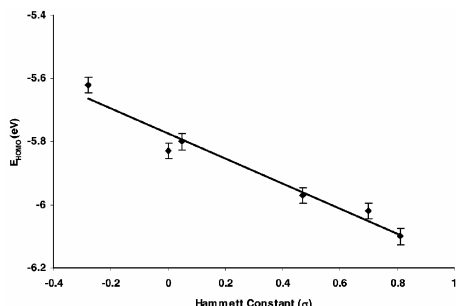
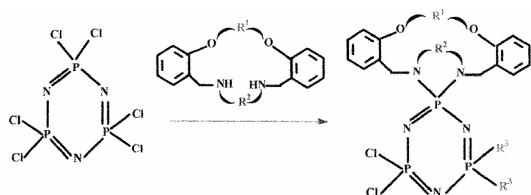


CONTENTS


Synthesis, photoluminescence and electrochemical properties of 2,7-diarylfuorene derivatives

Neeraj Agarwal, Pabitra K Nayak and N Periasamy 355–362

9,9'-bis-(alkyl)-2,7-diarylfuorene having electron withdrawing or electron donating groups on the *p*-phenyl positions were synthesized and characterized. The fluorene derivatives showed blue emission, high quantum yield and linear Hammett correlation with E_{HOMO} .

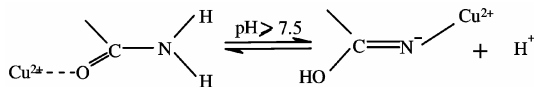


R ¹	R ²	R ³	Compound
(CH ₂) ₃	(CH ₂) ₃	Cl	4
(CH ₂) ₃	(CH ₂) ₄	Cl	5
(CH ₂) ₄	(CH ₂) ₄	Cl	6
(CH ₂) ₃	(CH ₂) ₃	C ₄ H ₈ N (pyrr)	7

Phosphorus–nitrogen compounds: Part 15. Synthesis, anisochronism and the relationship between crystallographic and spectral data of monotopic spiro-crypta phosphazenes

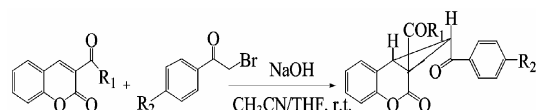
Nuran Asmafilız, Elif Ece Ilter, Zeynel Kılıç, Tuncer Hökelek and Ertan Şahin 363–376

The reactions of hexachlorocyclotriphosphazatriene, N₃P₃Cl₆, with N₂O₂-donor type coronands produce monotopic *spiro*-crypta phosphazene architectures (4, 5 and 6). The reaction of 4 with pyrrolidine gives the geminal product 7. The ³¹P-NMR spectra of 5 and 6 confirm that these compounds have anisochronism. The relationship between the endocyclic NPN bond angles and $\delta P_{(\text{spiro})}$ -shifts of the phosphorus atoms were investigated. The correlation between the $\Delta(P-N)$ (electron density transfer parameters) and the $\delta P_{(\text{spiro})}$ -shifts as well as $\Delta(\delta P)$ values was also taken into consideration.


Coordination equilibria in the complex formation of guanylurea with Cu^{II}: Formation and stability of binary Cu^{II}-guanylurea and ternary Cu^{II}-guanylurea–glycinate complexes

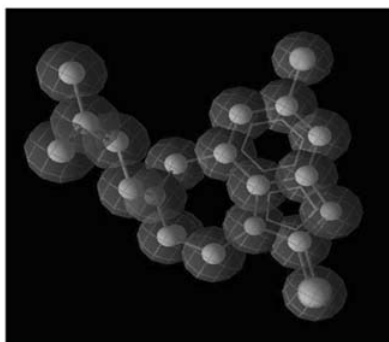
Tannistha Roy Barman and G N Mukherjee 377–390

Complex formation of guanylurea with Cu^{II} in binary and ternary systems in the presence of glycinate involves the coordination equilibria (1) with concomitant blue shift of λ_{max} of Cu^{II} with rise of pH, like the Cu^{II}-peptide complexes. Guanylurea anion provides bidentate (O=C<, =N⁻) chelation at pH ≤ 7 and (=N⁻, =N⁻) chelation, like biguanide anion at pH ≥ 7.5.


