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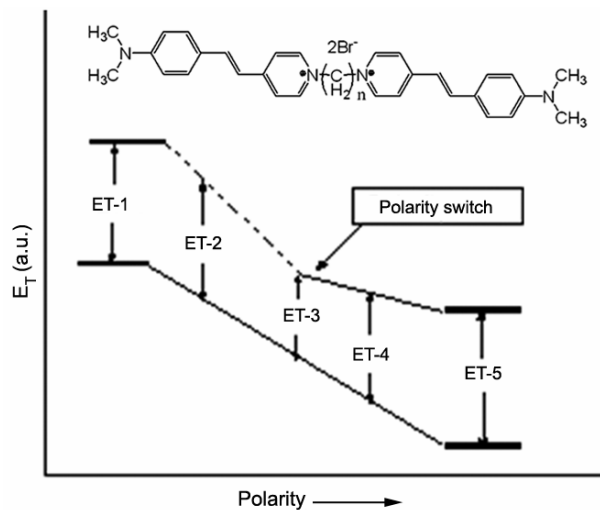
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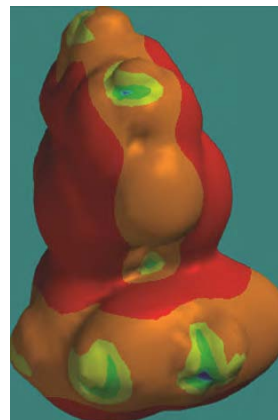
## CONTENTS

- 9 Solvent effect on the photophysical behavior of some bischromophoric dyes Hemicyanine dyes experience reversal in solvatochromism delineating a polarity switch for solvents at  $E_T(30)$  value of 52-55.



Sasmita Baliarsingh, Sabita Patel & Bijay K Mishra\*

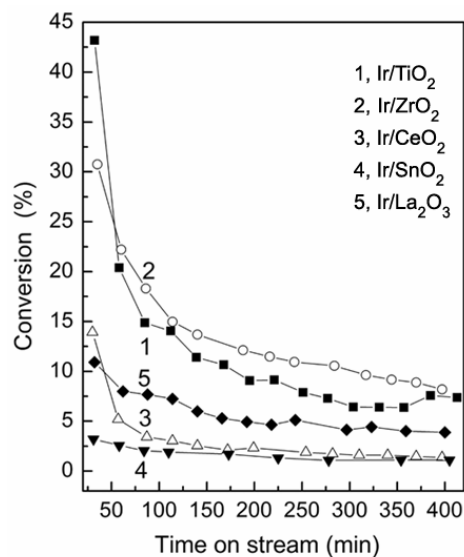
- 19 Intermolecular interaction in the benzene- $Ar_n$  and benzene dimer van der Waals complexes: DFT analysis of the charge distribution and electric response properties The wB97-XD method reproduces the well positions and well depths of the bz- $Ar$  and bz-bz clusters to a high degree of accuracy with the experimental data.



Rifaat Hilal\*, Walid M I Hassan, Abdulrahman Alyoubi,  
Saadallah G Aziz & Shabaan A K Elroby

28 **Selective hydrogenation of crotonaldehyde over supported Ir catalysts: Effect of surface acidity on catalyst deactivation**

Ir/TiO<sub>2</sub> catalyst shows the highest initial conversion of crotonaldehyde, while the Ir/SnO<sub>2</sub> catalyst shows the lowest activity. Deactivation of Ir catalysts strongly depends on the surface acidity.



Xiao Hong, Ji-qing Lu, Bo Li, Ling-yun Jin,  
Geng-shen Hu, Yue-juan Wang\* & Meng-fei Luo\*

### Notes

34 **Syntheses, structures and properties of pentacoordinated zinc(II) halide complexes containing a tridentate Schiff base as end capping ligand**

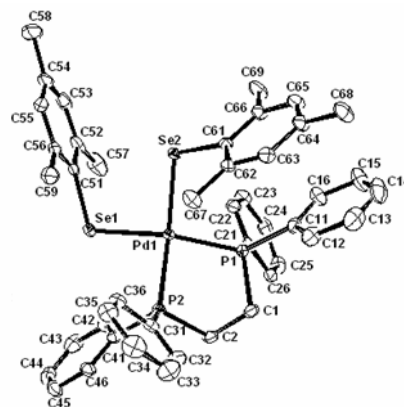
Pentacoordinated zinc(II) halide complexes in combination with a tridentate Schiff base show chelation behavior of Schiff base and terminal motif of halides. Intermolecular C-H...O, C-H...Br and C-H...I hydrogen bonds along with ... and C-H... interactions indicate different crystalline aggregates. The complexes display intraligand <sup>1</sup>( - \*) fluorescence in DMF solutions at room temperature.



