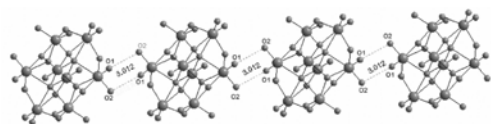


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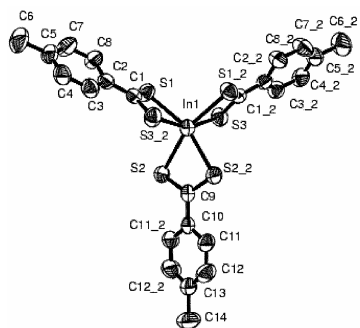
Note on plagiarism 295



Non-covalent O...O interactions among isopolyanions using a *cis*-{MoO₂} moiety by the assistance of N-H...O hydrogen bonds

T Arumuganathan, A Srinivasa Rao and Samar K Das 297–304

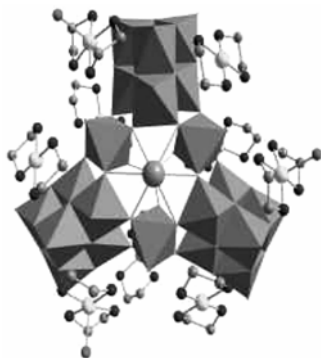
An inorganic–organic hybrid material, [2-AmpH]₄[Mo₈O₂₆] has been synthesized by the reaction of Na₂MoO₄·2H₂O with 2-aminopyrimidine (2-Amp) from an acidic aqueous solution. The relevant crystal structure reveals an unusual cluster–cluster (non-covalent O...O) interaction using *cis*-{MoO₂} moieties of the isopolyanion. N-H...O hydrogen bonds, originated from pyridimidium cation, play an important role for its stabilization.



Tris(dithiocarboxylato)indium(III): Thermal studies and crystal structure of [In(S₂Ctol)₃]

Shamik Ghoshal, Nisha P Kushwah, Manoj K Pal, Vimal K Jain and Munirathinam Nethaji 305–308

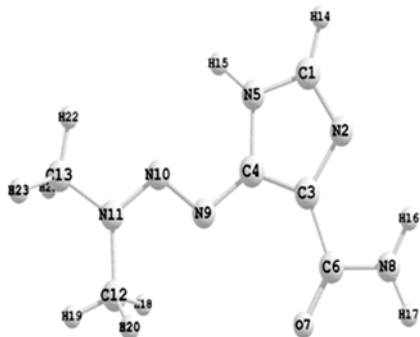
Tris(dithiocarboxylato)indium(III), [In{S₂CAr}₃] (Ar = phenyl or *p*-tolyl) have been reported. The X-ray structural analysis of [In(S₂Ctol)₃] revealed a distorted octahedral geometry with symmetrically chelating dithiocarboxylate groups. These complexes on thermolysis gave β-In₂S₃ which was characterized by XRD and EDX.



Preparation, crystal structure, and characterization of an inorganic–organic hybrid polyoxoniobate [Cu(en)₂][Cu(en)₂(H₂O)]_{1.5}[K_{0.5}Nb₂₄O₇₂H_{14.5}]₂·2.5H₂O

Jing-Ping Wang, Hong-Yu Niu and Jing-Yang Niu 309–313

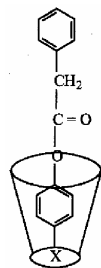
An inorganic–organic hybrid polyoxoniobate compound [Cu(en)₂][Cu(en)₂(H₂O)]_{1.5}[K_{0.5}Nb₂₄O₇₂H_{14.5}]₂·2.5H₂O **1** has been synthesized and characterized by IR, ESR spectroscopy and single-crystal X-ray diffraction method. The whole molecule possesses the C_{3v} symmetry and the structure contains N-H...O hydrogen bonds between the coordinated ethylenediamine and the polyniobate-anion.



