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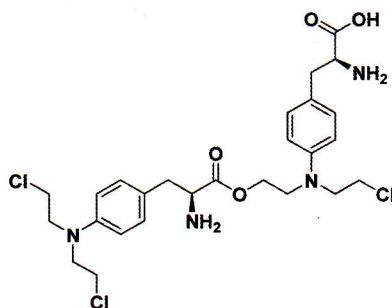
NUMBER 04

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CONTENTS

Papers

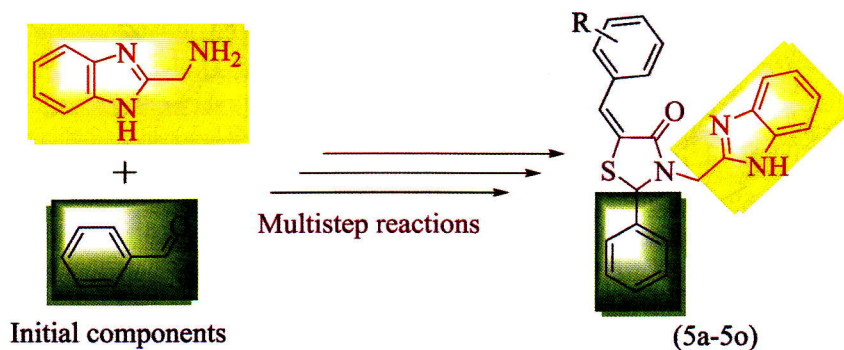
- 313 Novel high yielding route for the synthesis of Melphalan dimer impurity G** Melphalan dimer is an impurity from the synthesis of Melphalan which is an antineoplastic agent. In this article, a new route for the synthesis of Melphalan dimer impurity G has been discussed.



R A Rane*, R D Male, G V Babhulkar, M R Suryawanshi, Dileep Kumar, S Chindhe, D Pawar, S R Moharir & R K Patil

Department of Pharmaceutical Chemistry, BVDU Poona College of Pharmacy, Erandwane, Pune 411 038, India

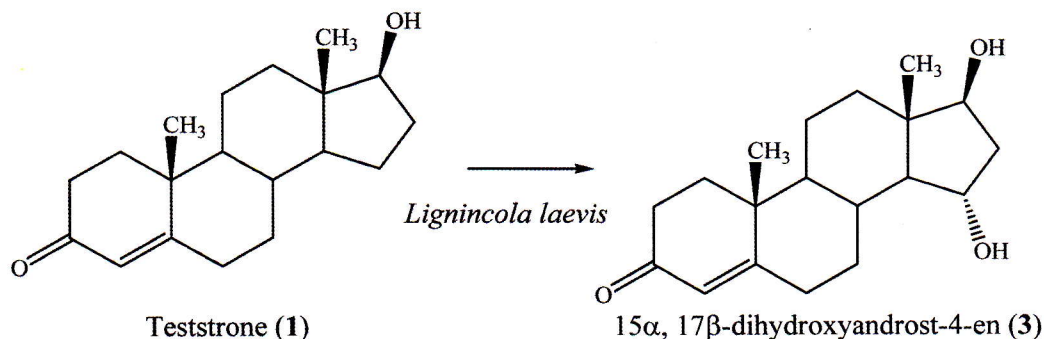
- 318 Design, synthesis and antimicrobial evaluation of benzimidazole containing 4-thiazolidinone based 5-arylidene derivatives** A series of 4-thiazolidinone-based 5-arylidene derivatives (5a-5o) have been synthesized and tested for their antimicrobial activity against gram-positive, gram-negative bacteria and fungi.



