

Journal of the Indian Chemical Society

VOLUME 96

NUMBER 1

JANUARY 2019

C O N T E N T S

An instrument for instant identification of chromatic changes in chemical reactions	1
A. Deepa, S. Ananthi, K. R. Balaji and V. Vignesh	
Synthesis and characterization of SiO₂-chitosan/AgNPs composite and its application for catalysis	5
A. Saravanakumar and M. Dharmendirakumar	
Solubility and swelling studies of polymer hybrid-nickel oxide nanocomposite	7
A. Suhasini and K. P. Vinod Kumar	
Synthesis and characterization of nanoclay doped PVC/polyester composite film	9
A. Mohammed Ibrahim and T. K. Shabeer	
Penetration enhancer accelerated solubilization of curcumin by poly(vinylpyrrolidone)	14
Anjitha Satheesh, Sreedevi Paramparambath, Elango Kandasamy and Susithra Selvam	
One-pot synthesis of modified 4-aryl-4H-chromenes and their preliminary anti-cancer studies	19
Archana D. Nair, Athira C. K., Priyadharshini Manikandan and Prasanna Ramani	
Study of corrosion inhibition property of metal oxides for carbon steel in acidic medium by gravimetric analysis	23
J. Arockia Selvi, M. Arthanareeswari, P. Kamaraj, T. Pushpa Malini and K. Thilakavathi	
A comparative study of hydroxyapatite (Ca₁₀(PO₄)₆(OH)₂) using sol-gel and co-precipitation methods for biomedical applications	25
B. Shalini and A. Ruban Kumar	
Calculation of activation energy for unsaturated polyamide using fumaric acid and 2,6-diaminopyridine by modified Higashi-Yamazaki phosphorylation method	29
B. Sridevi, D. Venkatesh and M. Chitra	
Thermal studies of unsaturated aliphatic-heterocyclic polyamides	32
B. Sridevi and R. Vijayakumar	
Biological studies of unsaturated aliphatic-heterocyclic polyamides	36
B. Sridevi and D. Venkatesh	
Biosynthesis of silver nanoparticles using <i>Piper nigrum</i> and its application in the photocatalytic degradation	38
D. Latha, S. Munusamy, A. Padmanaban, G. Gnamoorthy, S. Sampurnam, C. Arul Vasu and V. Narayanan	

Effect of complexing agent: Comparative study of copper based ternary thin films by chemical bath deposition technique	40
E. Anuja, R. Thiruneelakandan and K. Manikandan	
Insight into nonlinear third order susceptibility measurement and optical limiting nature of 8-hydroxyquinolinium hydrogen fumarate single crystal	45
G. Ahila, G. Vinitha and G. Anbalagan	
Synthesis and characterization of benzoin α-oxime and 2,6-pyridine dimethanol and its application of anti-corrosion behaviour	48
G. Kavitha and C. Vedhi	
Physico-chemical characterization and antimicrobial efficiency of beta-cyclodextrin/hydroxyapatite composite	52
G. Gowri, Jayachandran Venkatesan, Sukumaran Anil and P. N. Sudha	
Mineralogical study along the northern coast of Chennai	56
I. Inigo Valan, R. Sasikala, V. Narayanan and A. Stephen	
Growth, structural, spectral and nonlinear optical studies on potassium hydrogen phthalate single crystals with glycine as additive	59
J. Venkatamuthukumar and N. Sivakumar	
Growth, structure and spectroscopic studies of an organic optical material: 4-Aminopyridinium 4-nitrophenolate 4-nitrophenol single crystal	61
A. Jagadesan, N. Sivakumar and S. Arjunan	
Role of additives in an eco-friendly electroless copper deposition bath	63
Jayalakshmi Suseela, Venkatesh Perumal and Balaramesh Palanivelu	
Physicochemical characterization of CETP sludge	65
K. Kalaivani and S. V. Srinivasan	
Characterization studies of tannery sludge, flyash and GGBS	69
K. Kalaivani and S. V. Srinivasan	
A novel method of removal of toxic lead ion from the drinking water using medicinal valued bio-adsorbents in dip-tea-bag as point-of-use application	73
Kathirvel Asokan and Sarangapani Muniraj	
AC conductivity and dielectric studies of PVA based solid polymer electrolyte	76
M. Gnana Kiran, N. Krishna Jyothi, M. Narasimha Rao and K. Vijaya Kumar	
A green synthesis, characterization of highly luminescent carbon dots from <i>Moringa oleifera</i> gum application as an efficient potentiometric sensor for Hg^{2+} toxic metal ions	78
M. Muthukumar, G. Dhinakaran, V. Narayanan, T. Raju and K. Venkatachalam	

