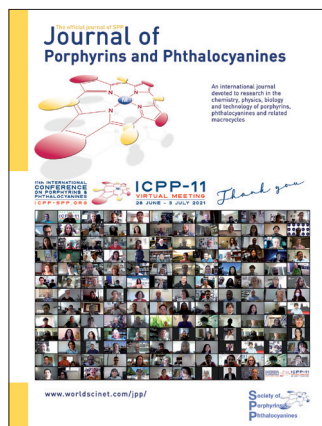


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About the Cover



The 11th International Conference on Porphyrins and Phthalocyanines (ICPP-11) 28 June–3 July, 2021 took the form of a virtual meeting arising from the twice postponed physical conference due to COVID-19 originally planned for Buffalo, New York, USA in June 2020.

The cover image is a montage of Zoom® video stills of consenting participants in order to create a partial group photo of the ICPP-11 virtual meeting.

A considerable and respectful 441 participants from 45 different countries contributed for a total of 476 abstracts, which warmed the heart, especially during these difficult times.

A very big thank you to you all for your patience and participation from all the editing team at the JPP Office and we look forward to seeing you all in Madrid 2022 for the reprise of the physical meeting.

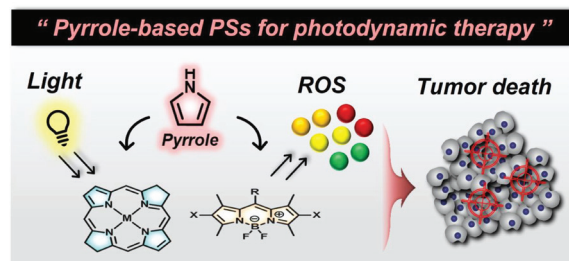
Review

pp. 773–793

Pyrrole-based photosensitizers for photodynamic therapy — a Thomas Dougherty award paper

Gabriela I. Vargas-Zúñiga, Hyeong Seok Kim, Mingle Li, Jonathan L. Sessler* and Jong Seung Kim

Photodynamic therapy (PDT) is a therapeutic modality that uses light to treat malignant or benign diseases. A photosensitizer, light, and oxygen are the three main components needed to generate a cytotoxic effect. Herein we review pyrrole-based photosensitizers that have been studied for possible use in PDT.



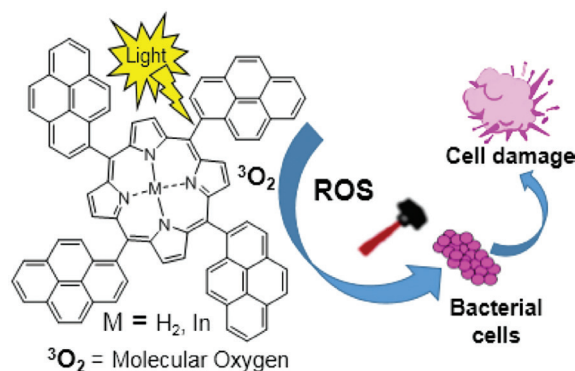
Articles

pp. 794–799

Synthesis, photophysical properties and photodynamic antimicrobial activity of meso 5,10,15,20-tetra(pyren-1-yl)porphyrin and its indium(III) complex

Jackline Khisa, Solomon Derese, John Mack, Edith Amuhaya* and Tebello Nyokong

5,10,15,20-tetra(pyren-1-yl)porphyrin (H_2TPyP) and its indium(III) complex (InCITPyP) were successfully synthesized and characterized. A Soret band of InCITPyP showed a 12 nm red shift when compared to H_2TPyP . The fluorescence quantum yield of InCITPyP was lower than that of H_2TPyP due to the heavy atom effect of In. InCITPyP showed better photoantimicrobial activity compared to the free-base H_2TPyP when tested against *Staphylococcus aureus*.