N C Desai*, K N Shah & B P Dave

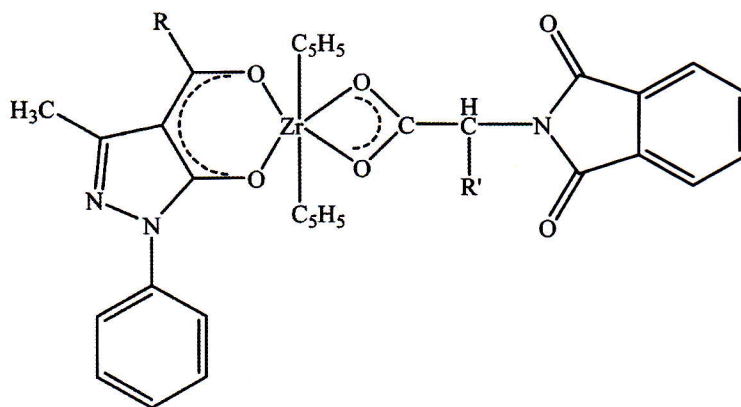
Division of Medicinal Chemistry, Department of Chemistry, Mahatma Gandhi Campus, Maharaja Krishnakumarsinhji Bhavnagar University, Bhavnagar 364 002, India

- 327 **Biotransformation of steroidal compounds using *Lignicola laevis*** Biotransformation of testosterone 1 and stanolone 2 has been investigated with fungus of *Lignicola laevis*. Biotransformation of 1 gives 15 α ,17 β -dihydroxyandrost-4-en-3-one 3.



Takamitsu Utsukihara*, Kazuhito Hoshiyama, Shoma Kobayashi, Masahiro Koshimura & C Akira Horiuchi
Hakodate National College of Technology, Tokura-cho, Hakodate 042-8501, Japan

- 331 **Biopotential Insights and structural chemistry of some zirconocene incorporated heterocyclic β -diketones and flexible N-protected α/β - amino acids** Zirconocene complexes of heterocyclic β -diketones and flexible N-protected α/β -amino acids have been synthesized and characterized by spectroscopic techniques. The structure-antimicrobial activity relationship of some of these complexes and corresponding ligands have also been investigated.



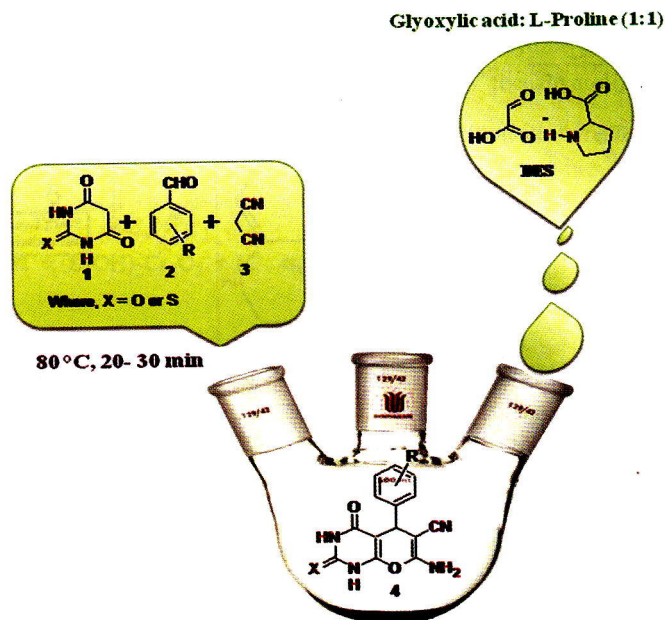
Structure of complex $[(C_5H_5)_2Zr(RCOC:C(O)N(C_6H_5)N:CCH_3)(O_2CCHR'NC(O)C_6H_4C(O))]$

Kanika Sharma, Komal Soni, Sanjiv Saxena & Asha Jain*

Department of Chemistry, University of Rajasthan, Jaipur, Rajasthan 302004, India

339 An efficient synthesis of pyranopyrimidine derivatives by using glyoxylic acid:L-proline deep eutectic solvent as a novel designer reaction promoter

A novel deep eutectic solvent (DES) by using glyoxylic acid: L-proline (1:1) has been developed. The efficiency of DES has been studied for the synthesis of pyrimidine core derivatives *via* three component multicomponent reaction.

