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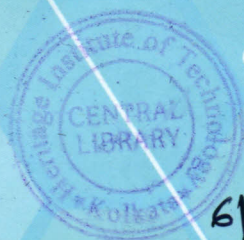
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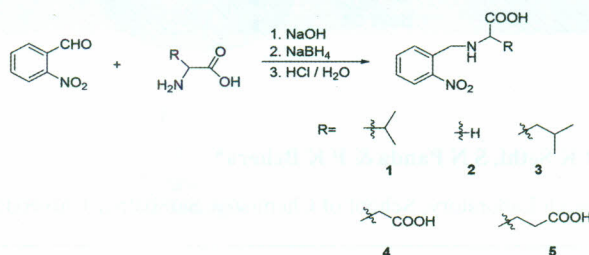
NUMBER 05

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CONTENTS

Papers

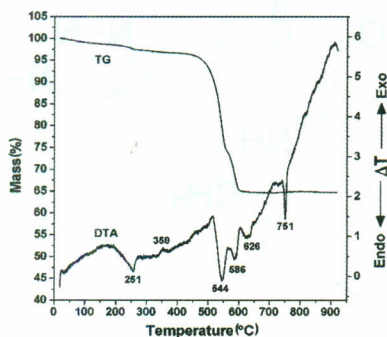
- 425 **Syntheses and characterizations of 2-nitrobenzaldehyde amino acid Schiff base reductive amination compounds** Condensation of 2-nitrobenzaldehyde with five amino acids (valine, glycine, leucine, aspartic acid, and glutamic acid) gives the corresponding Schiff bases, which upon treatment with NaBH_4 afford the reductive amination products 1–5.



Yu-Rou Jiang, Dan Su, Mu-Zhao Wang, Ai-Quan Jia & Qian-Feng Zhang*

Institute of Molecular Engineering and Applied Chemistry, Anhui University of Technology, Ma'anshan, Anhui 243002, P. R. China

- 431 **Synthesis of new complex $[\text{Bi}_6\text{O}_6(\text{OH})_2](\text{ClC}_6\text{H}_4\text{SO}_3)_4$ and investigation of its thermal decomposition** New complex $[\text{Bi}_6\text{O}_6(\text{OH})_2](\text{ClC}_6\text{H}_4\text{SO}_3)_4$ is synthesized and its thermal behavior is studied. Three decomposition temperatures (369, 558 and 662°C) are selected for isothermal heating according to DTA-TG. The phase composition of solid residues obtained at these temperatures is resolved by XRD and FTIR analysis.

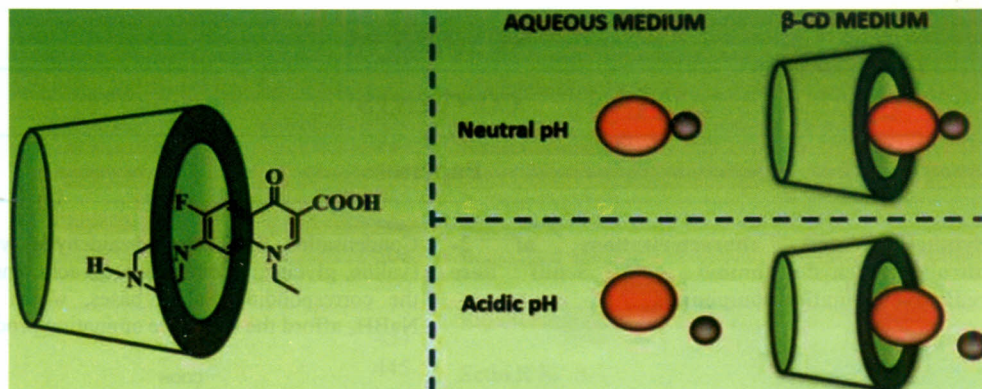


Nikolay Kaloyanov^{a,*}, Alexander Zahariev^{b,*}, Veneta Parvanova, Georgi Avdeev & Christian Girginov

^a Department of Organic Chemistry, University of Chemical Technology and Metallurgy, 8 St. Kliment Ohridski Blvd., 1756 Sofia, Bulgaria

^b Department of Chemistry, Technical University, 8 St. Kliment Ohridski Blvd., 1000 Sofia, Bulgaria

