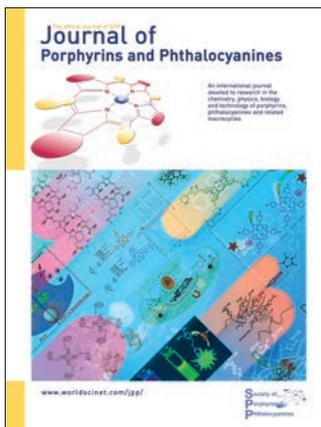


About the Cover



The cover shows a montage of the science presented in the current issue.

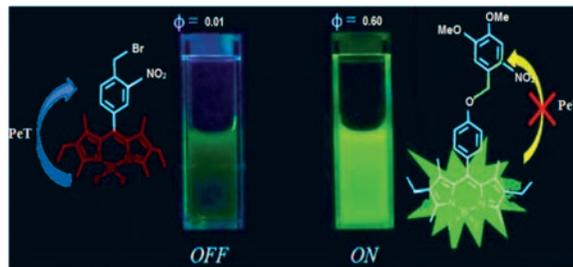
Articles

pp. 1–7

Synthesis and UV-irradiation of photocaged nitrobenzyl-BODIPY derivatives

Sherif Shaban Ragab*

Two different photocaged 2-nitrobenzyl-BODIPY derivatives were designed. The photochemical and photophysical properties of the two constructs were studied and their fluorescence quantum yields were determined. Ultraviolet irradiation of the two photocaged BODIPYs demonstrated a twofold fluorescence enhancement accompanying uncaging of the BODIPY with a direct attached phototrigger while the second switchable dyad with a phenoxy linker retained its emissive behavior which was essentially unaltered.

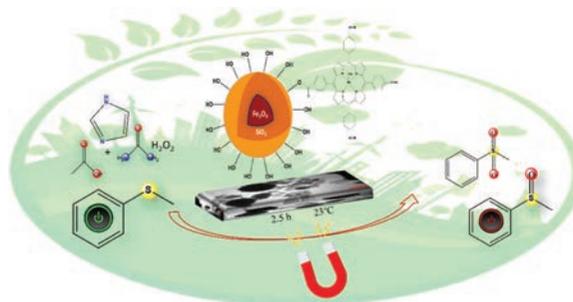


pp. 8–18

Surface decorated magnetic nanoparticles with Mn porphyrin as an effective catalyst for oxidation of sulfides

Saeedeh Shokoohi and Saeed Rayati*

A manganese porphyrin complex was immobilized covalently onto the surface of silica-coated magnetic nanoparticles. The magnetically separable nanocatalysts were fully characterized and utilized for the oxidation of sulfides with urea hydrogen peroxide in the presence of acetic acid and imidazole. The simplicity of the separation by an external magnet and reusability of the catalyst are beneficial aspects of the reported nanocatalyst.

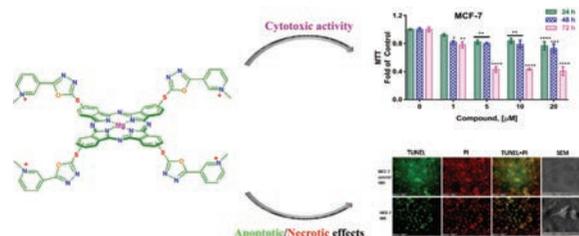


pp. 65–77

New water soluble magnesium phthalocyanine as a potential anticancer drug: Cytotoxic and apoptotic effect on different cancer cell lines

Ebru Yabaş*, Serap Şahin-Bölükbaşı and Zeynep Deniz Şahin-İnan

A new water-soluble magnesium phthalocyanine compound was synthesized, characterized and investigated for cytotoxic activity by using (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) cell viability assay on human breast cancer cells (MDA-MB-231, MCF-7), human prostate cancer cells (PC-3) and human healthy lung fibroblast cells (WI-38). The results showed that the compound had concentration- and time-dependent cytotoxic activity against cancer cells and lower toxicity against WI-38 healthy cells at 48 and 72 hours. The apoptotic and necrotic effect of the compound was also examined using TUNEL and PI staining, respectively.

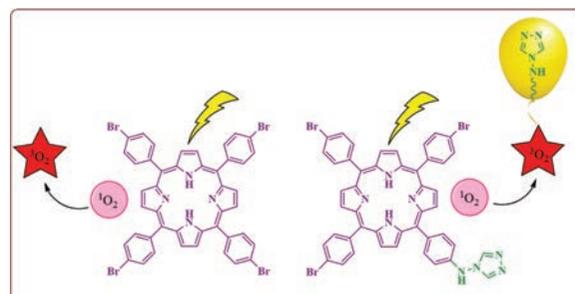


pp. 78–83

Asymmetrically meso-substituted porphyrin derivative containing the triazole group: Synthesis, characterization and photo-physicochemical properties

Kevser Harmandar, Gülenay Tunç, Tuğba Küçük, Ayşe Gül Gürek and Devrim Atilla*

A novel asymmetrical *meso*-substituted porphyrin derivative containing one triazole group to enhance the anticancer activity of the molecule and three bromophenyl groups to improve photochemical properties was synthesized and characterized. Photophysical and photochemical properties of this asymmetric porphyrin derivative (A_B) and the symmetric derivative (B₄) were investigated in THF.



pp. 84–89

Mechanochemical synthesis of freebase and metal corroles

Adrian Dorniak, Michael Haas, Oliver Brüggemann, Ian Teasdale and Wolfgang Schöfberger*

We describe the first mechanochemical synthesis procedures to obtain freebase and metal corroles in a ball mill. With the mechanochemical approach we could shift the EcoScale obtained from common synthetic procedures to significantly more positive values while the E-factor for the mechanochemical copper insertion was significantly lowered.

