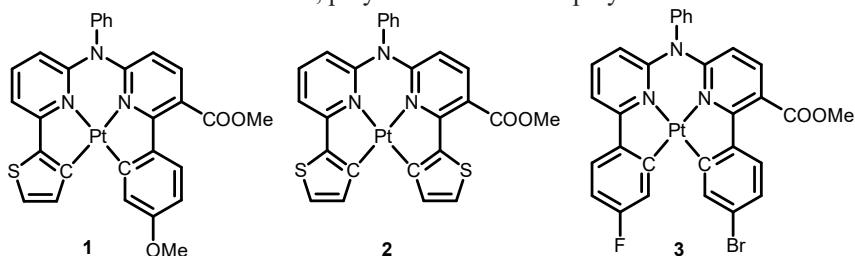
# Photophysical Properties of C<sup>N</sup>\*N<sup>N</sup>\*C-cyclometalated Platinum(II) Complexes

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Cyclometalated platinum(II) complexes are organometallic compounds that include chelating ligands forming at least one carbon-metal covalent bond. The development of novel materials based on cycloplatinates, which are able to efficiently emit from an excited state with formally triplet character, is an intriguing field of scientific research. Owing to their rich photophysical properties, such materials have been successfully used in the design of nanoscale sensors, optoelectronic devices, smart materials and bioimaging agents [1]. The tendency of cycloplatinates to form molecular assemblies due to the flat geometry, allowing efficient "axial" and "non-axial" intermolecular non-covalent interactions, is attractive [2]. These interactions lead to a change in the nature of the radiative excited state with a red shift of the photoemission.

Herein we report the synthesis and photophysical properties of a series of C<sup>N</sup>\*N<sup>N</sup>\*C-cyclometalated square-planar Pt-complexes 1-3 (Scheme 1). Their emission and excitation spectral profiles, quantum yields, and lifetime of excited state were studied in solution, polymer matrix and in polymeric micelles.



*Scheme 1. Structure of complexes 1-3.*

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