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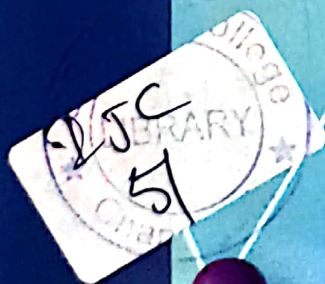
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# Indian Journal of Chemistry

VOL. 65

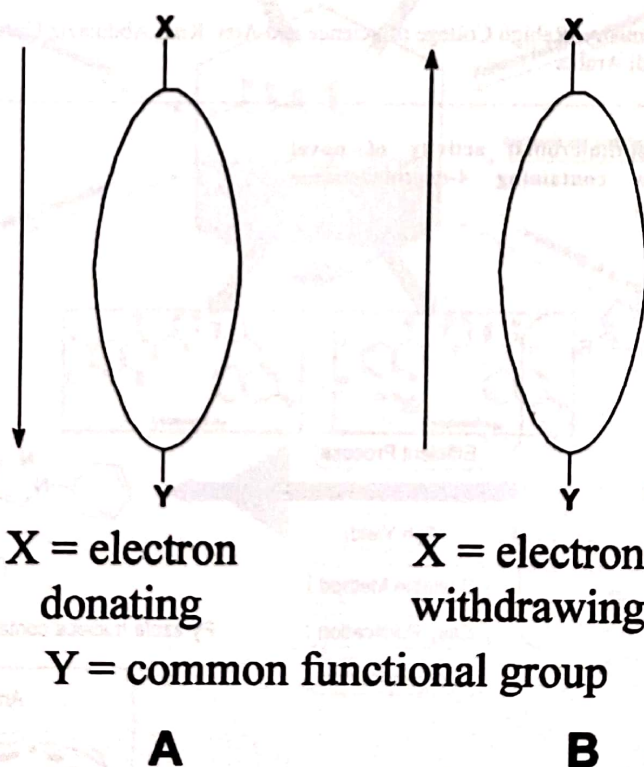
NUMBER 4

APRIL 2026

## CONTENTS

### Papers

- 291 Application of non-linear free energy relationships to parachors ( $P$ ) of some aromatic and aliphatic compounds

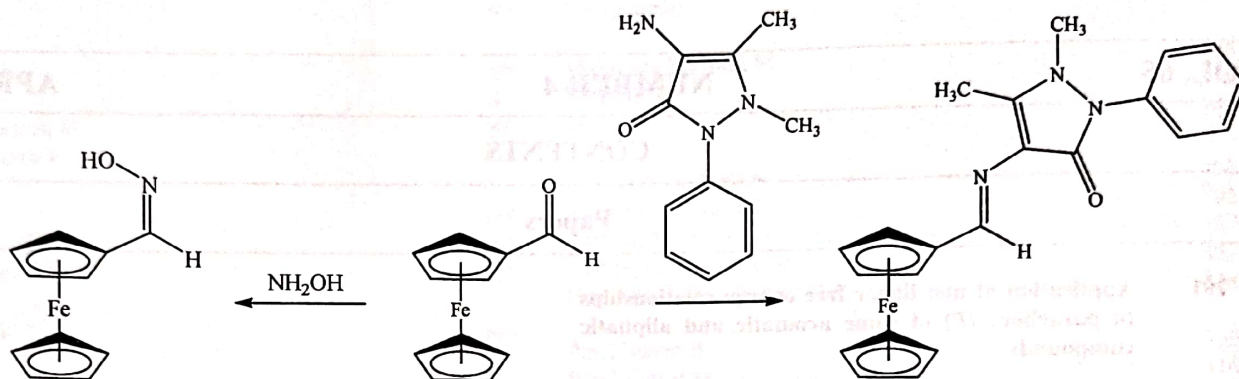


Sanjeev Rachuru, Partha Sarathi Guru & V Jagannadham\*

Department of Chemistry, Osmania University, Hyderabad 500 007, Telengana, India

- 299 **Hirshfeld analysis, anticancer efficacy and molecular docking studies for ferrocenecarboxaldehyde oxime and ferrocene-based aldimine**

