

Indian Journal of Chemistry

Sect. A: Inorganic, Bio-inorganic, Physical, Theoretical & Analytical

www.niscair.res.in; http://nopr.niscair.res.in
CODEN: ICACEC; ISSN: 0376-4710 (Print), 0975-0975 (Online)

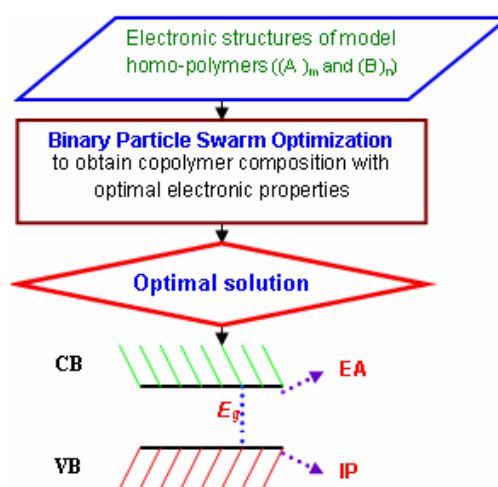
VOLUME 52A

NUMBER 3

MARCH 2013

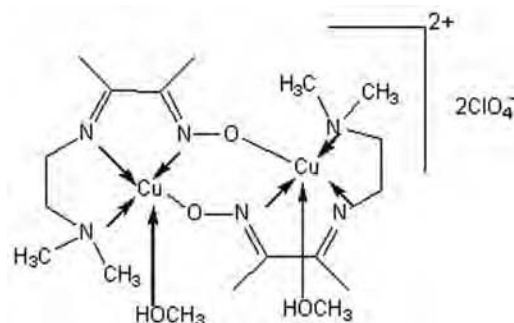
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- 317 In-silico engineering of intrinsically conducting copolymers using particle swarm optimization algorithm



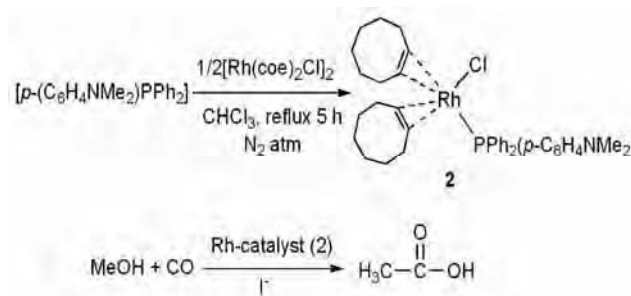
Priyanka Thakral, Vinita Arora, S Kukreti & A K Bakhshi*

- 327 Synthesis, crystal structure, DNA binding and cleavage activities of oximate bridged cationic dinuclear copper(II) complex having labile ligands



P Haribabu, K Hussain Reddy* Yogesh P Patil & M Nethaji

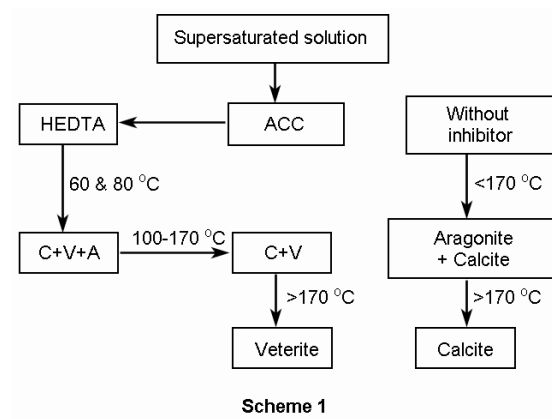
- 334 **Ruthenium(II), rhodium(I) and iridium(I) complexes with *p*-(N,N-dimethylamino) phenyl)diphenylphosphine ligand: Synthesis, characterization and rhodium-catalysed carbonylation of methanol**



Geetika Borah* & Devajani Boruah

- 342 **Anomalous transformation of calcite to vaterite: Significance of HEDTA on crystallization behavior and polymorphism at elevated temperatures**

