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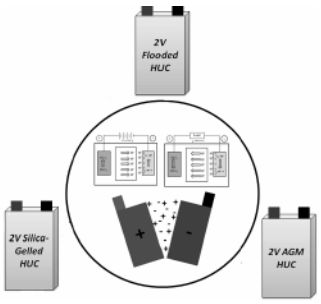
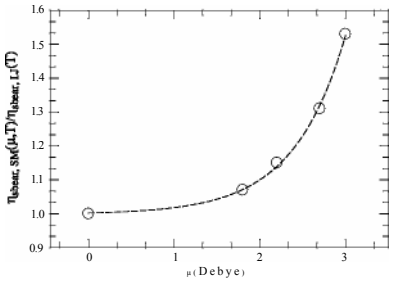


Substrate integrated Lead-Carbon hybrid ultracapacitor with flooded, absorbent glass mat and silica-gel electrolyte configurations

A Banerjee, M K Ravikumar, A Jalajakshi, P Suresh Kumar, S A Gaffoor and A K Shukla ..... xxx–xxx

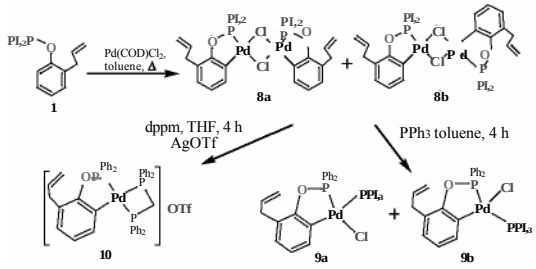
Substrate-integrated Lead-Carbon hybrid ultracapacitor are fabricated with varying electrolyte configurations, namely flooded, absorbent-glass-mat (AGM) and silica gel, and performance tested. A cause and effect analysis of the various physical and electrical parameters pertaining to the aforesaid Lead-Carbon hybrid ultracapacitors is presented.



Does polar interaction influence medium viscosity? A computer simulation investigation using model liquids

Snehasis Daschakraborty and Ranjit Biswas..... xxx–xxx

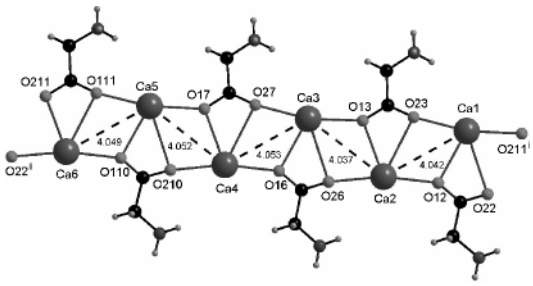
Simulated results for Lennard-Jones and Stockmayer fluids at 300 K using parameters for argon at ~1. 14 g/cm^3 are brown. Lines going through the simulated data are for visual guide. Note that the maximum increase in viscosity with dipole moment is nearly 60%.



Allyl functionalized phosphinite and phosphonite ligands: Synthesis, transition metal chemistry and orthopalladation reactions

Singappagudem Govindaraju, Guddekoppa S Ananthnag, Susmita Naik, Shaikh M Mobin and Maravanji S Balakrishna ..... xxx–xxx

Coordination chemistry of allyl functionalized phosphinite and phosphonite ligands $PPh_2(OAr)$ [Ar = $C_6H_4(\sigma C_3H_5)$] (1) and phosphonite $PPh(OAr)_2$ (2) is described. Reactions of 1 and 2 with ruthenium and gold yield simple mononuclear complexes, whereas the reaction of 1 with palladium(II) reagents produce both *cis*- and *trans*-orthometallated complexes.



Synthesis and structural characterization of a calcium coordination polymer based on a μ3-bridging tetradentate binding mode of glycine

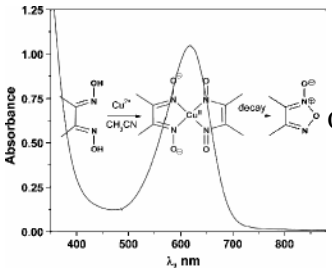
Subramanian Natarajan, Bikshandarkoil R Srinivasan, J Kalyana Sundar, K Ravikumar, R V Krishnakumar and J Suresh ..... xxx–xxx

The synthesis and structural characterization of a new coordination polymer namely $[[Ca_6(H^-gly)_{12}(H_2O)_{18}]Cl_{12}\cdot{}^6H_2O]_n$ (1) (H-gly = glycine) isolated from the calcium chloride-glycine-water system is reported.

One-pot multi-component synthesis of 1,4-dihydropyridine derivatives in biocompatible deep eutectic solvents

Suhas Pednekar, Rahul Bhalerao and Nitin Ghadge 615-621

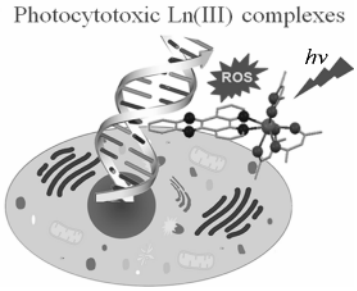
An environmentally benign one-pot synthesis of 1 ,4-dihdropyridine derivatives using recyclable biocompatible deep eutectic solvent (DES) is reported.



Mechanistic studies of copper(II)-mediated oxidation of vic-dioxime to furoxan

Oindrila Das and Tapan Kanti Paine 1269-1273

Copper(II) salts in acetonitrile oxidize vic-dioximes to furoxans gave high yields under ambient conditions. A dioximate-copper(II)-dinitrosoalkene intermediate is implicated in the reaction pathway.



Photocytotoxic lanthanide complexes

Akhtar Hussain and Akhil R Chakravarty 1327-1342

The emerging chemistry of lanthanide complexes showing photo-induced DNA cleavage activity and photocytoxicity in cancer cells is reviewed. Lanthanide complexes of pyridyl bases show significant photocytotoxicity in HeLa cells in UV-A light of 365 nm. The cell death is apoptotic in nature as revealed from the fluorescence microscopic studies.

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