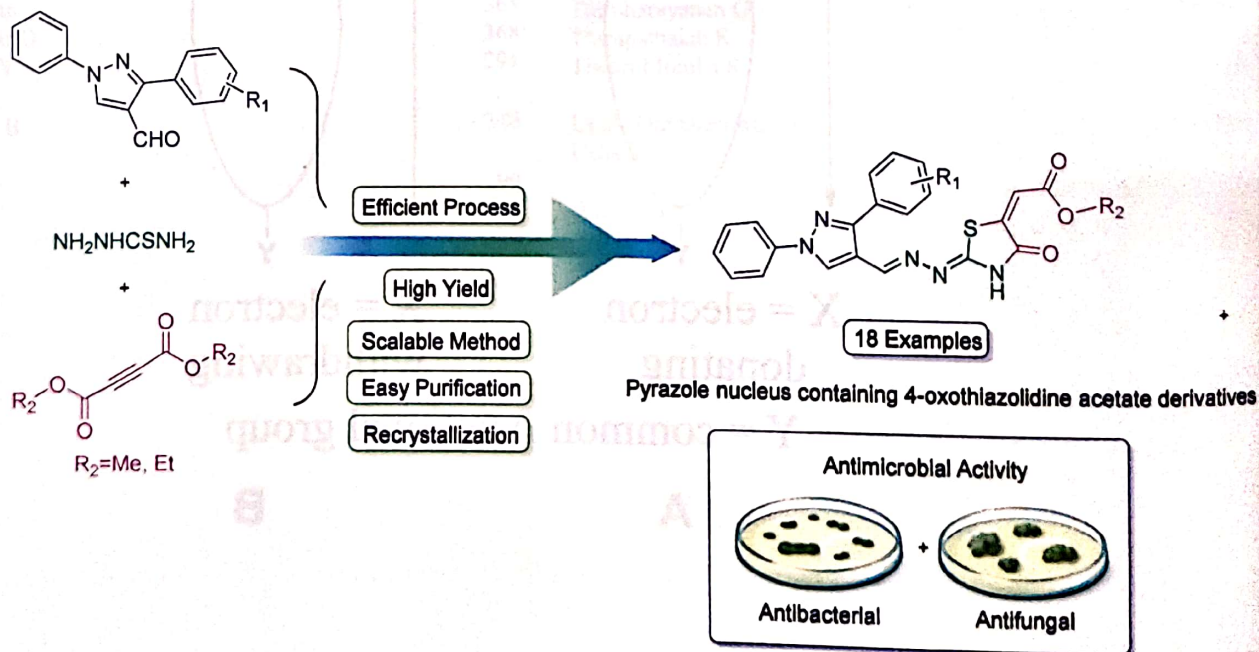
Ferrocenecarboxaldehyde oxime and ferrocene-based aldimine have been synthesized and evaluated for their anticancer potentials against MCF-7 and T47D cell lines with the support of molecular docking and Hirshfeld studies.



Jamal Lasri\*, Naser E Eltayeb, Saied M Soliman, Ehab M M Ali, Ahmed M Adam & Bandar A Babgi

Department of Chemistry, Rabigh College of Science and Arts, King Abdulaziz University, Jeddah 21589, Saudi Arabia

