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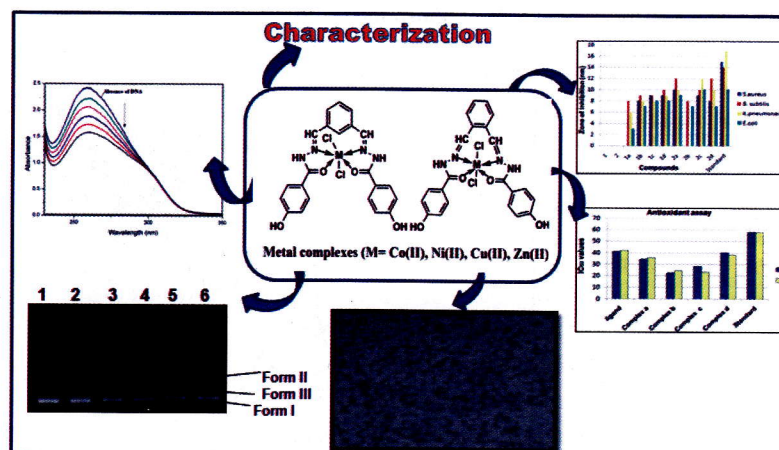
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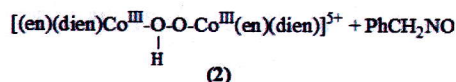
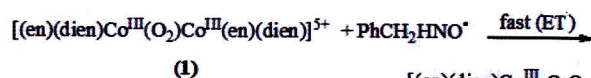
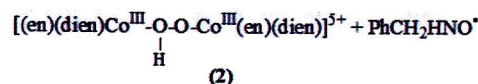
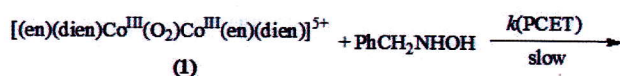
### Papers

- 915 **Synthesis, spectral characterisation and pharmacological studies on Co(II), Ni(II), Cu(II) and Zn(II) bis-Schiff base complexes derived from 4-hydroxybenzohydrazide** The synthesised ligands and their metal complexes were characterized by various spectroscopic methods. The compounds were exhibited the good pharmacological effects.



P Priya, P Jayaseelan & S Vedanayaki\*

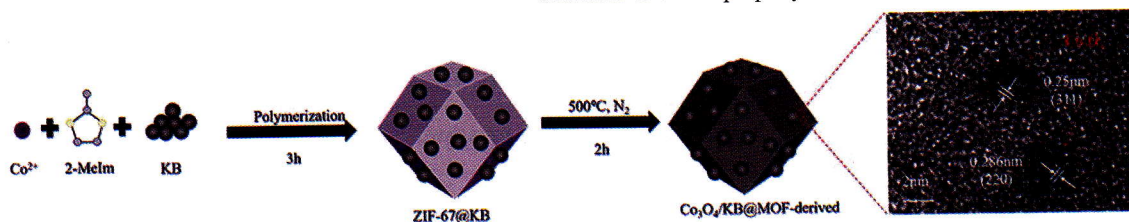
- 927 **Kinetics and mechanistic studies for oxidation of N-benzylhydroxylamine by a Co<sup>III</sup>-bound bridging superoxo complex in perchloric acid medium** In perchloric acid medium, the superoxide ligand in [(en)(dien)Co<sup>III</sup>(O<sub>2</sub>)Co<sup>III</sup>(en)(dien)]<sup>5+</sup>, (1) oxidise PhCH<sub>2</sub>NHOH in parallel paths viz; proton coupled electron transfer (PCET) from PhCH<sub>2</sub>NHOH and electron transfer (ET) from PhCH<sub>2</sub>NHO<sup>•</sup>.



Sekhar Gain\*

932 **Highly dispersed and ultrafine  $\text{Co}_3\text{O}_4$ @N-doped carbon catalyst derived from metal-organic framework for efficient oxygen reduction reaction**

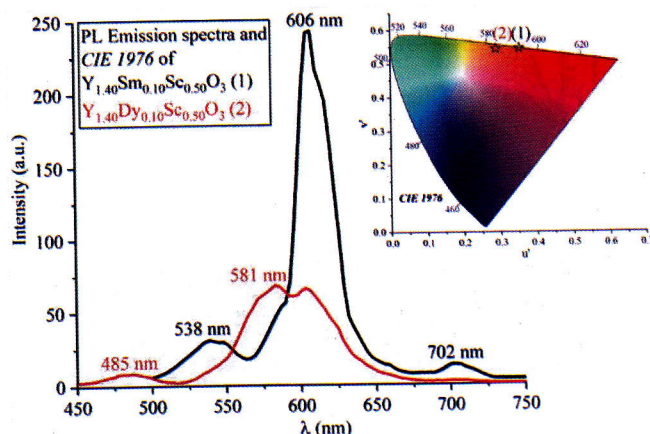
$\text{Co}_3\text{O}_4$ /ketjen black (KB)@MOF-derived with uniformly dispersed and ultrafine  $\text{Co}_3\text{O}_4$  nanoparticles (1-5 nm) synthesized by a facile in-situ method, exhibit enhanced activity with onset potential of 0.96 V (vs. RHE) and a half-wave potential of 0.86 V (vs. RHE) in 0.1 M KOH solution, the excellent durability with  $E_{1/2}$  a small negative shift of 10 mV after 5000 continuous cycles and good methanol-tolerance property.