Synthesis of poly(2,5-dimethoxyaniline)-SnO₂ nanocomposites and their structural, optical and electrochemical properties	81
M. Senthilkumar and P. Manisankar	
Impact of annealing process on electrical characteristics of Ni Schottky rectifiers fabricated on p-type Si	85
V. Manjunath, N. Nanda Kumar Reddy, K. Krishna Veni, R. Padma Suvama, P. Ananda and M. V. Lakshmaiah	
Synthesis, growth, vibrational, thermal and birefringence property of NLO active organic crystal: Quinolinium fumarate	90
J. Mohana and G. Anbalagan	
A detailed study on the effect of side chains of amino acids for the synthesis of zinc nanoparticles	93
A. Muthuvinothini and S. Stella	
Electrocatalytic properties of palladium modified zinc oxide nanorods (Pd-ZnO NRs): Hydrothermal preparation and characterization	96
K. Suresh Babu, T. Dhanasekaran, A. Padmanaban, G. Gnanamoorthy, A. Stephen and V. Narayanan	
One-dimensional TiO₂ by electrochemical anodization of DC sputtered Ti films	100
P. Vengatesh, C. Karthik Kumar and T. S. Shyju	
Performance and stability of ethanol oxidation an alkaline-acid membraneless fuel cell	103
M. Priya and B. Muthukumaran	
Triphala incorporated PCL nanomembrane as wound dressing material for infection control	111
Rajalakshmi Ramamoorthy, Swetha Andra and Murugesan Muthalagu	
Studies on proton conducting polymer electrolytes based on poly(ethylene oxide)/poly(vinyl pyrrolidone) with NH₄SCN	113
R. Sasikumar, K. Selvakumar, M. Ramesh Prabhu and V. Sethuraman	
DNA interaction studies of oxovanadium, manganese, copper and nickel complexes	118
Rajeswari Kundu, Saraswathi Kothandan, A. Sheela, Anushree Suresh and Jayanthi Abraham	
Hydrazine free synthesis of Cu nanostructures: Exploring vitamin-C as environmental benign reducing agent to synthesize Cu nanowires	121
M. Ranjana, T. G. Satheesh Babu and D. V. Ravi Kumar	
Visible light activity of sulfur doped TiO₂ nanoparticles prepared by one step process	126
S. Arunmetha and R. Jayavel	
Acetone detection at room temperature by chemical sensors based on PVDF/Al₂O₃ composite	131
S. Devikala, P. Kamaraj and M. Arthanareeswari	
Corrosion resistance behavior of PVA/ZrO₂ composite in 3.5% NaCl	133
S. Devikala, P. Kamaraj and M. Arthanareeswari	