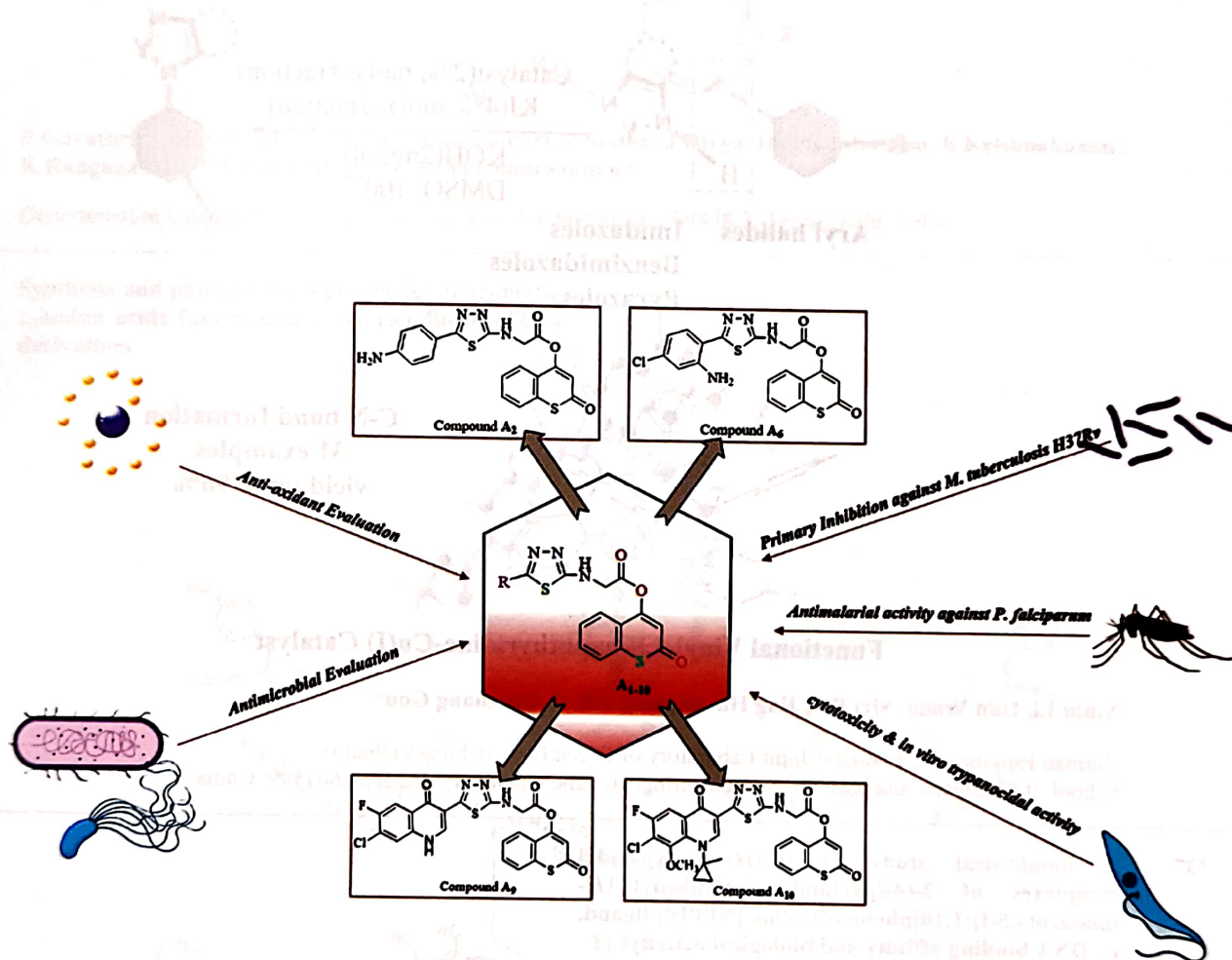
- 306 **Synthesis and antimicrobial activity of novel pyrazole nucleus containing 4-oxothiazolidine acetate derivatives**



Vidhya V Jadvani, Bhoomi M Makwana & Yogesh T Naliapara\*

Department of Chemistry, Saurashtra University, Rajkot 360 005, Gujarat, India

316 **Synthesis and multitarget activity of thiadiazole-thiocoumarin hybrids: A new class of broad-spectrum anti-infective agents**