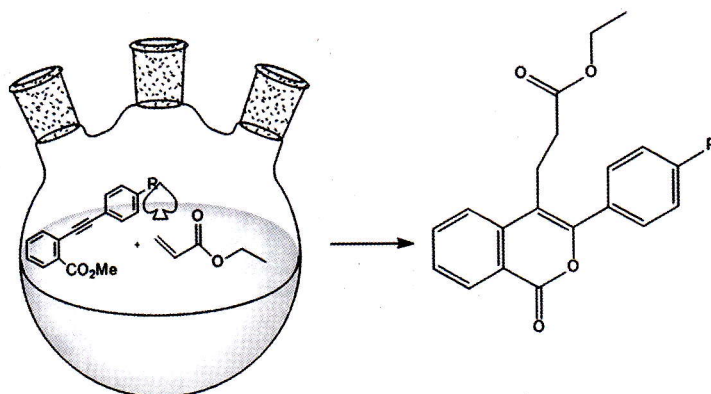


Vishram Karande, Priyanka Mohire, Shubham Deshmukh, Ajinkya Patravale, Vikram Desai, Dattatray Chandam, Sandeep Sankpal & Madhukar Deshmukh*

Department of Agrochemicals and Pest Management, Shivaji University, Kolhapur, Maharashtra, India

350 Facile and efficient method for synthesis of isocoumarin derivation catalyzed by $Zn(OTf)_2$ and their antioxidant properties

Isocoumarin derivatives have been synthesized by tandem intramolecular cyclization of methyl 2-(phenylethynyl)benzoate with ethyl acrylate. The antioxidant properties of the synthesized isocoumarin have also been investigated by DPPH method.



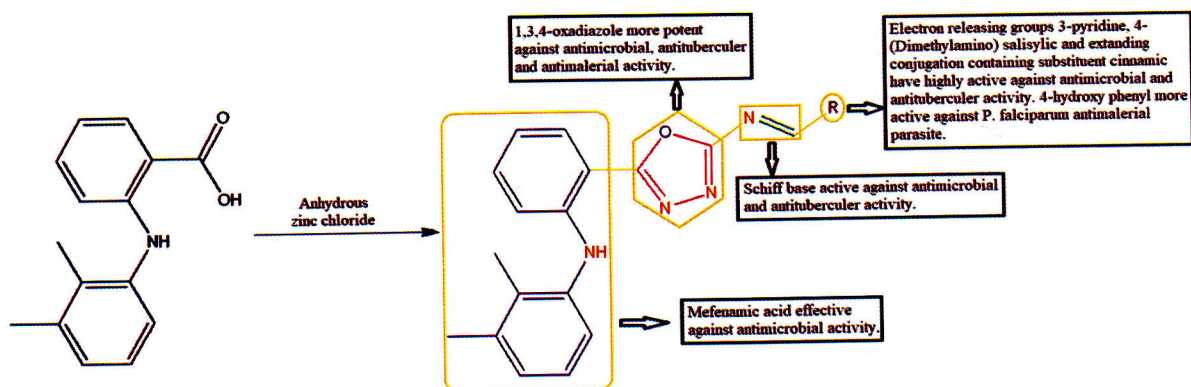
Nesimi Uludag* & Alev Orhan Nevarsa

Namık Kemal University, Department of Chemistry, 59030, Tekirdag, Turkey

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One pot synthesis of 1,3,4-oxadiazoles by Lewis acid catalyst and their study of 2D-QSAR, antimicrobial and anti-tubercular activities

Syntheses of 1,3,4-oxadiazole derivatives were reported. The Biological activity as well as their structure activity relationship have also been discussed.



J A Patel & N B Patel*

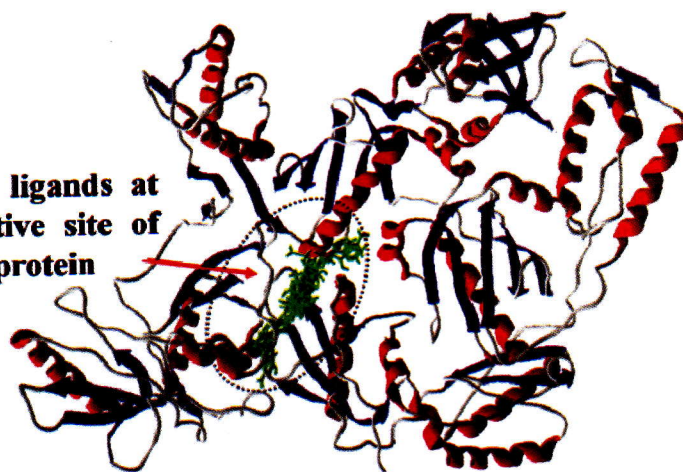
Department of Chemistry, Veer Narmad South Gujarat University, Udhana-Magdalla Road, Surat 395 007, Gujarat, India