Development of <i>Mimosa pudica</i> incorporated silk-PCL nanofibrous mat for wound healing application	136
S. Lakshmi Priya, N. M. Imayathamizhan, P. S. Swetha, R. Suganthi and R. Vignesh	
Synthesis, characterization of manganese(II) Schiff base complex and its electrocatalytic sensing of hydroquinone	139
S. Praveen Kumar, S. Munusamy, S. Muthamizh, T. Dhanasekaran, A. Padmanaban and V. Narayanan	
Studies on structural basis of epidermal growth factor receptor target using Tunicamycin on human cancer cell line	142
S. Sivaranjani and C. Arulvasu	
Synthesis and characterization of MnTe nanoparticles and its photocatalytic activity	147
S. SriNandhini, A. Padmanaban, R. Y. Sheeja and V. Narayanan	
Synthesis, spectral characterization and biological evaluation of Mn^{II}, Ni^{II} and Cu^{II} complexes with new N₂S₂ Schiff base ligand	150
S. Vigneswari, K. M. Avinash Raj and A. Jeyarajendran	
Controlling factors affecting the stability and rate of electroless copper plating	153
S. Jothilakshmi, T. Manikanda Kumaran and S. Rekha	
Study the effect of silk-fibroin/nanochitosan/hyaluronic acid on adhesion, proliferation and osteoblast differentiation of bone using MC3T3-E1 cell line for tissue engineering	158
S. Gokila, T. Gomathi, K. Vijiyalakshmi and P. N. Sudha	
Effect of composition on electrical and humidity sensing properties of NiO:MnO₂:CuO solid mixture	161
Crystal Y. Wilson and S. Manivannan	
Synthesis, characterization and visible light photocatalytic activity of PANI modified TiO₂/Cu nanocomposite	165
S. Sampurnam, T. Dhanasekaran, A. Padmanaban, S. Munusamy, D. Latha and V. Narayanan	
Synthesis of polypyrrole@ZrO₂/Ag nanocomposite and its photocatalytic activity in environmental remediation	168
S. Sampurnam, A. Padmanaban, T. Dhanasekaran and V. Narayanan	
Trace level determination of t-butyl alcohol and t-butyl chloride by GC in dolasetron mesylate	171
K. Samuel Barnabas, N. Balaji, S. Niranjani, M. Muthukumaran, V. Sivakumar, T. Raju and K. Venkatachalam	
Antimicrobial characterization of silver nanoparticle-coated polyvinyl alcohol/nanochitosan surface by “touch test” method	176
K. Sangeetha and P. N. Sudha	
Facile single step preparation of carbon nanodots from chitosan by carbonization	180
Sheril Ann Mathew, S. Dhanavel, Y. Sruthi Hubert, V. Narayanan and A. Stephen	
Electrical and di-electrical properties of PVA:PEG:CH₃COONH₄	182
Sneha Latha Pala, S. Naresh Varma, N. Krishna Jyothi and K. Vijaya Kumar	

Structural and optical properties of pulsed electrodeposited Ag-In alloy	185
T. Mohana Selvi, T. Sivaranjani, T. A. Revathy, V. Narayanan and A. Stephen	
Enhanced magnetic and catalytic properties of copper substituted barium M-hexagonal ferrites synthesized from chemical co-precipitation method	187
T. L. Ajeesha, Ashwini Anantharaman and Mary George	
Low-cost activated carbon derived from <i>Cassia alata</i> seeds for the removal of xylenol orange from aqueous solution: Kinetic, equilibrium, thermodynamic studies	198
G. Ushanandhini, K. Arivalagan and R. Tamilarasan	
Biosynthesis of gold nanoparticles using the flower extract of <i>Azadirachta indica</i> (Neem) – Characterisation and antibacterial study	200
V. Gopalakrishnan and S. Muniraj	
Remediation of selected heavy metals (Pb, Cd) from fly ash using magnetite nanoparticles	203
Virendra Kumar Yadav and M. H. Fulekar	
Visible light driven photocatalytic activity of copper sulfide nanoparticles	207
Y. Sruthi Hubert, Sheril Ann Mathew, S. Dhanavel, V. Narayanan and A. Stephen	
Development of new aliphatic biocompatible polymers from PEG 400 for their applications	209
B. Yamini and R. Nanthini	