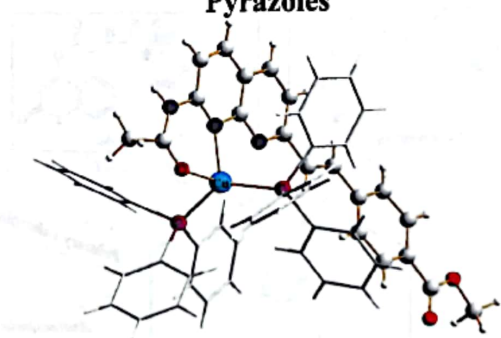
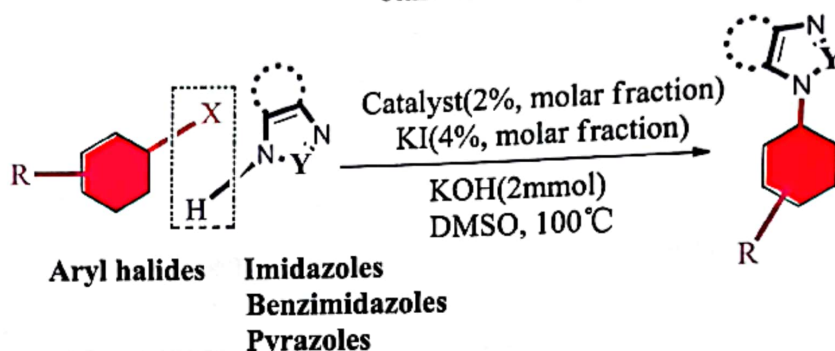


Navin B Patel, Monika R Tiwari, Ankita S Gamit, Tejal R Humal, Rogelio Gomez-Escobedo, Benjamin Noguera-Torres, Gildardo Rivera & Vatsal M Patel\*

Department of Chemistry, Jamanaben Narottambhai Motiram Patel Science College, Bharthana (Vesu), Surat 395 017, Gujarat, India

- 328 **Functional vinyl-1,8-naphthyridine copper(I) complex as efficient synergistic catalyst with KI for N-arylation coupling reactions**

An efficient and novel functional vinyl-1,8-naphthyridine copper(I) complex has been synthesized, and its X-ray crystal analysis is presented. A method has been developed in which this analysis is presented. A method has been developed in which this complex serves as a synergistic catalyst for the C-N cross-coupling reactions of aryl halides with imidazoles, benzimidazole, or pyrazole.



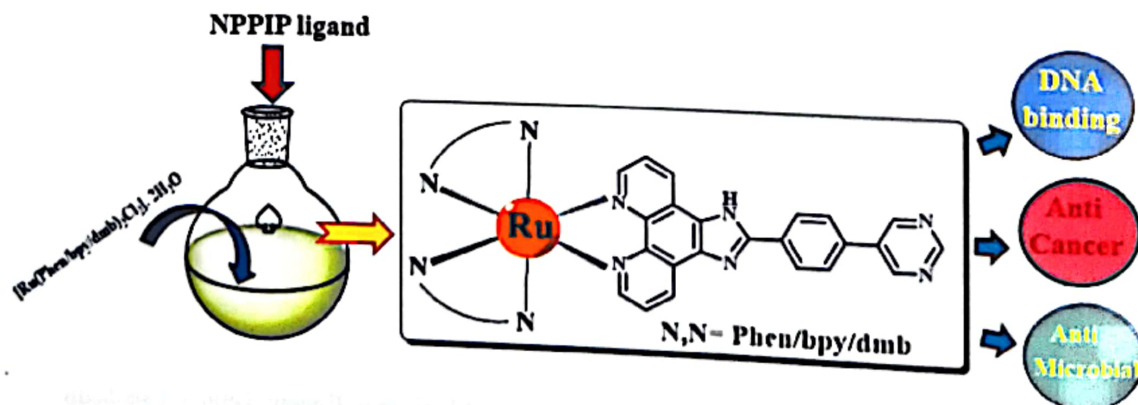
C-N bond formation  
31 examples  
yield up to 96%

**Functional Vinyl-1,8-naphthyridine-Cu(I) Catalyst**

Xinlu Li, Han Wang, Siyi Bai, Jing Hu, Qianhui Liu & Gaozhang Gou\*

Yunnan Province International Joint Laboratory of Green Food (China-Vietnam)  
School of Chemistry and Resources Engineering, Honghe University, Mengzi, 661199, China