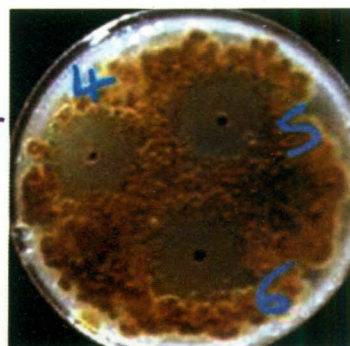
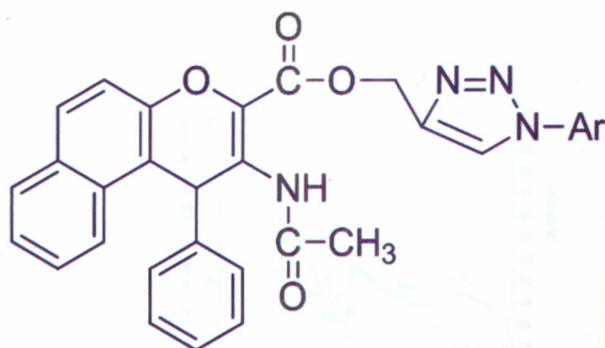
- 437 **Impact of host-guest complexation between norfloxacin and β -cyclodextrin on fluorescence quenching: Steady-state and time resolved fluorescence study** 1:1 host-guest interaction of norfloxacin (NFX) with β -cyclodextrin (β -CD) and localization of NFX and Cu^{2+} in β -CD on nature of quenching has been studied.



Prabhati Padhan, R K Sethi, S N Panda & P K Behera*

Photochemistry Research Laboratory, School of Chemistry, Sambalpur University, Jyoti Vihar, Sambalpur 768 019, India

- 445 **Synthesis and antimicrobial activity of novel (1-phenyl-1*H*-1,2,3-triazol-4-yl)methyl-2-acetamido-1-phenyl-1*H*-benzo[*f*]chromene-3-carboxylate and 2-amino-octahydro-4-phenyl-2*H*-chromene-3-carbonitrile** Novel (1-phenyl-1*H*-1,2,3-triazol-4-yl)methyl-2-acetamido-1-phenyl-1*H*-benzo[*f*]benzo[*f*]chromene-3-carboxylate **6a-i** have been synthesized and show the best profile of activity against *Staphylococcus aureus*, *Escherichia coli* and *Aspergillus fumigatus*. The antibacterial and antifungal properties of the synthetic compounds have been compared with the conventional antibiotics Chloramphenicol and Amphotericin-B

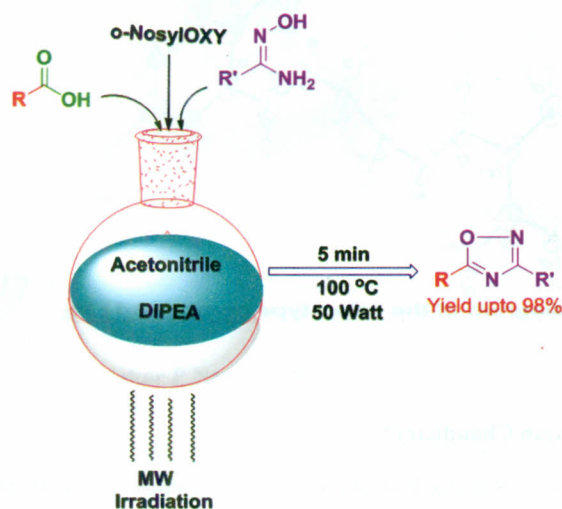


Sriramoju Shamili, Kavitha Siddoju*, G Chandrakala & Sd Ishrath Farheen

Department of Chemistry, Chaitanya Deemed to be University, Warangal Urban, Telangana 506 001, India

- 454 **Synthesis of 1,2,4-oxadiazoles utilizing ethyl 2-cyano-2-(2-nitrophenylsulfonyloxyimino) acetate (*ortho*-nosylOXY) as a catalyst and dehydrating reagent under microwave irradiation**

An optimized microwave-assisted synthesis of 1,2,4-oxadiazoles from carboxylic acids and amidoximes using ethyl 2-cyano-2-(2-nitrophenylsulfonyloxyimino) acetate (*ortho*-NosylOXY) as an activating agent of carboxylic acid for O-acylation step followed by cyclization step in one pot with significantly good yield is reported. Interestingly, the same reagent, *ortho*-NosylOXY, acts as a catalyst for the first step and helps as a dehydrating agent for the second step.

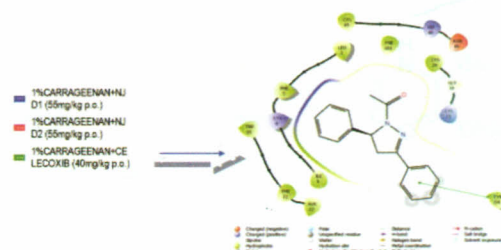
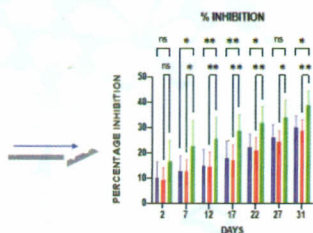
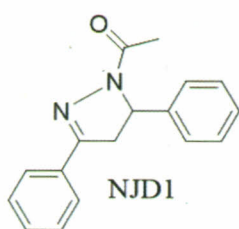


Jyoti Chandra

Department of Chemistry, Patna Women's College, Patna University, Patna 800 001, India

- 465 **Investigation of chalcone cyclized pyrazole derivatives as an anti-inflammatory agent: *In-vivo* and *in-silico* molecular docking approach**

A novel pyrazole condensed with chalcone and pyrazoline derivatives have been synthesized. NJD1 would be the most potent compound ($30.10 \pm 0.02\%$) found to be inhibitory in rats. Molecular docking studies have been conducted on PDB: 1TD7.

