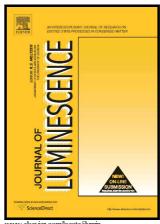
## Author's Accepted Manuscript

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Synthesis, characterization, photophysical, and photochemical properties of

novel zinc(II) and indium(III) phthalocyanines containing 2-phenylphenoxy

units

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**ABSTRACT** 

The synthesis of highly soluble and non-aggregated peripherally/non-peripherally Zn and

In(OAc) phthalocyanines was achieved by 3-/ and 4-(2-phenylphenoxy)phthalonitrile as

starting materials. The novel compounds were characterized by elemental analyses, FT-

UV-vis and MALDI-TOF mass spectroscopic techniques. Additionally,

photophysical, photochemical and spectral properties of the phthalocyanines were

reported. Especially, the indium(OAc) phthalocyanines showed good singlet oxygen

quantum yields in DMSO and they can be appropriate candidates as Type II

photosensitizers in photodynamic therapy (PDT) applications.

Keywords: Phthalocyanine; 2-Phenylphenol; Photochemical; Photophysical; fluorescence;

singlet-oxygen

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1. INTRODUCTION

Phthalocyanine (Pc) is a macrocyclic and tetramer molecule, which is a planar conjugated

system of  $18\pi$  electrons exhibiting aromatic behavior, formed of four isoindoline units. The

particular electronic delocalization of the  $18\pi$  system gives rise to outstanding electronic and

unconventional physical properties, and high chemical and thermal stability. Due to the

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