Selective synthesis and biological activity of triazine-porphyrins as potential anti-cancer agents
Shen-Chu Xiao, Chao-Zhou Liu, Wu-Kun Liu, Wen-Zhong Xie, Wei-Ying Lin, Guo-Fang Jiang and Can-Cheng Guo

Ten triazine-porphyrins were selectively synthesized, their cytotoxic activity were evaluated in vitro against MCF-7. All compounds showed similar activity against MCF-7 cells when compared to 5-fluorouracil and hematoporphyrin in the absence of light.

Synthesis of water-soluble conducting polypyrrole with transition-metal tetrasulfonated porphyrins
Mohammad Reza Nabid*, Mitra Shamsianpour, Roya Sedghi, Samira Osati and Nasser Safari

A novel catalytic route for the synthesis of a water-soluble and electrically conducting polypyrrole (PPy) in the presence of sulfonated polystyrene (SPS) is presented. The formation of PPy was confirmed by UV-vis and FT-IR spectroscopy. Cyclic voltammetry showed that the synthesized polymer has convenient electroactivity.

In the 1950s, Linstead and Elvidge presented the synthesis of phthalocyanine analogs where one or two isoindoline rings are replaced with benzene rings. In this report, we present the first comprehensive structural study of these two hemiporphyrine macrocycles: dicarbahemiporphyrine (dcHp) and benzophthalocyanine (bzPc).
CONTENTS

pp. 133–141
DDT-reductive dechlorination catalyzed by cobalt phthalocyanine, 2,3- and 3,4-tetrapyridoporphyrazine complexes in non-aqueous media
Jianguo Shao, Abegayl Thomas, Baocheng Han* and Christopher A. Hansen

Cobalt phthalocyanine and two tetrapyrido-porphyrazine complexes were examined in three non-aqueous media for their catalytic properties in the reductive dechlorination of DDT to generate DDD, DDE and DDMU.

pp. 142–149
Photoelectrochemical characterization of electrodeposited ZnO thin films sensitized by octacarboxymetallophthalocyanine derivatives
Mopelola Idowu, Thomas Loewenstein, Andreas Hastall, Tebello Nyokong and Derck Schlettwein*

Hybrid thin films of electrodeposited crystalline ZnO were modified by different octacarboxy metallophthalocyanines in an established two-step procedure. Homogeneously blue or green thin films were formed. The photoelectrochemical characteristics of the electrodes were studied by time-resolved photocurrent measurements. Zinc octacarboxyphthalocyanine showed one of the largest quantum efficiencies in the sensitization of ZnO obtained so far with phthalocyanine-type sensitizers on nanostructured ZnO films.

pp. 150–157
Alkynyl corroles: synthesis by Sonogashira coupling reaction and the physicochemical properties

Alkynyl corroles were synthesized from iodidphenyl corrole precursor by using Sonogashira coupling reaction with or without the presence of copper(I) iodide co-catalyst. The alkynyl group on corrole macrocycle has a significant effect on the photophysical and electrochemical properties of free-base and metal corrole derivatives.

pp. 158–165
A manganese porphyrin-based sensor for flow-injection potentiometric determination of thiocyanate
Saeed S. Beheshti, Fatemeh Sohbat and Mohammad K. Amini*

Manganese(III) tetraphenylporphyrin based sensors have been used for batch and flow-injection potentiometric determination of thiocyanate with low detection limit and high selectivity.
Heteronuclear lanthanide-containing complexes on the base of modified porphyrins and their luminescent properties
Natalya Rusakova, Nikolay Semenishyn and Yuriy Korovin*

The paper describes spectral-luminescent characteristics of the complexes M(ATPP) Ln(L) (Ln = Yb, Lu; M = Co, Ni, Zn, Cu, 2H; ATPP - porphyrin; L = aminopolycarboxylic acid). Luminescence studies showed that porphyrin fragment of ligands absorbed the visible light and transferred the energy to ytterbium ion emitting in the near IR-region. Efficiency of the 4f-luminescence has been determined for d-f-metal containing porphyrin complexes in comparison with the mononuclear Yb-containing complexes.

The structures of free-base carbahemiporphyrazines
Saovalak Sriphothongnak, Natalie V. Barone, Anıl Çetin, Ruoqiu Wu, William S. Durfee and Christopher J. Ziegler

In this report we present an X-ray crystallographic study of two N-deficient phthalocyanine analogs: dicarbahemiporphyrazine (1) and benzophthalocyanine (2). Both compounds can be isolated in multiple crystal forms, five different solvated forms of macrocycle 1 and four structures of macrocycle 2 are presented.

Light-induced hole transfer in a hypervalent phosphorus(V) octaethylporphyrin bearing an axially linked bis(ethylenedithio)tetrathiafulvalene
Prashanth K. Poddutoori, Ann Dion, Songjie Yang, Melanie Pilkington, John D. Wallis and Art van der Est*

The synthesis and characterization of axially linked electron rich bis(ethylenedithio)tetrathiafulvalene to the electron poor hypervalent phosphorus(V) porphyrin are reported. Excited state properties were investigated with various spectroscopic methods, including steady-state, time-resolved fluorescence and also transient electron paramagnetic resonance spectroscopy. Excited state and electrochemical data suggest that hole transfer occurs from tetrathiafulvalene to excited state porphyrin.

Discotic liquid crystals of transition metal complexes 42: the detailed phase structures and phase transition mechanisms of two Cub mesophases shown by discotic liquid crystals based on phthalocyanine metal complexes
Hidetomo Mukai, Miho Yokokawa, Masahiro Ichihara, Kazuaki Hatsusaka and Kazuchika Ohta*

A series of sandwich type of phthalocyanine-based metal complexes, 2,3,9,10, 16,17,23,24-octakis(3,4-dialkoxyphenoxy)phthalocyaninate]lanthanoid(III) were synthesized. They exhibited two thermotropic cubic mesophases. We revealed the detailed symmetry and phase structure of each of these two cubic mesophases.