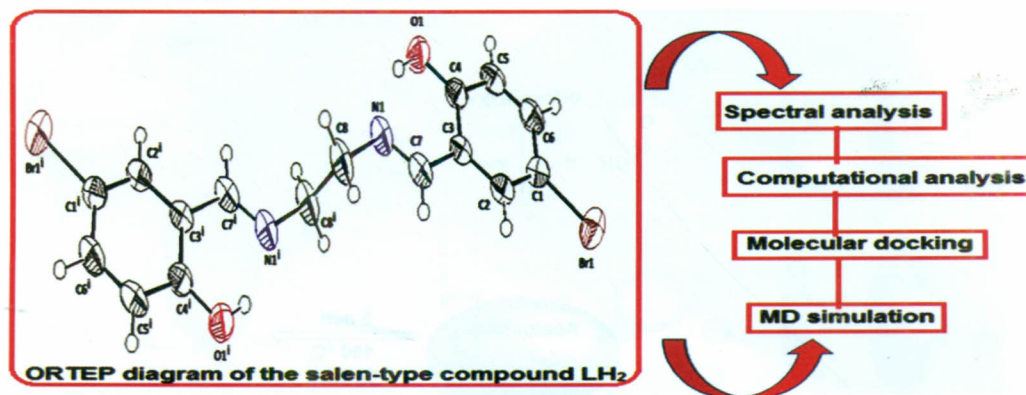


Naman Jain, Raihan Abdu, Omkar Tambekar, Mayuri Bedse, Tanvi Goel, Sanal Dev & Deepali Bansode*

Department of Pharmaceutical Chemistry, Bharati Vidyapeeth (Deemed to be) University, Poona College of Pharmacy, Pune, India

472 **Design and development of salen-type Schiff bases as potential antiviral agents: Experimental and theoretical approach**

Five new salen-type Schiff base compounds ($LH_2-L^4H_2$) have been designed and synthesized and their interaction with SARS-CoV-2, HIV virus and DNA polymerase IV have been studied by *in silico* approaches.

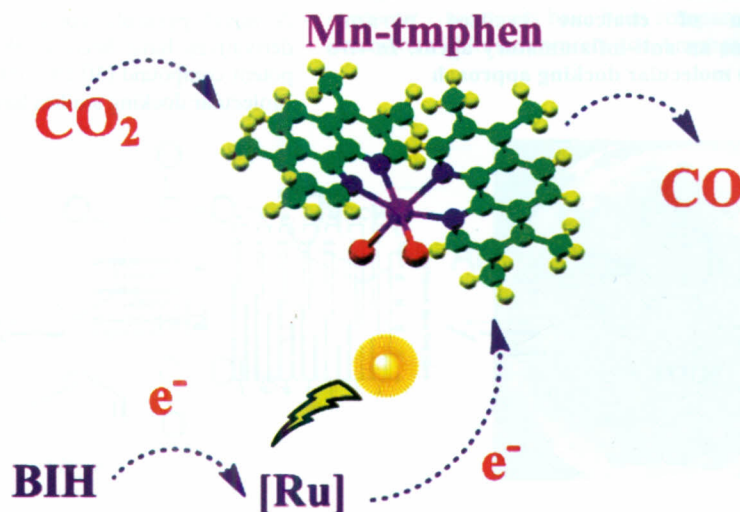


Sunil Kumar & Mukesh Choudhary*

Department of Chemistry, National Institute of Technology Patna, Patna 800 005, Bihar, India

498 **A homogeneous polypyridine-based manganese catalytic system: Reducing CO_2 to CO under visible light**

Photocatalytic conversion of CO_2 to CO was achieved with high turnover using simple Mn-Based homogeneous catalysts, and a reaction mechanism is presented.