Density functional theory study of vibrational spectra, and assignment of fundamental modes of dacarbazine

S Gunasekaran, S Kumaresan, R Arunbalaji, G Anand and S Srinivasan 315–324

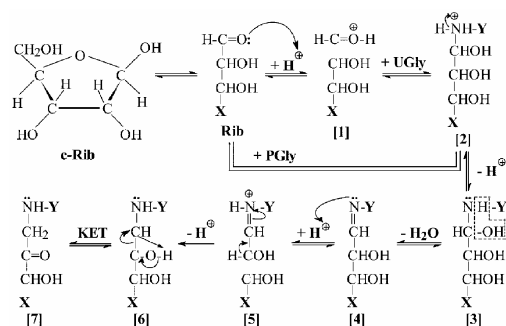
Vibrational assignment was made for dacarbazine using *ab initio* Hartree-Fock, MP2 and DFT method. The calculated harmonic vibrational frequencies compared with experimental FTIR and FT Raman spectra. Based on the comparison between calculated and experimental results and the comparison with related molecules, assignments of fundamental vibrational modes are justified.



Guest–host interactions in the cleavage of phenylphenyl acetates by β -cyclodextrin in alkaline medium

V Raj, T Chandrakala and K Rajasekaran 325–328

The rates of cleavage of phenylphenyl acetate (PPA) and several *para*-substituted PPA have been measured spectrophotometrically in alkaline medium containing β -cyclodextrin (CD). PPA form 1 : 1 inclusion complex with CD. The overall rate constants for the cleavage of the [PPA : CD] complex correlate with the Hammett σ -constants and Hansch hydrophobicity parameters π .



The ribose and glycine Maillard reaction in the interstellar medium (ISM): A theoretical study

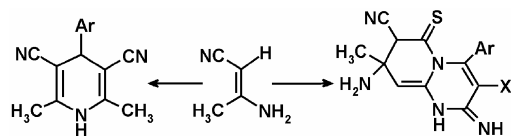
Abraham F Jalbout and Md. Abul Haider Shipar 329–337

Possibility of the Maillard reaction to take place in the gaseous phase in the interstellar medium was investigated by theoretical DFT computations. Cyclic ribose (**c-Rib**)/open-chain ribose (**c-Rib**) and glycine have been taken as the model. The kinetics of the mechanics has also been briefly addressed in this work.

β -Enaminonitriles in heterocyclic synthesis: Synthesis of new tetrahydropyridinethione, pyridopyrimidines, pyridotriazines and dihydropyridines

Ibrahim Saad Abdel Hafiz, Mahmoud Mohamed Mahfouz Ramiz, Fivian Farok Mahmoud and Elham Sayed Darwish 339–345

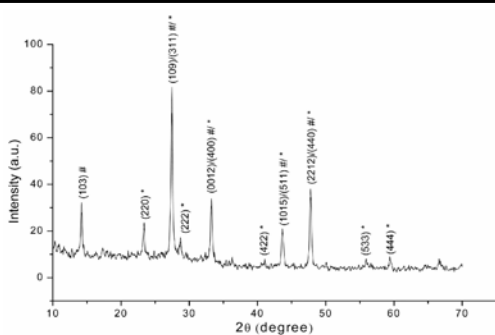
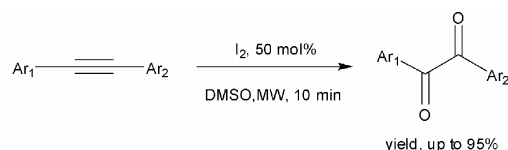
3-Aminocrotononitrile (**1**) reacted with cyanothioacetamide to give tetrahydropyridinethione (**4**). Heating of **4** gives **5**. Compound **4** was reacted with ethoxymethylene-malononitrile and ethyl-2-cyano-3-ethoxyacrylate to give **9a–b**. Compounds **1** and **4** were reacted with benzylidenemalononitrile and arylidenecyanothioacetamide to give **13a–f** and **24a–e**. Some isothiocyanate derivatives were reacted with **4** to give the pyridotriazine derivatives **16a–b** and thiourea derivatives **18a–b**.



Microwave-assisted efficient oxidation of internal alkynes to 1,2-diaryldiketones with DMSO/I₂

Min Chen, Qin Zhao, De-Bing She, Ming-Yu Yang, Hao-Hao Hui and Guo-Sheng Huang 347–351

This paper reports the oxidation of functionalized internal alkynes with DMSO in the presence of I₂ under microwave irradiation. This procedure gave 1,2-diaryldiketones in good yields.



Cover picture: XRD pattern obtained from thermolysis of [In{S₂CPh}₃]. For details see the paper by Shamik Ghoshal *et al* (pp 305–308).