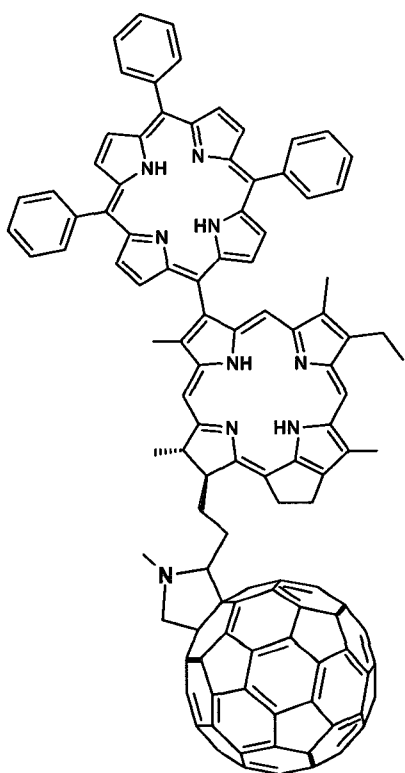


# THE SYNTHESIS AND SPECTRAL PROPERTIES OF PORPHYRIN(P)-CHLORIN(C)-FULLERENE(C60) TRIAD AND ITS POTENTIAL FOR PDT

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Understanding the factors which govern the efficiency of charge separation steps in Photosynthetic Reaction Center has led to the development of many synthetic systems. Recently, the interaction of fullerenes (C<sub>60</sub>) with a variety of covalently attached chromophores has been investigated widely.

A molecular triad consisting of a chlorophyll (C) covalently linked to a porphyrin (P) and a fullerene (C<sub>60</sub>) has been prepared and studied to investigate multiple photoinduced electron transfer pathway. In its triad, a chlorin moiety is directly bounded at its 3-position to the 5-position of 10,15,20-triphenyl porphyrin and fullerene(C<sub>60</sub>) is attached to 17-position of chlorin's propionic methyl ester moiety by pyrrolidine spacer. The absorption spectra and electrochemical measurements indicate that there are strong interaction in these chromophores.

This compound is interested as a model of photosynthetic reaction center as well as a potential photosensitizer for Photodynamic therapy (PDT)