Yu-mei Chen, Ke-Xin Zhou, Quan-Qing Xu* & Zhi-Yang*

Faculty of Chemistry and Chemical Engineering, Yunnan Normal University, Kunming 650 050, P R China

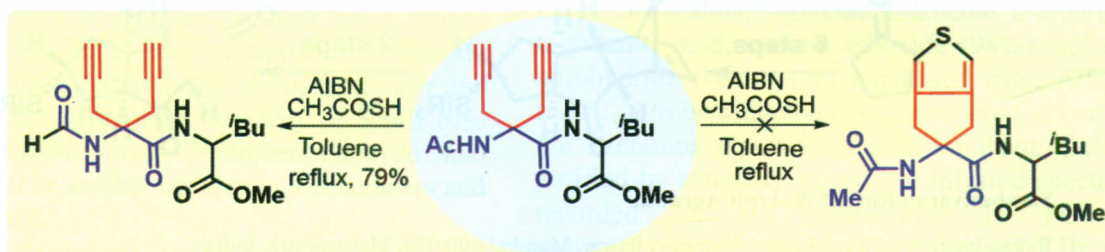
- 506 **Design and synthesis of phosphonate functionalized naphthalenediimide: Application to induce mitochondria mediated apoptosis in the human skin melanoma cells (SKMEL2)** Effect of naphthalenediimides (NDI-1 and NDI-2) on regulation of the anti and pro apoptotic genes has been analyzed by real time PCR and flow cytometric methods, indicating NDI-induced apoptosis occurs in SKMEL-2.



Kiran R Kharat, Rajesh S Bhosale, Kamalakar P Nandre, Madan R Biradar, Sheshanath V Bhosale & Sidhanath V Bhosale*

Polymers and Functional Materials Division, CSIR-Indian Institute of Chemical Technology, Hyderabad 500 007, Telangana, India

- 513 **Serendipitous late-stage modification of dipeptide by using AIBN and thioacetic acid** 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.

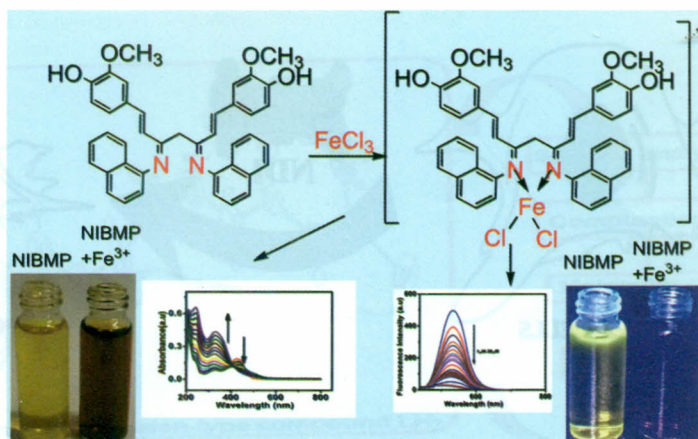


Sambasivarao Kotha*, Naveen Kumar Gupta & Saima Ansari

Department of Chemistry, Indian Institute of Technology Bombay, Powai, Mumbai 400 076, India

- 518 An effective colorimetric and fluorescent chemosensor derived from modified curcumin for the detection of the Fe^{3+} ion

From curcumin and 1-aminonaphthalene, the chemosensor NIBMP (4,4'-(3,5-bis(naphthalene-1-ylimino)hepta-1,6-diene-1,7-diyl)bis(2-methoxyphenol)) has been prepared. For Fe^{3+} as opposed to other metal ions, NIBMP serves as both a colorimetric and a fluorescence turn-off sensor.

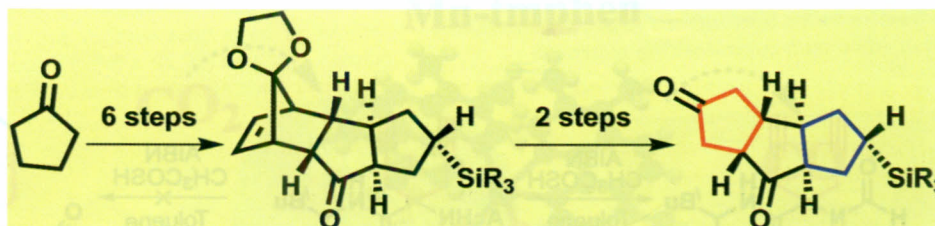


Pappian Rajam & Rajaram Mahalakshmy*

Department of Chemistry, Thiagarajar College (Affiliated to Madurai Kamaraj University),
Madurai 625 009, Tamil Nadu, India

- 527 Synthesis of linear *cis-anti-cis* triquinane derivative via a [3+2] cycloaddition and Krapcho decarboxylation as key steps

A short synthetic sequence to a linear triquinane is reported involving [3+2] cycloaddition, oxidative cleavage of double bond using ruthenium catalyst followed by decarboxylation. By this methodology, norbornene double bond can be easily cleaved to obtain the linear triquinane unit. This methodology is useful for the synthesis of natural and non-natural products having fused cyclopentane ring systems.



Sambasivarao Kotha* & Arpit Agrawal

Indian Institute of Technology, Bombay, Powai, Mumbai 400 076, Maharashtra, India

- 532 Additions and Corrections

Authors for correspondence are indicated by (*)