Rapid Communication

455 Design of neutral hydrocarbons having a planar tetracoordinate carbon

U Deva Priyakumar & G Narahari Sastry*

A new bonding mode wherein the planar tetracoordinated arrangement is more stable than the tetrahedral form is proposed.

Papers

458 Lyotropic liquid crystals formed in 3-dodecyloxy-2-hydroxypropyl trimethyl ammonium bromide–n-butanol–n-decane–water system

Lan-Ying Zhu, Xi-Lian Wei, Qing Sang, Bao-Lin Yin & De-Zhi Sun*

Model investigations on the surface composition and catalytic activity of supported Pt-Rh nanocatalysts and their dependence on the impurity and the metal-support interactions have been presented. Monte-Carlo simulations indicate that sulphur can influence the surface composition very strongly; but the influence of metal-support interaction on the surface composition is insignificant.

464 Model studies on segregation and catalytic properties of supported Pt-Rh nanocatalysts

Abir De Sarkar & Badal C Khanra *

Ceria loaded rutile samples with different percentages of ceria and their sulphated analogues have been synthesized and characterized. Vapour phase decomposition of cyclohexanol performed over all the systems reveals that sulphation of the ceria loaded systems leads to selective catalysts for cyclohexene formation.

473 Surface properties and catalytic activity for cyclohexanol decomposition of ceria loaded rutile and their sulphated analogues

J Babu, K R Sunajadevi & S Sugunan*

Infrared multiphoton dissociation studies are reported on acrylonitrile at pressures of ~ 10 torr by irradiation at 976 cm⁻¹ by a TEA CO₂ laser. The stable products on irradiation have been found to be H₂, C₂H₂ and C₂H₄. With increased laser energy, the radical pathways compete with the molecular elimination channels leading to extensive decomposition of acrylonitrile.
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>487</td>
<td>Poly(o-toluidine-co-o-chloroaniline) copolymers: Effect of polymerization conditions on the properties of the copolymers</td>
<td>P Savitha &amp; D N Sathyanarayana*</td>
</tr>
<tr>
<td>494</td>
<td>Liquid membrane phenomena: Degree of coupling and electrokinetic energy conversion in liquid membranes generated by Triton X-100</td>
<td>Abhay K Jain* &amp; Jai P Upadhyay</td>
</tr>
<tr>
<td>505</td>
<td>Viscosities and electrical conductances of some tetraalkylammonium and common ions in aqueous binary mixtures of N,N-dimethylacetamide at 298.15K</td>
<td>Debashis Das &amp; Dilip K Hazra*</td>
</tr>
<tr>
<td>511</td>
<td>Halogen oxidation of some diarylthiourea carbonyl complexes of chromium and molybdenum</td>
<td>A K Shrimal*, Amar Nath &amp; Amar Srivastava</td>
</tr>
<tr>
<td>516</td>
<td>A study on heterobimetallic chemistry of polyfunctional bis(2-hydroxy-1-naphthaldehyde) malonoyldihydrazono Dioxouranum(VI), dioxomolybdenum(VI), zinc(II), copper(II), nickel(II) and cobalt(II) complexes</td>
<td>R A Lal*, J Chakraborty, A Kumar, S Bhaumik, R K Nath &amp; D Ghosh</td>
</tr>
</tbody>
</table>

**Notes**

- **527** NMR studies of N-vinyl pyrrolidone / 4-vinyl pyridine copolymers.
  - Sunita Hooda*, Rajeev Kumar & Manpreet Kaur

- Fully substituted polyaniline derivatives are synthesized by chemical copolymerization of o-toluidine with o-chloroaniline by three different methods to note the effect of synthesis conditions and their structures determined. The copolymers are soluble in DMSO and their conductivities are generally higher than those of the homopolymers.

- The transport coefficients of liquid membranes generated by triton X-100 in series array with a supporting membrane have been evaluated from the coefficients of total composite series membrane. The trends observed in resistance coefficients, degree of coupling and energy conversion corresponding to liquid membranes suggest that the liquid membranes generated at the interface are stabilized when ethylene glycol is added in the dispersion.

- Electrical conductance measurements are reported for tetraalkylammonium bromides, sodium bromide and sodium tetraphenyl borate in binary mixture of N,N-dimethylacetamide and water. The results have been interpreted considering the selective solvation, size and structure forming effect of ions and also the movement of ions in a strongly hydrogen bonded solvent system.