High stereoselective cyclopropanation reaction of 3-acylcoumarins with α -bromoketones at room temperature

Qin Zhao, Min Chen, Hao-Hao Hui, De-Bing She, Ming-Yu Yang and Guo-Sheng Huang 391–394

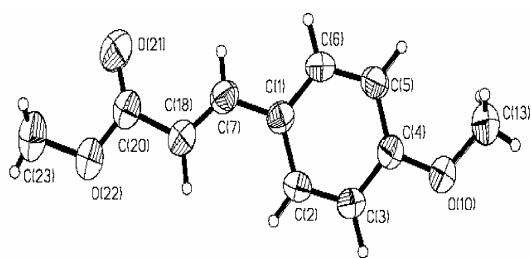
A rapid and simple method for the synthesis of cyclopropane derivatives without catalyst is reported.



Assessing ligand efficiencies using template-based molecular docking and Tabu-clustering on tetrahydroimidazo-[4,5,1-jk][1,4]-benzodiazepin-2(1H)-one and -thione (TIBO) derivatives as HIV-1RT inhibitors

Nitin S Sapre, Swagata Gupta and Neelima Sapre 395–404

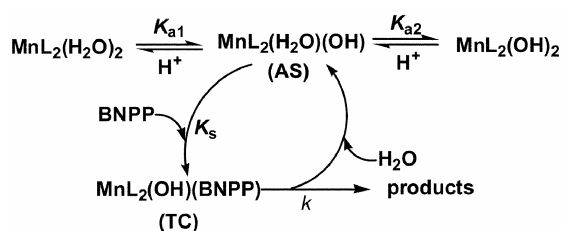
A template-based molecular docking and Tabu-clustering were performed on tetrahydroimidazo-[4,5,1-jk][1,4]-benzodiazepinone (TIBO) derivatives as HIV-1RT inhibitors.



Surface enhanced Raman spectra of the organic nonlinear optic material: Methyl 3-(4-methoxy phenyl) prop-2-enoate

D Sajan, I Hubert Joe, V S Jayakumar and Jacek Zaleski .. 405–410

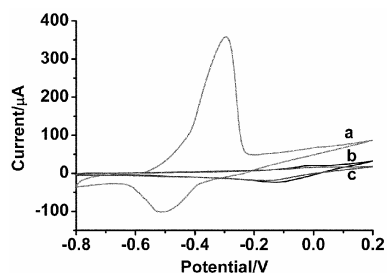
The surface geometry of Methyl 3-(4-methoxy phenyl) prop-2-enoate molecule was studied by analysis of the SERS spectra adsorbed on silver colloid surfaces. The absence of a C–H stretching vibrations and the observed C–H out-of-plane bending modes suggest that the MMP molecule may be adsorbed in a flat on orientation to the surface.



Hydrolytic cleavage of bis(*p*-nitrophenyl) phosphate by Schiff base Mn^{III} complexes containing morpholine pendants in Gemini 16–6–16 micelles

Weidong Jiang, Bin Xu, Junbo Zhong, Jianzhang Li and Fuan Liu 411–417

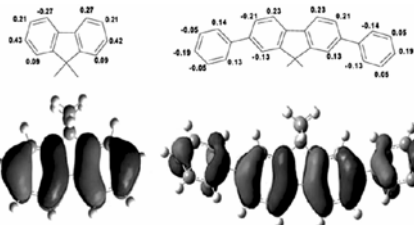
A six-order of magnitude rate enhancement was given for the hydrolysis of bis (*p*-nitrophenyl) phosphate promoted by Mn(III) catalysts with Schiff base ligands in Gemini 16-6-16 micellar solution. Especially, effects of complex structures and various surfactant micelles were evaluated in detail.



Microdetermination of human serum albumin by differential pulse voltammetry at a L-cysteine modified silver electrode

Liyuan Lu, Yanqin Zi and Hongling Wang 419–424

L-cysteine can be modified onto a silver electrode by Ag–S binding and accelerate the transfer of electron from HSA to the surface of electrode. This modified electrode can be used for the determination of HSA by DPV technique and the detection limit can be as low as 4×10^{-17} mol/L.



Cover picture: Representation of molecular orbitals of 9,9'-dimethylfluorene and 2,7-diphenyl-9,9'-dimethylfluorene. For details see the paper by Neeraj Agarwal *et al* (pp 355–362).