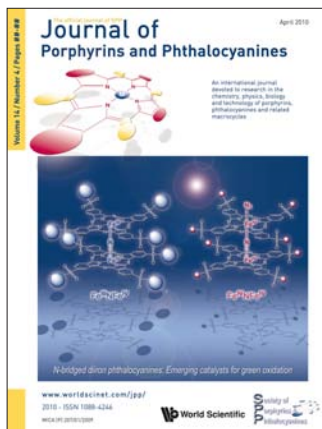


About the Cover



Ümit İşci, Fabienne Dumoulin, Vefa Ahsen* and Alexander B. Sorokin*
pp. 324–334

The iron electronic state in N-bridged diiron phthalocyanines depends on the size of the peripheral alkylsulfonyl substituents, possibly influencing conformation of the diiron complexes.

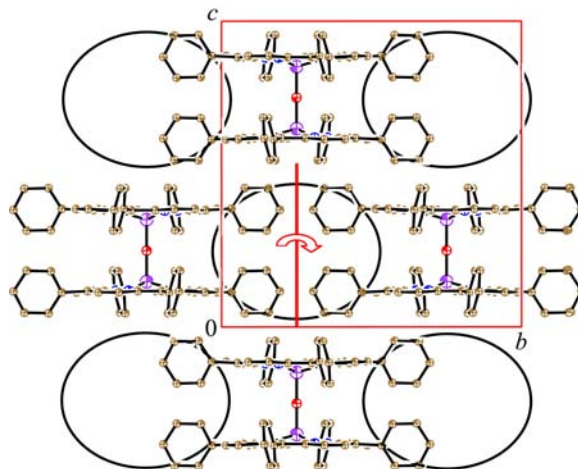
Articles

pp. 293–297

Transition from free rotation of C_{70} molecules to static disorder in the molecular C_{70} complex with covalently linked porphyrin dimers: $\{(Fe^{III}TPP)_2O\} \cdot C_{70}$

Dmitri V. Konarev*, Salavat S. Khasanov and Rimma N. Lyubovskaya

Fullerene C_{70} and $(Fe^{III}TPP)_2O$ dimers form molecular complex $\{(Fe^{III}TPP)_2O\} \cdot C_{70}$ in which the transition from free rotation to static disorder of C_{70} molecules is observed.

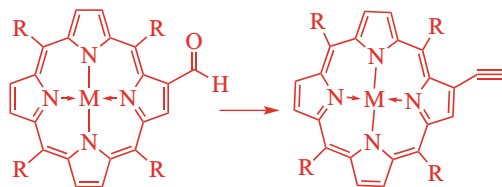


pp. 298–304

Halo-Wittig and zirconium promoted synthesis of conjugated metalloporphyrin dimers

Muhammad Yaseen*, Mukhtar Ali, Munawar Ali Munawar, Muhammad Salim, Muhammad NajeebUllah, Irshad Khokhar and Muhammad H. Sayyad

Zirconocene-promoted bromomethylenation of 2-formyl metalloporphyrins is described. Bromomethylenated products were dehydrobrominated and the products were self dimerized to get metalloporphyrin dimers.

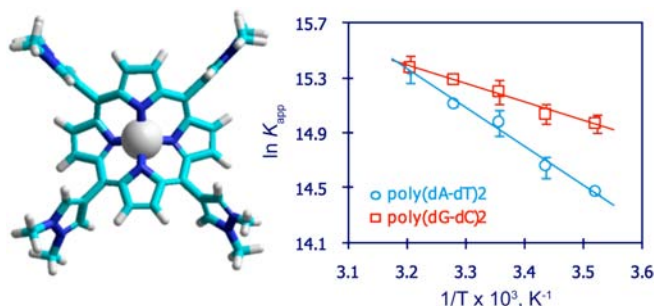


pp. 305–313

Binding of nickel(II) tetrakis(dimethylpyrazolium-4-yl)porphyrin to poly(dG-dC)₂ and poly(dA-dT)₂

Daryono H. Tjahjono*, Suhendar, Benny Permana, Naoki Yoshioka and Hidenari Inoue*

Nickel(II) tetrakis(pyrazolium-4-yl)porphyrin (NiPzP) is intercalated into poly(dG-dC)₂ but outside bound to the major groove of poly(dA-dT)₂. The binding process of NiPzP to both polynucleotides is endothermic and entropically driven.

