

CONTENTS

Volume 21 Number 12

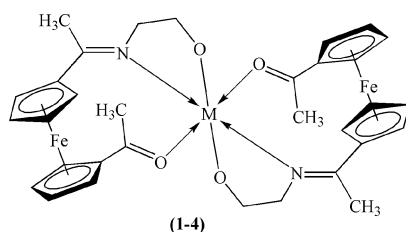
Papers published online December 2007

Section: Bioorganometallic Chemistry

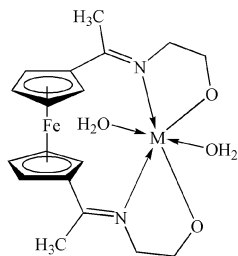
Condensation reactions of 1,1'-diacetylferrocene with ethanolamine have been investigated. The obtained compounds have been further used for their ligation and biological properties with Co(II), Cu(II), Ni(II) and Zn(II) metal ions. The synthesized compounds have been screened for their antibacterial properties against pathogenic bacterial strains e.g., *Escherichia coli*, *Pseudomonas aeruginosa*, *Bacillus subtilis*, *Staphylococcus aureus*, *Salmonella typhi* and for antifungal activity against *Trichophyton longifusus*, *Candida albicans*, *Aspergillus flavus*, *Microsporum canis*, *Fusarium solani* and *Candida glabrata* using agar-well diffusion method.

Z. H. Chohan* and M. M. Naseer
..... 1005–1012

Organometallic based biologically active compounds: synthesis of mono- and di-ethanolamine derived ferrocenes with antibacterial, antifungal and cytotoxic properties



(1-4)



(5-8)

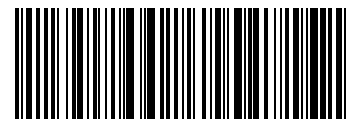
M = Co(II), Cu(II), Ni(II), Zn(II)

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Identification statement

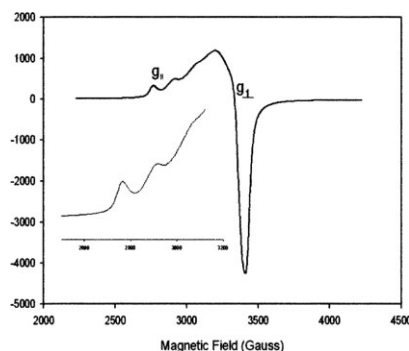
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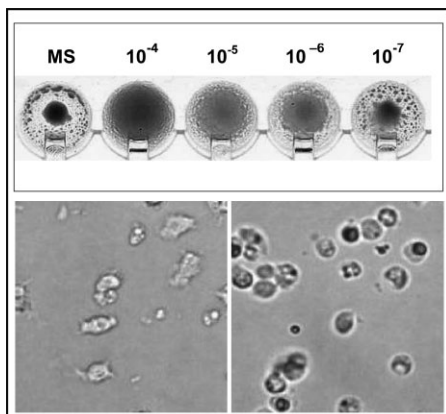
A new polyester, *poly-(ethylene oxamide-N, N'- diacetate)* (PEODA) containing glycine moiety was synthesized by the reaction of oxamide-N, N'-diacetic acid and ethylene glycol and its polymer metal complexes were synthesized with transition metal ions. The polymer metal complexes showed excellent antibacterial activities against both types of microorganisms, whereas the polymeric ligand also found to be effective but respectively least to the polymer metal complexes.



T. Ahamad, V. Kumar, S. Parveen and
N. Nishat* 1013–1021

In vitro antibacterial and anti-fungal assay of poly-(ethylene oxamide-N, N'-diacetate) and its polymer metal complexes

Methylmercury¹ sublethal concentrations affect innate immune responses of *Styela plicata* hemocytes. The phenoloxidase-dependent hemocyte cytotoxic activity toward erythrocytes, due to quinone products, as well as the phagocytic activity vs yeast are decreased. Both the responses need cell-target contacts that could be affected by methylmercury which causes changes in hemocyte shape and spreading capacity as revealed by a microplate method. The hemocyte immune responses and the micropalte test could be an additional immunotoxicology test for marine environment evaluation.

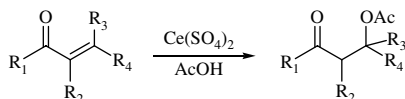


M. Cammarata, M. G. Parisi, G. Benenati,
V. Arizza, T. Cillari, D. Piazzese,
A. Gianguzza, M. Vazzana, A. Vizzini and
N. Parrinello* 1022–1028

In vitro effects of methylmercury on ascidian (*Styela plicata*) immunocyte responses

Section: Materials, Nanoscience and Catalysis

The reaction of α,β -unsaturated ketones with CS in acetic acid gave β -acetoxy ketones.



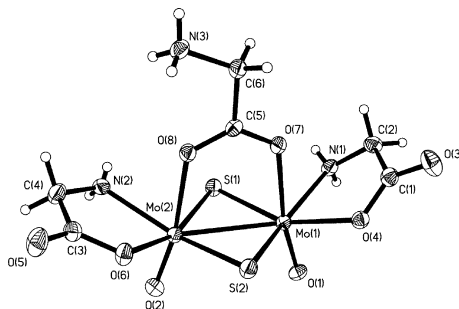
K. Itoh, T. Utsukihara, K. Funayama,
H. Sakamaki, M. Kanamori, T. T. Taka-
hashi, Y. Saitoh, M. Matsushita, L. He,
C. Hashimoto, T. Sugiyama and C. A.
Horiuchi* 1029–1032

Reaction of α,β -unsaturated ketones using cerium (IV) sulfate tetrahydrate in acetic acid