365

Synthesis, crystal packing and HIV-1 reverse transcriptase studies of 1,1'-(1,3-Phenylene)bis(1H-tetrazole)

1,1'-(1,3-Phenylene)bis(1H-tetrazole) has stronger binding energies than six known compounds and that of the (co-crystallized ligand (GW564511) of PDB molecule. The molecule would lead to the design of a potent antiviral drug against HIV disease.

Bound ligands at the active site of target protein



Priyanka Singh, M Fátima C Guedes da Silva, Rajesh K Kesharwani & Kafeel Ahmad Siddiqui*

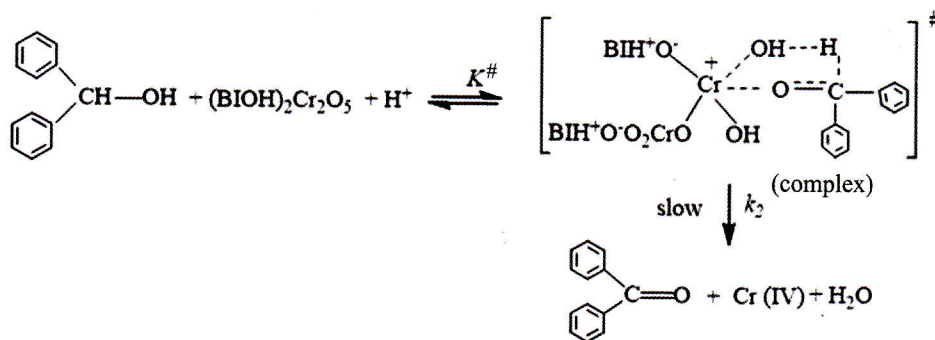
Department of Chemistry, National Institute of Technology Raipur, Raipur, Chhattisgarh 492 010, India

372 **Kinetics and structure reactivity correlation in the oxidation of some *para*-substituted benzhydrols by benzimidazolium dichromate**

The oxidation of some *para*-substituted benzhydrols by benzimidazolium dichromate (BIDC) in dimethyl sulfoxide (DMSO) medium, results in the formation of corresponding diphenyl ketone. The reaction has been investigated on the condition of pseudo-first order. The rate is calculated as follows.

$$\text{Rate} = \frac{k_2 K^\# [\text{benzhydrol}] [\text{BIDC}]_t}{(1 + K^\# [\text{benzhydrol}])}$$

where, $[\text{BIDC}]_t = [\text{Complex}] + [\text{BIDC}]$

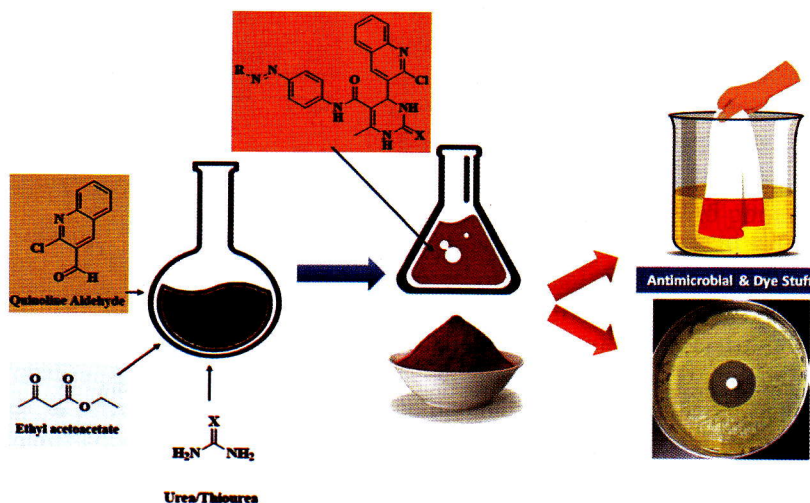


Dinesh Panday

Department of Chemistry, M. L. Sukhadia University, Udaipur, Rajasthan 313001, India

