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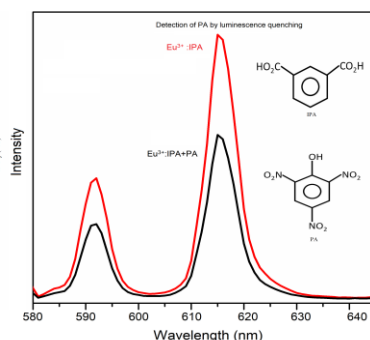
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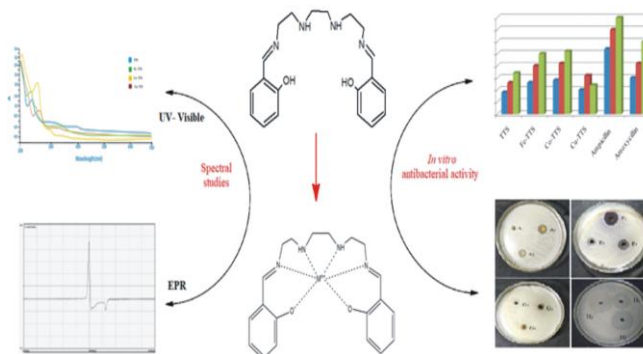
Papers

- 1041 Lanthanide luminescence based probe for detection of picric acid** A fluorimetric method is developed for the estimation of picric acid in aqueous solution and it could be estimated down to 0.23 ppm. Common cations and anions found in natural waters did not interfere in the analysis. The precision in measurement is within 5% RSD in the entire range of measurement.



R Ananthanarayanan, Sitakanta Panda, M Sivaramakrishna & B S Panigrahi*

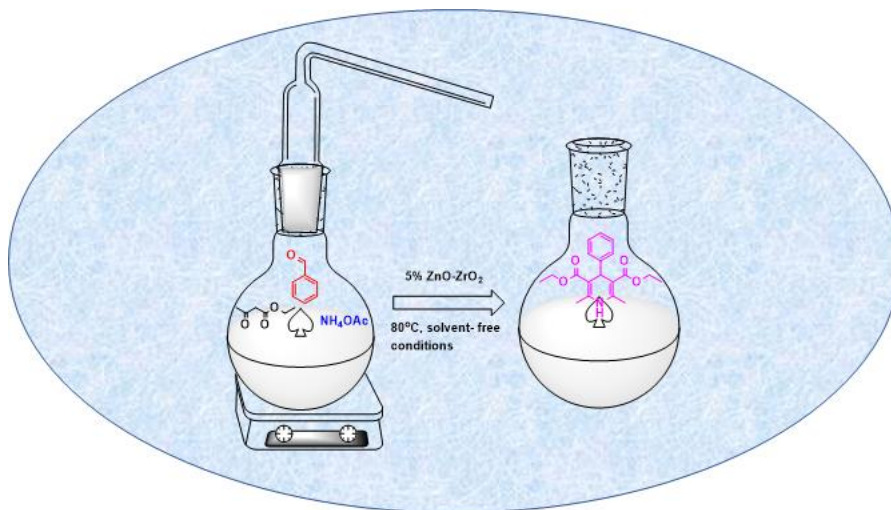
- 1048 Fe(III), Co(II) & Cu(II) Complexes of N,N'-Bis[2-salicylideneamino]ethane-1,2-diamine: Preparation, characterisation and in vitro antibacterial activity** Characterisation of Fe, Co and Cu complexes of Schiff base (TTS) confirm the co-ordination of metal ions to Schiff base. In vitro antibacterial studies of Schiff base and its complexes confirm that these are potential active agents against *S. aureus*, *B. subtilis*, *Enterobacter*, and *E. coli*. The Fe-TTS has the highest antibacterial activity among all synthesized complexes.



Shital Joshi*, Komal Sharma, Jaishri Jadhav & Uma Sharma

1055 Hantzsch synthesis of 1,4-dihydropyridine derivatives over ZnO/ZrO₂ catalyst under solvent free condition

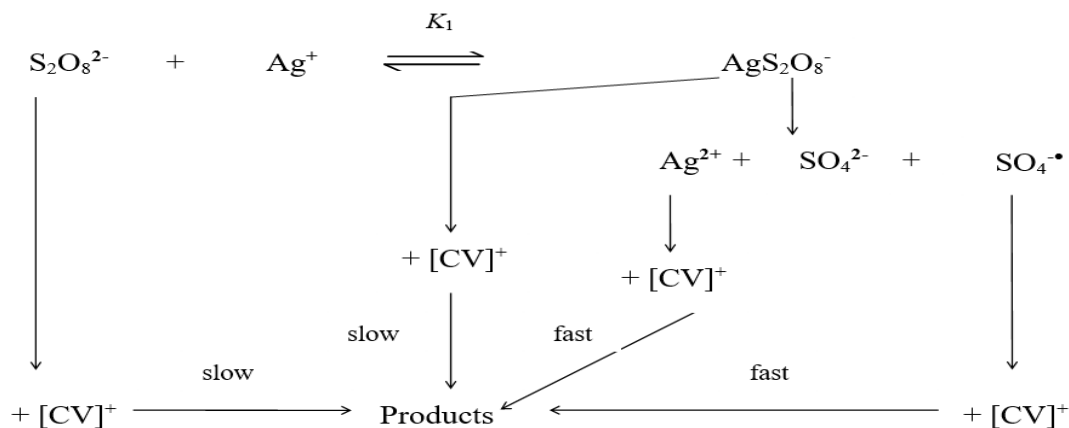
A facile synthesis of 1,4-dihydropyridine derivative using zirconia supported zinc oxide catalyst under mild condition is reported. Impregnation of zinc onto zirconia and calcination promotes the transformation of monoclinic phase to tetragonal phase, an increase in acidity and catalytic activity.