- 337 **A biophysical study of Ru(II) polypyridyl complexes of 2-(4-(pyrimidine-5-yl)phenyl)-1H-imidazo[4,5-f][1,10]phenanthroline [NPIP] ligand, its DNA binding affinity and biological activity**

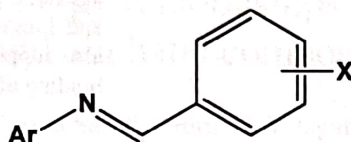


Navaneetha Nambigari\* & Markandeya Namani

Department of Chemistry, University College of Science, Saifabad, Osmania University,  
Hyderabad 500 004, Telangana State, India

- 348 Greener synthesis, spectroscopic relationships, molecular docking analysis, antimicrobial, antimalarial activities of aryl *E*-imines and X-ray crystal structure of (*E*)-*N*-(4-nitrobenzylidene)-2-(trifluoromethyl)aniline

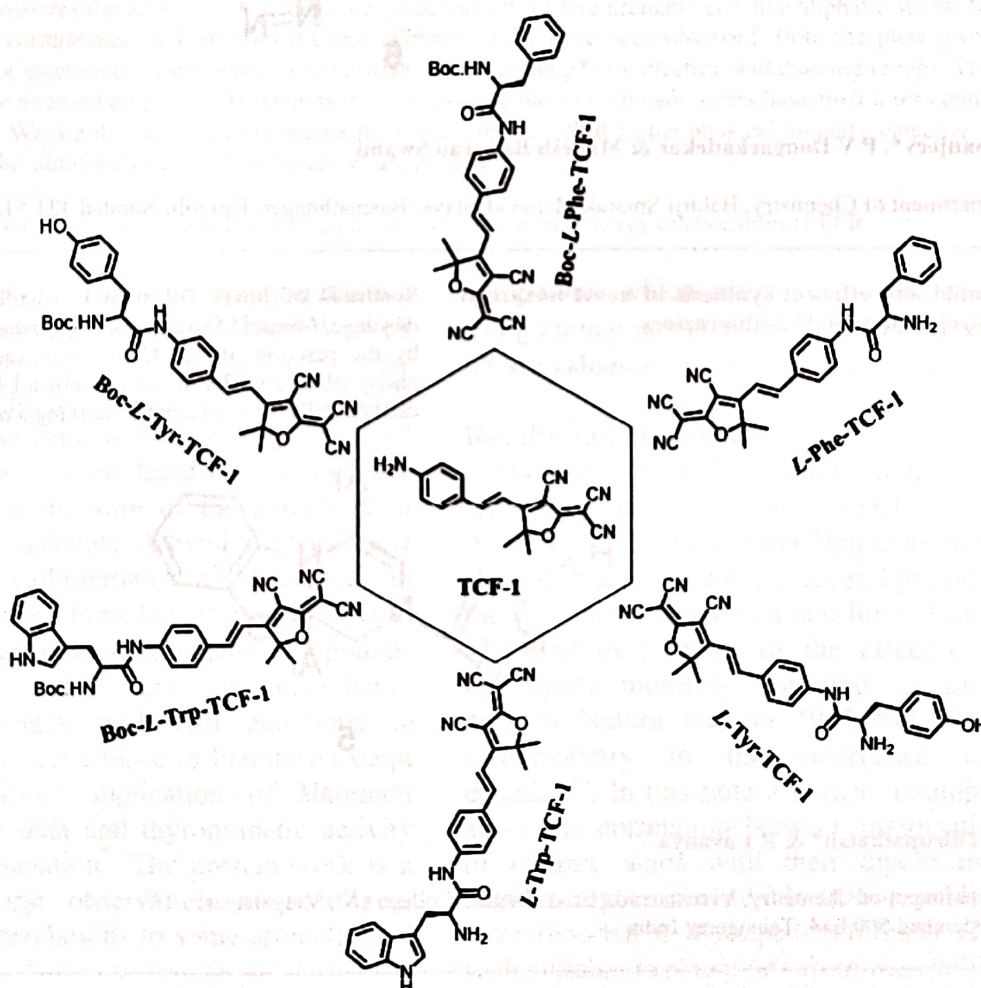
Three series of *E*-imines have been synthesized using microwave assisted sulfated fly-ash:SnO<sub>2</sub> promoted condensation of aryl aldehyde and amines. These *E*-imines have been subjected to investigation of their *in silico* and *in-vitro* properties. The XRD structure of one *E*-imine has been deduced.