Subhasis Roy, Subhasish Kundu, Kishalay Bhar,  
Smita Satapathi, Partha Mitra &  
Barindra Kumar Ghosh\*

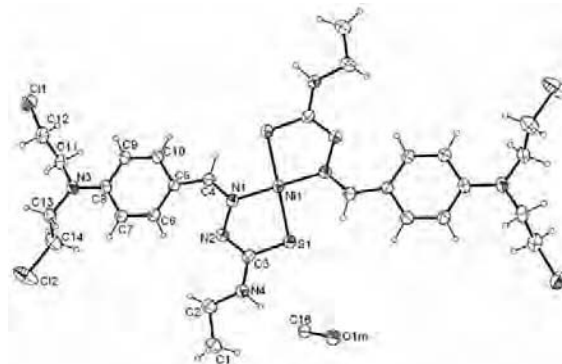
- 41 **Bis-phosphine palladium(II) mesityl chalcogenolate complexes: Synthesis and structure of [Pd(SeMes)<sub>2</sub>(dppe)]**

Reactions of [PdCl<sub>2</sub>(P<sup>∧</sup>P)] (P<sup>∧</sup>P = dppe, dppp) with Pb(SMes)<sub>2</sub> or NaEMes yield mononuclear complexes of the type, [Pd(EMes)<sub>2</sub>(P<sup>∧</sup>P)] (Mes = mesityl (2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>); E = S, Se or Te) while the reaction of [PdCl<sub>2</sub>(dppp)] with NaTeMes affords a trinuclear complex, [Pd<sub>3</sub>(μ-Te)<sub>2</sub>(dppp)<sub>3</sub>]<sup>2+</sup>.



Rohit Singh Chauhan, G Kedarnath,  
James A Golen, Arnold L Rheingold & Vimal K Jain\*

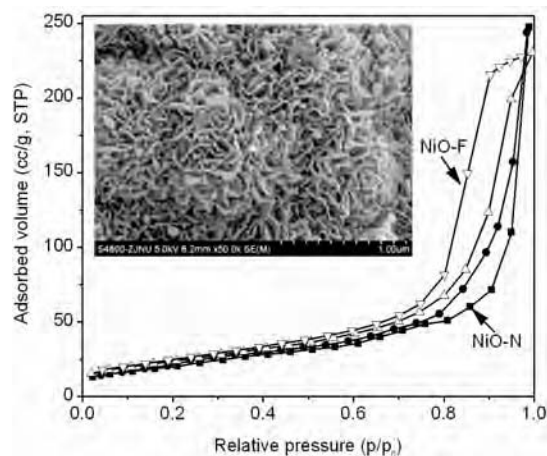
- 45 **Synthesis and characterization of nickel(II) complex of *p*-[N, N-bis (2-chloroethyl)amino]benzaldehyde-4-ethyl thiosemicarbazone**



S Anitha, J Karthikeyan\* & A Nityananda Shetty

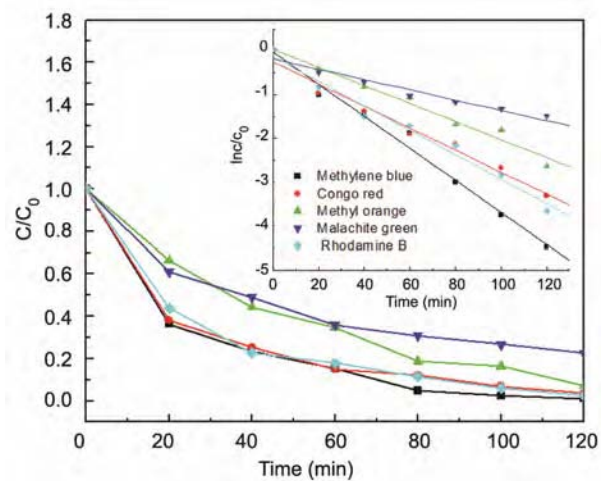
- 51 **A facile synthetic route to flower-like NiO and its catalytic properties**

Flower-like NiO synthesized via a facile synthetic route exhibits better catalytic performance for oxidative dehydrogenation of ethane reaction as compared to conventional particulate NiO.



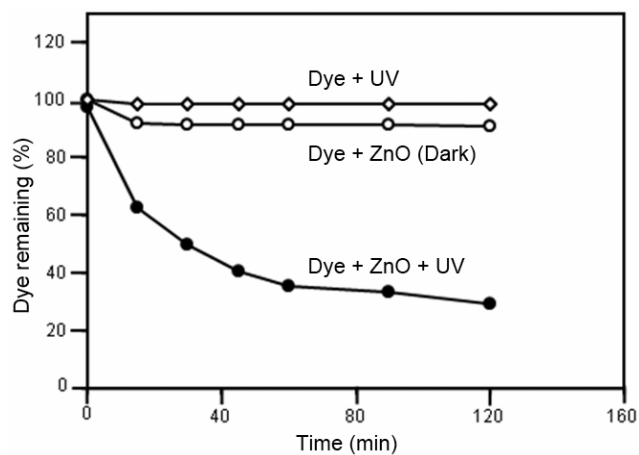
Dishan Zhou, Aifeng Yan, Ying Wu\* & Tinghua Wu\*

- 57 Photocatalytic and antibacterial activities of CdS nanoparticles prepared by solvothermal method



Zhihong Jing\*, Lihua Tan, Fen Li, Jun Wang,  
Yucai Fu & Qian Li

- 63 Photocatalytic destruction of an organic dye, Acid Red 73 in aqueous ZnO suspension using UV light energy



A Nilamadhanthai, N Sobana, B Subash,  
M Swaminathan & M Shanthy\*

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Authors for correspondence are indicated by (\*)