Prasad Sunkara, M Keshavulu, Veerasomaiah Puppala, P Vijay Kumar & Manohar Basude*

1064 Silver(I) catalyzed oxidation kinetics of the crystal violet dye by peroxydisulphate in aqueous and micellar media

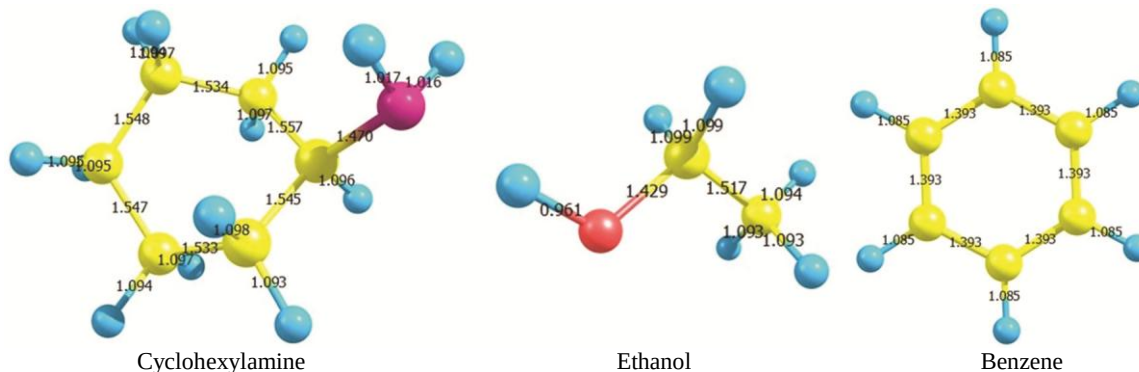
The kinetics of the oxidative decolourisation of crystal violet (CV⁺) as a cationic dye by peroxydisulphate using silver(I) catalyst in aqueous acidic medium has been studied. The effects of different parameters like hydrogen ion, silver(I), reactants concentration, micelles and temperatures are investigated. The reaction between [CV]⁺ and persulphate is investigated under pseudo-first-order kinetics by taking a large excess of [S₂O₈²⁻] over [CV]⁺. An outer-sphere process for the electron transfer is the proposed mechanism for this reaction.



Salem A Hameed* & Hassan A Ewais

1072 Computational and experimental study of molecular interaction in a ternary liquid mixture of cyclohexylamine+ethanol+benzene

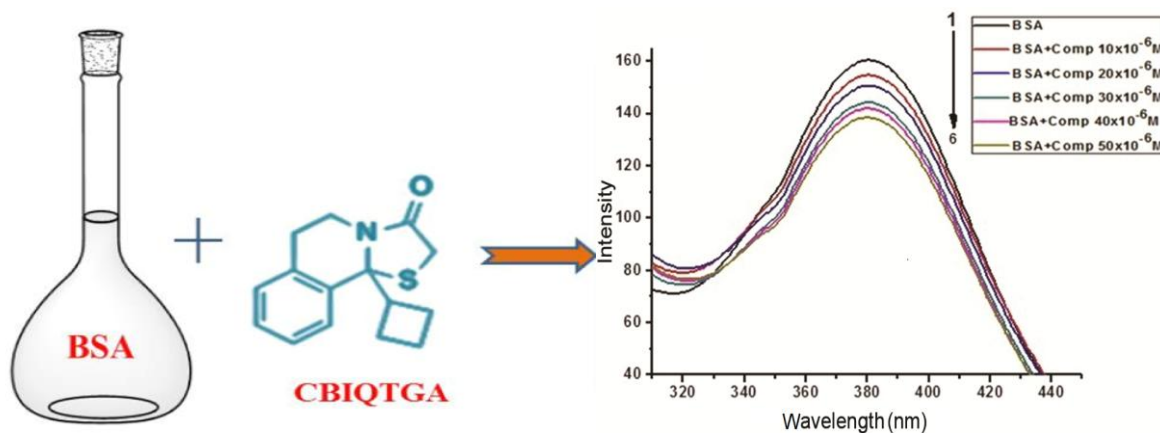
The molecular interaction in a ternary mixture of cyclohexylamine (CHA), ethanol (Eth) and benzene (B) is studied theoretically as well as experimentally. The interaction between CHA dimer and complexes (Eth-CHA, B-CHA, CHA-Eth-B) are studied theoretically using density functional theory in gas phase. The variations in excess acoustic parameters with the concentration of CHA are discussed in terms of the interactions and molecular geometry of the liquid mixture.



Hema, Tara Bhatt*, Tarun Pant, Charu Ch Dhondiyal & Himani Tiwari

1081 Synthesis and spectroscopic investigation of binding of novel Thiazolo [2, 3-a] isoquinoline analog with bovine serum albumin

A condensation reaction between 1-cyclobutyl-3,4-dihydroisoquinoline and thioglycolic acid has been carried out using DCC yields 10b-cyclobutyl-5,6-dihydro-2H-thiazolo [2, 3-a] isoquinolin-3(10bH)-one [CBIQTGA]. The interaction of CBIQTGA with bovine serum albumin has been studied using UV spectroscopy, spectrofluorimetry and circular dichroism techniques.



Prasanna B Ranade, Dinesh N Navale, Santosh W Zote, Dnyaneshwar K Kulal, Mohmad V Sheikh & M M V Ramana*

Authors for correspondence are indicated by (*)