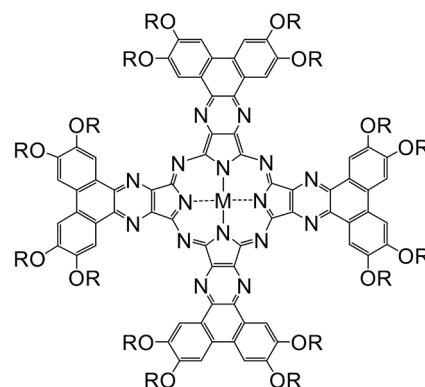


pp. 843–857

Discotic liquid crystals of transition metal complexes 59[†]: Parity effect of the number of *d*-electrons on the columnar mesomorphism and homeotropic alignment of 1,4-diazatriphenylenocyaninato metal(II) complexes

Masahiro Shichi, Mikio Yasutake and Kazuchika Ohta*

20 super-discotic metallomesogens were synthesized based on a largely expanded π -conjugated macrocycle of 1,4-diazatriphenylenocyaninato metal(II) complex, $(C_nO)_{16}TzM$ ($M = Co, Ni, Cu, Zn$; $n = 8\sim 16$). The $Co(II)[d^7]$ and $Cu(II)[d^9]$ complexes exhibit a Col_{tet} mesophase accompanied by homeotropic alignment for $n = 8\sim 14$, whereas the $Ni(II)[d^8]$ and $Zn(II)[d^{10}]$ derivatives do not. The parity effect originates from the number of *d*-electrons in the central metal ion.

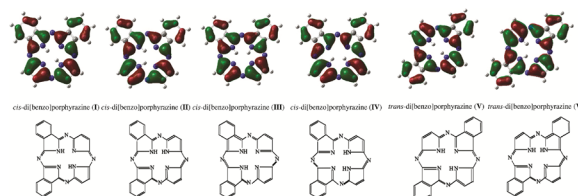


pp. 858–865

(*H,H*)-Isomerism of *cis*- and *trans*-di[benzo]porphyrazines: Quantum chemical modeling within the framework of the DFT method

Oleg V. Mikhailov* and Denis V. Chachkov

A quantum-chemical calculation of key structural parameters for molecular structures of (*H,H*)-isomeric (*NNNN*)-donoratomic macrocyclic tetradentate ligands, namely *cis*-di[benzo]porphyrazines (4 isomeric forms) and *trans*-di[benzo]porphyrazines (2 isomeric forms), was carried out using density functional theory (DFT) B3PW91/TZVP.

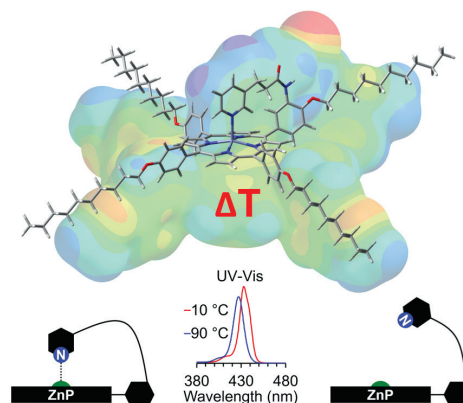


pp. 866–877

A temperature switchable pyridyl-zinc(II) side arm porphyrin with functionality for surface immobilisation

Rhys B. Murphy and Martin R. Johnston*

A side arm porphyrin appended with decyl chains undergoes reversible switching in solution, laying the foundation for surface mounted switchability.



pp. 878–884

Controlled synthesis of metal-organic frameworks with skeletal and pore-filling iron(III) porphyrins for electrochemical oxygen reduction

Yunlong Zhang, Hongsa Han, Jiaqi Qin, Na Zhang, Guanghui Zhang and Yujiang Song*

Fe porphyrins have been employed to modify both the pores and the skeleton of metal-organic frameworks, which were further pyrolyzed to synthesize atomically dispersed Fe–N–C electrocatalysts with effective activity and durability toward oxygen reduction reaction. Furthermore, the Fe–N–C sites may exist in the configuration of distorted octahedral $(O/N)_2-Fe^{III}-N_4$.