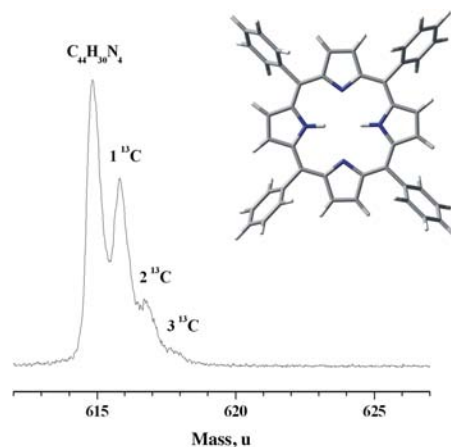


pp. 314–323

The spectroscopy of jet-cooled porphyrins: an insight into the vibronic structure of the Q band

Joseph M. Beames, Timothy D. Vaden and Andrew J. Hudson*

The resonant 2-photon ionization (R2PI) spectrum for *meso*-tetraphenylporphyrin has been measured under isolated conditions, *in vacuo*, using both thermal and laser desorption of the polycrystalline compound. The gas-phase molecules are cooled in a supersonic expansion of an inert gas, and the photoions are collected in a time-of-flight mass spectrometry. The peak positions and intensities in the R2PI spectrum provide an insight into the vibrational structure of the Q band.

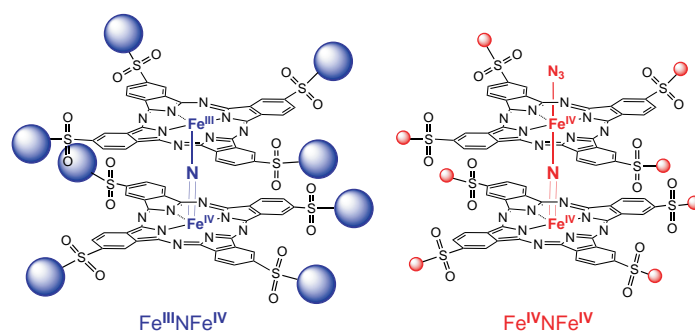


pp. 324–334

Preparation of N-bridged diiron phthalocyanines bearing bulky or small electron-withdrawing substituents

Ümit İşci, Fabienne Dumoulin, Vefa Ahsen* and Alexander B. Sorokin*

The peripheral substituents' bulkiness of N-bridged diiron phthalocyanines has an effect on the electronic state of the two N-bridged iron atoms: Fe^{IV}-N-Fe^{IV} for small substituents, Fe^{III}-N-Fe^{IV} for big ones.

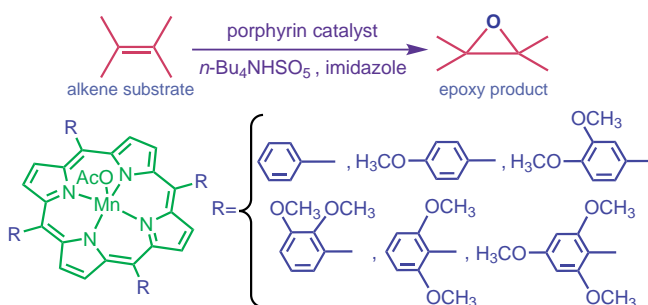


pp. 335–342

Effects of methoxy substituted metalloporphyrins in catalytic alkene epoxidation by *n*-Bu₄NHSO₅

Amineh Aghabali and Nasser Safari*

Different methoxy-substituted TPPMnOAc were used as catalysts for alkene epoxidation in the presence of *n*-Bu₄NHSO₅ and imidazole. Effects of the methoxy groups on the yields, electronic and steric properties, as well as the stability of catalysts were investigated. T(2,3-OMeP) PMnOAc presented considerable activity and stability. Furthermore, using solvent mixtures, steps were taken to identify the active intermediate of the catalyst in alcohols.