Yuanyuan Chu\*, Bohan Deng, Kuixiao Wang, Yu Xue & Xiaoyao Tan

938 **Synthesis and photoluminescence analysis of  $\text{Y}_{1.50}\text{Sc}_{0.50}\text{O}_3:\text{Sm}^{3+}$  and  $\text{Y}_{1.50}\text{Sc}_{0.50}\text{O}_3:\text{Dy}^{3+}$  phosphors**

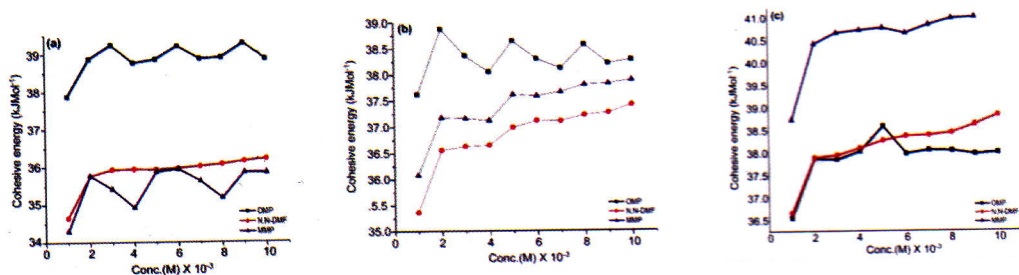
Both phosphors could be considered as supplementary, and therefore, they are candidate for white-emitting devices (LEDs).



Esra Öztürk\* & Erkul Karacaoglu

943 **Acoustical & thermodynamic properties of some ternary systems of 1-pentanol in n-hexane solution with various organic compounds using ultrasonic technique**

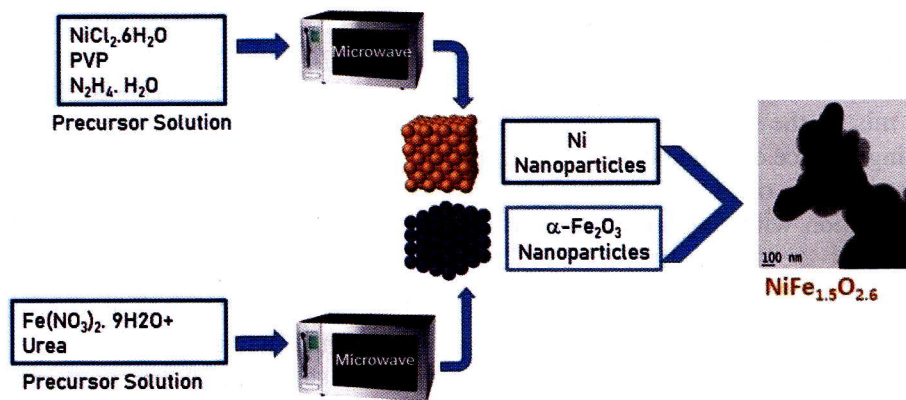
The thermo-physical parameters like density, ultrasonic velocity and viscosity have been experimentally measured for the ternary liquid mixtures of 1-pentanol with N,N dimethyl formamide (N,N-DMF) / o-methoxy phenol or 2-methoxy phenol (OMP) / m-methoxy phenol or 3-methoxy phenol (MMP) in n-hexane medium at various temperatures like 303 K, 308 K and 313 K.



P S Syed Ibrahim\*, J Edward Jeyakumar & S Chidambara Vinayagam

953 **Synthesis and characterisation of nickel-iron bimetallic oxide nanoparticles via microwave irradiation technique**

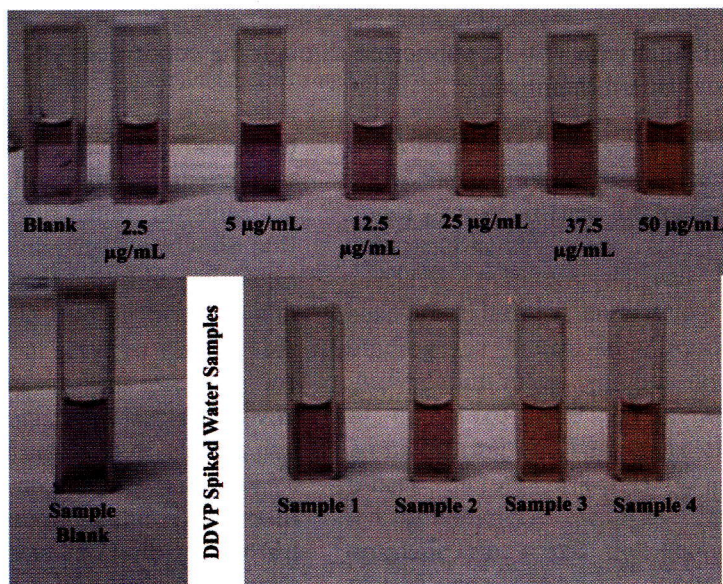
The microwave assisted synthesised Nickel and iron oxide nanoparticles are combined together in 1:1 molar ratio and treated under microwave irradiation followed by calcination to get Ni-Fe bimetallic oxide nanoparticles (average size~30 nm).



V G Viju Kumar\*, Vidya V G & Arsha P Mohan

959 **Digital camera analysis of dichlorvos by phloroglucinol and quantitate with standard colour chart in environmental water matrices – an approach**

Digital camera analysis for dichlorvos is performed using alkaline degradation path in phloroglucinol to quantitate the colour in ground water samples. The colour is pale purple to dark brown and act as one-time multi standard colour chart for dichlorvos.



Kamesh Viswanathan Baskaran\*

Authors for correspondence are indicated by (\*)