- Halogen oxidation of several sym-diaryltlioureas (L), viz., sym-diphenylthiourea, sym-di-o-tolyliourea, sym-di-o-anisidylthiourea and sym-di-t-º-naphthylthiourea chromium and molybdenum carbonyls have been studied. The species isolated are heptacoordinated [(L)Mo(CO)₄X₂], hexacoordnated [(L)Cr(CO)₄X]X and [(L)Cr(CO)₄X₂] (X = Br or I).
Kinetics and mechanism of bromination of phenols by sodium bromate - sodium bisulphite reagent in water - acetonitrile mixture

\[ O\text{H}_2C\text{O}_2H + \text{Br}^- \rightarrow \text{HBr} + \text{H}_2\text{O} \]

J Viroopakshappa & V Jagannadham*

Synthesis and characterization of organogallium complexes derived from 2-(hydroxy)pyridine, 2-(hydroxy methyl)pyridine and 2-(2-hydroxy ethyl)pyridine

R\text{3}Ga\text{Et}_2\text{O} + 2\text{HO(CH}_2\text{)}_2\text{C}_2\text{H}_4\text{N} \rightarrow [R\text{3}Ga\{\text{O(CH}_2\text{)}_2\text{C}_2\text{H}_4\text{N}\}] + \text{RH} + \text{Et}_2\text{O}

R\text{3}Ga\text{Et}_2\text{O} + 2\text{HO(CH}_2\text{)}_2\text{C}_2\text{H}_4\text{N} \rightarrow [R\text{Ga(O(CH}_2\text{)}_2\text{C}_2\text{H}_4\text{N})_2] + 2\text{RH} + \text{Et}_2\text{O}

Nisha P Kushwah, Dimple P Dutta & Vimal K Jain*

Synthesis of phenylamino bis(dichlorophosphine oxide) and its complexes with group 12 metals

```
PhNH\textsubscript{2} + \text{POCl\textsubscript{3}} (excess) \rightarrow 95-100 \degree\text{C} \rightarrow \begin{array}{c}
\begin{array}{c}
\text{Cl} \\
\text{Cl}
\end{array}
\end{array}
\begin{array}{c}
\begin{array}{c}
\text{P}
\end{array}
\end{array}
\begin{array}{c}
\begin{array}{c}
\text{Cl}
\end{array}
\end{array}
\begin{array}{c}
\begin{array}{c}
\text{Cl}
\end{array}
\end{array}
\begin{array}{c}
\begin{array}{c}
\text{R}
\end{array}
\end{array}
\end{array}
```

Srinivasan Priya & Maravanji S Balakrishna*

Dioxomolybdenum(VI) and dioxouranium(VI) complexes of tetradentate amidate ligands

The ligands methylsalicyl, diaminoprop; [MoO\textsubscript{2}(acac), refluxing me [MoO\textsubscript{2}L] and densation of ane. 1,2-react with molar ratio in the formula

Mannar R Maurya* & Neha Singh

Synthesis, spectral and electrochemical studies on Fe (III) and Mn (II) complexes with a tridentate ligand carrying pendant benzimidazolyl groups

Lata Nohria & Pavan Mathur*

Dinitrosylmolybdenum(0) complexes of catalytic and environmental relevance: A novel single step synthesis of dinitrosylmolybdenum(0) complexes of \{Mo(NO\textsubscript{2})\}_2^+ electron configuration involving biologically active 8-hydroxyquinoline-sulphonamides directly from molybdate(VI) and their characterization

R C Maurya*, A K Singh & S Rajput
Synthesis and physico-chemical studies on transition metal complexes of macrocyclic ligand derived from 2,6-diacetylpyridine dihydrazone

Mohanm1ad Shakir*, Poonam Chingsubam, Hamida-Tun-Nisa Chishti, Yasser Azim & Nishat Begum

Synthesis and characterization of indole-3-acetates and indole-3-butyrate of Mo(VI) and W(VI)

Haq N Sheikh*, Ashaq Hussain, Madhu Sharma & Bans L Kalsotra

Synthesis and characterization of schiff base derivatives of bimetallic[Mg(II); Al(III)]-μ-oxoisopropoxide

Harish K Sharma* & Pramesh N Kapoor

Quinoline-8-thiol functionalized solid phase extractant for the preconcentration of ultratrace amounts of mercury(II)

Rosilind Mathew, A Maria starvin & T Prasada Rao*

A facile spectrophotometric method for the determination of hypochlorite using azure B

B Narayana*, K Vipin, Mendalin Mathew & N V Sreekumara

Extractive spectrophotometric determination of molybdenum(VI) using 3-hydroxy-2-(4-methoxyphenyl)-6-propionyl-4H-chromen-4-one as a new reagent.

Rameshwar Dass*, Anil Kumar & R G Sharma

Authors for correspondence are indicated by (*)