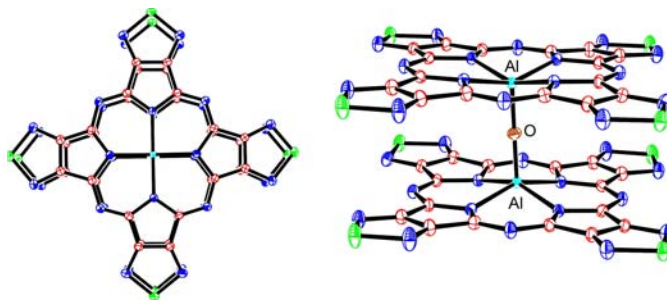


pp. 343–348

Tetrakis(thiadiazole)porphyrazines. 7. Synthesis and structure of μ -oxo-bis[tetrakis(thiadiazole)porphyrazinato-aluminum(III)]

Maria Pia Donzello*, Masato Fujimori, Yasuhito Miyoshi, Hirofumi Yoshikawa, Elisa Viola, Kunio Awaga* and Claudio Ercolani

The μ -oxo-bis[tetrakis(thiadiazole)porphyrazinato-aluminum(III)], [(TTDPzAl)₂O], was prepared and its structure solved by single-crystal X-ray work. The eclipsed position of the macrocycles within the molecule resembles that observed in the phthalocyanine analog [(PcAl)₂O]. The very short contacts (3.24 Å) between TTDPz units of adjacent molecules are in the range of those found for the previously studied mononuclear [TTDPzM] complexes.

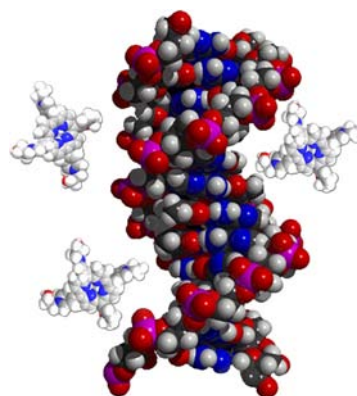


pp. 349–353

DNA damage and anti-tumor activity induced by Zn, Ag and Co containing *meso*-tetra(4-N-oxyethylpyridyl)porphyrins *in vivo*

Nelli H. Karapetyan*, Lusya V. Torosyan, Gayane V. Ananyan and Rafael E. Muradyan

Many DNA binding porphyrins are effective pharmaceutical agents, especially in cancer therapy. Here, we have shown the apoptotic potential of the Ag- and Zn-*meso*-tetra(4-N-oxyethylpyridyl)porphyrins (AgT4OEPyP and ZnT4OEPyP) in the cancer cells.

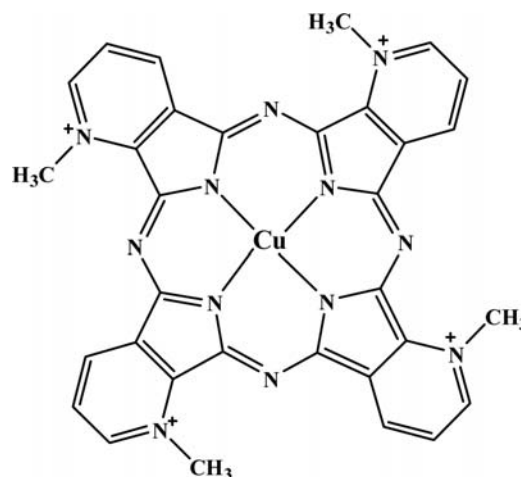


pp. 354–360

Aggregation behavior of tetrakis(N,N',N'',N'''-tetramethyl tetra-2,3-pyridino)porphyrazine copper(II) and its interaction with ct-DNA: a thermodynamic approach

Hamid Dezhampanah*, A. Khalegh Bordbar*, Zaynab Salimian and Elham Safaei

The association behavior of tetrakis(N,N',N'',N'''-tetramethyl tetra-2,3-pyridino)porphyrazine copper(II) ([Cu(II) 2,3-tmtppa]⁴⁺) was investigated in aqueous solutions at 25 °C and various ionic strengths using optical absorption and resonance light scattering (RLS) spectroscopies. The results show that [Cu(II) 2,3-tmtppa]⁴⁺ does not have any affinity for aggregation due to increasing of salt concentration and exists as monomers even in homogeneous aqueous solutions of high ionic strengths. The thermodynamic parameters of results indicate that the process of binding porphyrazine to DNA is entropy-driven and suggest that hydrophobic interactions are the main driving forces for the complex formation.

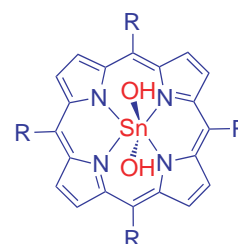


pp. 361–370

A simple alternative method for preparing Sn(IV) porphyrins

Vijayendra S. Shetti and Mangalampalli Ravikanth*

A simple and alternative method for the insertion of Sn(IV) into different porphyrin macrocycles, and their spectral and electrochemical properties are described.



R = tolyl, pyridyl, thienyl, furyl, etc.