380 **Quinoline incorporating pyrimidine heterocyclic azo dye derivatives: Synthesis, characterization and applications**

Novel quinoline substituted pyrimidine heterocyclic azo dye derivatives have been synthesized, characterized and evaluated for *in vitro* antimicrobial activity. Out of all the phenol derivatives, Naphthol substituted compounds have come out as remarkably active antimicrobial scaffolds with excellent dye characteristics.



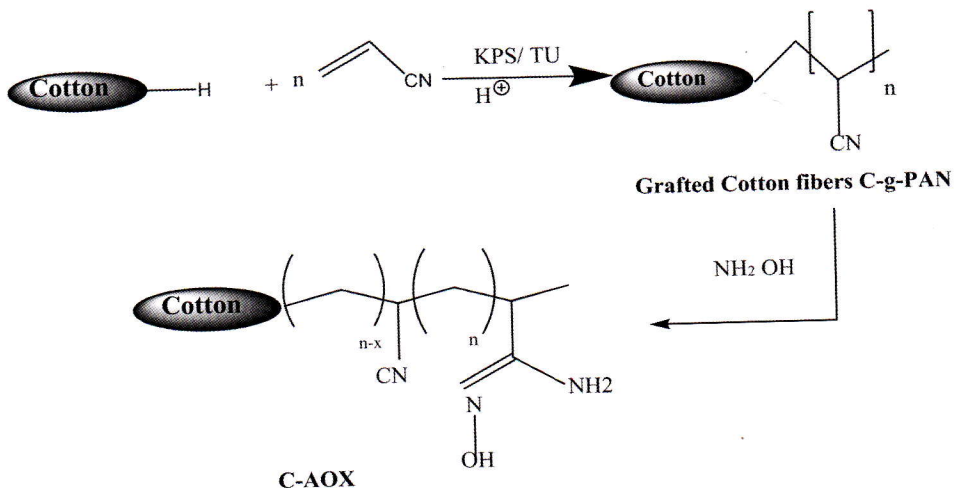
Harsh D Trivedi, Vidhi B Joshi & Bonny Y Patel*

School of Science, Department of Chemistry, R. K. University, Rajkot 360 020, Gujarat, India

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Fast extraction of vanadyl ion using grafted cotton fiber inserted with amidoxime moiety

Egyptian cotton cellulose fibers have been adapted by graft copolymerization of polyacrylonitril and then by ingestion of amidoxime moiety to finally generate C-AOX chelating fibers. The obtained C-AOX is used for removal and extraction of VO^{2+} from its aqueous solution.



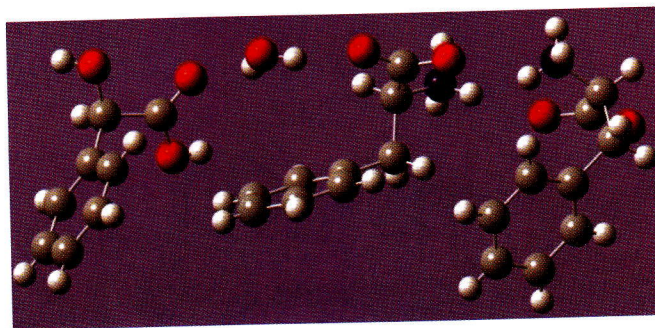
Magda A Akl*, Wael Ali & Mohamed Moneir

Department of Chemistry, Faculty of Science, Mansoura University, Mansoura, Egypt

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Density functional analysis of molecular crystal: bis-1-Phenyl alanine mandelate

A novel organic nonlinear four component molecular crystal bis-1-phenylalanine mandelate has been synthesized and single crystal has been grown by slow evaporation method in an aqueous solution at ambient temperature.



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