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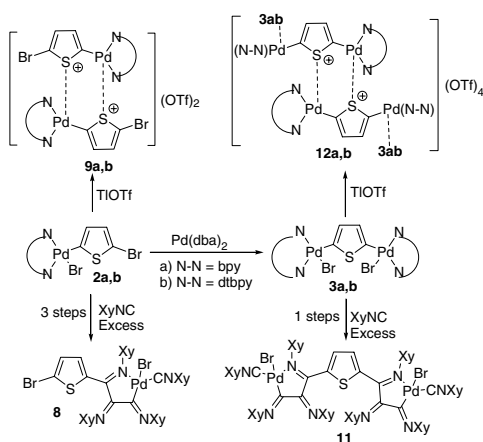
Two binuclear Mo–S complexes have been prepared by the reaction of $(\text{NH}_4)_2\text{MoS}_4$ and amino acids L (L= glycine, nitrilotriacetic acid) in ethanol–water medium at ambient temperature. They were characterized by spectroscopic analyses and by X-ray crystallography. The molybdenum atom is hexa-coordinated in each case, surrounded by two bridging sulfurs, one terminal oxygen atom as well as a nitrogen atom and two oxygen atoms from the ligands. Their catalytic activities in the reduction from C_2H_2 to C_2H_4 as well as other binuclear Mo–S–polycarboxylate complexes, a $[\text{Fe}_4\text{S}_4]$ single cubane and a chainlike Mo–Fe–S compound have been described.



J.-F. Wu, D.-M. Li*, L.-F. Cui, C.-F. Zhuang, S.-N. Song, T.-G. Wang, J.-Q. Xu*, H.-Q. Jia and N.-H. Hu
..... 1033–1040

Two novel molybdenum complexes containing $[\text{Mo}_2\text{O}_2\text{S}_2]^{2+}$ fragment: synthesis, crystal structures and catalytic studies

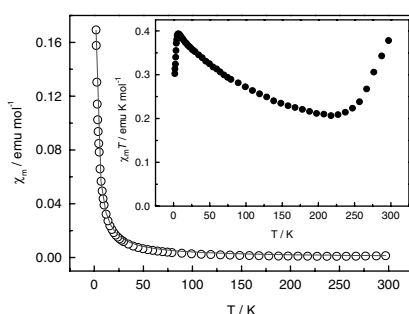
Thiophene monopalladium(II) **2a, b** and thiophene dipalladium complexes **3a, b** were formed by the reaction of bulky 2,5-dibromothiophene with molar amounts of $[\text{Pd}_2(\text{dba})_3]\cdot\text{dba}$ $[\text{Pd}(\text{dba})_2]$ in the presence of a stoichiometric amount of nitrogen donor ligands such as bpy or dtbbpy with equimolar ratio in degassed acetone under nitrogen. The complexes **2a, b** and **3a, b** were examined by insertion reactions with CO or a different molar amount of bulky isocyanides such as CNXy ($\text{Xy} = 2,6\text{-Me}_2\text{C}_6\text{H}_3$), as shown by palladium(II) complexes **8** and **11**. On the other hand, the treatment of complexes **2a, b** and **3a, b** with TiOTf ($\text{Tf} = \text{CF}_3\text{SO}_2$) in CH_2Cl_2 gave the cyclopalladate cation or palladocycle of **9a, b** and **12a, b**.



A.-S. S. H. Elgazwy* 1041–1053

Synthesis and reactivity of thiophene palladium and thiophene dipalladium complexes with unsaturated molecules

A new ion-pair complex, $[\text{NO}_2\text{BzPy}][\text{Ni}(\text{bdt})_2]$ (**1**), was synthesized and characterized. The X-ray structure analysis shows that the anions are centrosymmetric and the two non-equivalent anions form different uniform-spaced stacking pattern. The temperature dependence of magnetic susceptibilities of **1** indicate ferromagnetic behavior in the antiferromagnetic exchange system, which may arise from spin-canting.

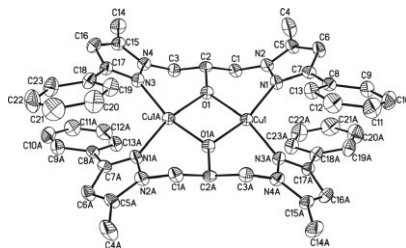


G.-X. Liu*, L.-F. Huang and X.-M. Ren
..... 1054–1058

Synthesis, crystal structure and magnetic property of a novel ion-pair nickel(III) complex containing 1,2-benzenedithiolate

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A series of dicopper(II) complexes derived from pyrazole-containing N_2O ligands were synthesized and three of them characterized by single-crystal X-ray diffraction analysis. Each compound has one inversion center located the middle of the Cu_2O_2 plane. Two of the compounds were investigated on their oxidation of 3,5-di-*tert*-butylcatechol in anaerobic conditions oxidase.



Synthesis, structural characterization and catalytic activities of dicopper(II) complexes derived from tridentate pyrazole-based N₂O ligands

Book Review	P. C. Craig 1066 <i>Inorganic structural chemistry</i>
Book Review	R. O. Jenkins 1067 <i>MALDI MS: a practical guide to instrumentation, methods and applications</i>
Book Review	A. Smith 1068 <i>N-heterocyclic carbenes in synthesis</i>
Book Review	K. Firman 1069 <i>Nanobiotechnology II: more concepts and applications</i>
Book Review	A. B. A. Boxall 1070 <i>Nanomaterials: toxicity, health and environmental issues</i>
Volume author index	1071–1074
Volume keyword index	1075–1078
Volume contents	vi–xvi