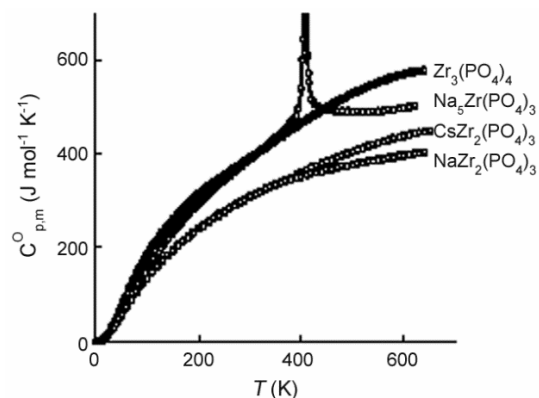
Above 170 °C, HEDTA facilitates the unusual transformation of calcite to vaterite, which could make it a possible potential scale inhibitor and a boiler sludge conditioner at elevated temperatures.



Shanmukhaprasad Gopi & V K Subramanian*

350 Thermodynamic properties of compounds with kosnarite-type structure

Thermodynamics properties, viz., heat capacity, entropies and enthalpies of formation for the crystalline kosnarite-type structure compounds $A_x\text{Me}_{2.25-0.25x}(\text{PO}_4)_3$ ($A = \text{Na}, \text{Cs}; \text{Me} = \text{Ti}, \text{Zr}, \text{Hf}; x = 0, 1, 5$) are discussed. Isostructural solid-to-solid phase transitions of $\text{Na}_5\text{Zr}(\text{PO}_4)_3$ and $\text{Na}_5\text{Hf}(\text{PO}_4)_3$ show centering of the off-centered Me atoms in octahedral sites and Na^+ occupation transfer between sodium sites.

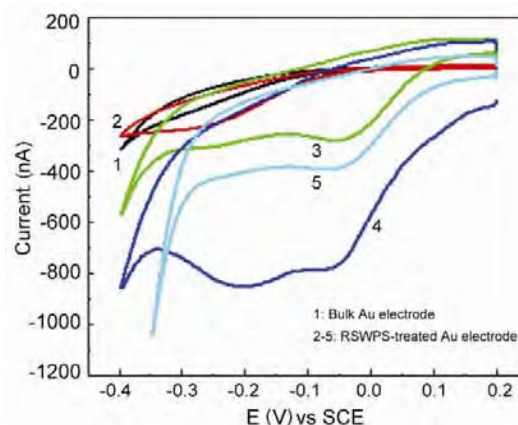


V I Pet'kov* & E A Asabina

Notes

357 Enhanced electrocatalytic reduction of oxygen by repetitive square wave potential signal treated gold electrodes

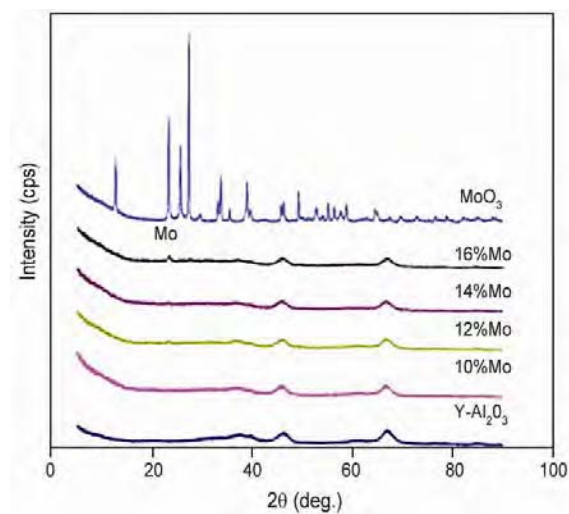
High frequency square wave potential signal treated gold electrode shows a two-step four-electron pathway towards electrochemical oxygen reduction.



Guangming Liu, Shipeng Yu & Shufeng Liu*

362 Effect of metal dispersion on hydrodesulphurization activity of alumina-supported molybdenum catalysts

CO chemisorption has been explored to study the metal dispersion of hydrotreating catalyst. Metal dispersion and hydrodesulphurization activity show that CO selectively adsorbs on the specific sites of hydrotreating catalyst and there is a correlation between dispersion and hydrodesulphurization activity.



G Pritika, T Chiranjeevi*, D T Gokak &
N V Choudary

Authors for correspondence are indicated by (*)