P Gayathri, P Mayavel, I Muthuvel, S Balasundari, P Sudha, J Divya, D Govindarajan, B Krishnakumar, K Ranganathan, V Usha, K Devika & G Thirunarayanan\*

Department of Chemistry, Annamalai University, Annamalinagar 608 002, Tamil Nadu, India

- 368 Synthesis and photophysical properties of aromatic L-amino acids functionalized tricyanofuran (TCF) derivatives

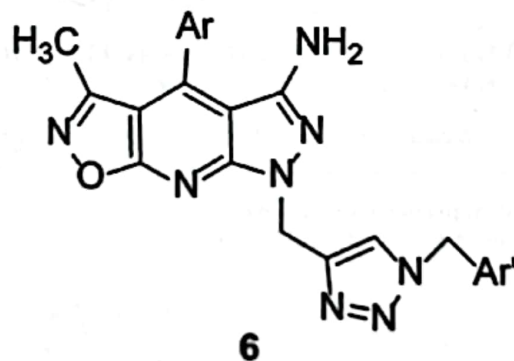


Gayatri Jagadale, Dnyaneshwar D Ugale, Sudhir D Jagadale, Dinesh N Nadimetla, Avinash L Puyad, Shailaja B Jadhav, Sheshanath V Bhosale & Sidhanath V Bhosale\*

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

- 383 Synthesis, spectral characterization, molecular docking studies, and antimicrobial activity of isoxazolo[5,4-*b*]pyrazolo[4,3-*e*]pyridine derivatives containing benzyl 1,2,3-triazole moiety

A molecular hybridization strategy has been employed to synthesize 7[(1-benzyl-1*H*-1,2,3-triazol-4-yl)methyl]-3-methyl-4-aryl-7*H*-isoxazolo[5,4-*b*]pyrazolo[4,3-*e*]pyridine-5-amines, **6** by incorporating pyrazolo-pyridine on isoxazole nucleus with 1,2,3-triazole fragment on pyrazole nitrogen as potential antimicrobial agents. Compounds **6g** and **6h** can be employed as bacteriocides and fungicides after further studies. Molecular docking analysis also supports the data of antimicrobial activity by revealing high binding affinity scores across the entire series.

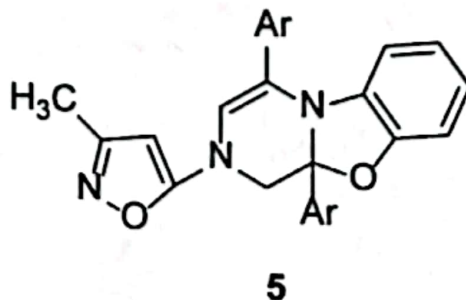


R Sanjeev\*, P V Dongarkadekar & Mahesh Bapurao Swami

Department of Chemistry, Bahirji Smarak Mahavidyalaya, Basmathnager, Hingoli, Nanded 431 512, India

- 396 A mild and efficient synthesis of novel isoxazolyl-benzo[4,5]oxazolo[3,2-*a*]pyrazines

Synthesis of novel 2(3-methylisoxazol-5-yl)-4,10a-diaryl-2,10a-dihydro-1*H*-benzo[4,5]oxazolo[3,2-*a*]pyrazines **5** have been achieved by the reaction of 2,2'-(3-methylisoxazol-5-yl)azone-diylbis(1-phenylethanones) **3** with *o*-aminophenol **4** in the presence of CAN catalyst in CH<sub>3</sub>CN solvent by adopting a new synthetic protocol.



K Thirupathiah\* & R Lavanya

Department of Chemistry, Vivekananda Govt. Degree College (A), Vidyanagar, Hyderabad 500 044, Telangana, India

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