



**PHOTOLUMINESCANT PART FOR MANUSCRIPT OF  
8-(2-AMINO-2-PHENYL-ACETYL) AMINO-4-CHLORO-7-OXO- 6-AZABICYCLO[4.2.0]  
OCT-4-ENE-5-CARBOXYLIC ACID AND ITS VARIOUS COMPLEXES**

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This study focuses on the preparation, characterization and the optical properties of a 8-(2-amino-2-phenyl-acetyl) amino-4-chloro-7-oxo- 6-azabicyclo[4.2.0] oct-4-ene-5-carboxylic acid ligand and its Zn<sup>2+</sup>, Cd<sup>2+</sup>, Ni<sup>2+</sup>, Pd<sup>2+</sup> and Pt<sup>2+</sup> complexes. The 8-(2-amino-2-phenyl-acetyl) amino-4-chloro-7-oxo- 6-azabicyclo[4.2.0] oct-4-ene-5-carboxylic acid ligand and the resulting metal complexes gave an intense emission (where  $\lambda_{\max} = 376$  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 8-(2-amino-2-phenyl-acetyl) amino-4-chloro-7-oxo- 6-azabicyclo[4.2.0] oct-4-ene-5-carboxylic acid ligand has a photoluminescence quantum yield of 52% and long excited-state lifetime of 4.88 ns. The photoluminescence intensities and quantum yields of the metal complexes dramatically reduced with respect to that of the 8-(2-amino-2-phenyl-acetyl) amino-4-chloro-7-oxo- 6-azabicyclo[4.2.0] oct-4-ene-5-carboxylic acid ligand upon complexation with various metals. This novel compound and its complexes are of interest as organic emitting material for electroluminescent devices.