

Indian Journal of Pure and Applied Physics

<http://www.niscair.res.in>; <http://nopr.niscair.res.in>; Impact Factor 0.763 (JCR 2011)

VOLUME 51

NUMBER 5

MAY 2013

CODEN:IJOPAU 51(5) 275-388

ISSN:0019-5596 (Print); 0975-1041 (Online)

Special Issue

on

Recent Advances in Solid State Ionics

[This special issue is based on the papers presented at Ninth National Conference on Solid State Ionics (NCSSI-9) at Jaypee Institute of Information Technology, Noida, India during December 15-17, 2011]

CONTENTS

Preface	277
D K Rai	
Papers	
Effect of nanoadditives on ionic conductivity of solid polymer electrolyte Arup Dey, S Karan & S K De*	281
Coupled fast and slow relaxation dynamics in ion conducting solids G Govindaraj	289
Sublattice magic?!-Phase transitions in superionics C S Sunandana	296
Cathode materials for intermediate temperature solid oxide fuel cells S S Bhoga & A P Khandale	305
Application aspects of polymer electrolytes in solar cells S Austin Suthanthiraraj	310
Studies on redox supercapacitor using electrochemically synthesized polypyrrole as electrode material using blend polymer gel electrolyte S K Tripathi*, Amrita Jain, Ashish Gupta & Manju Kumari	315
Ion transport property of hot-press cast Mg ²⁺ -ion conducting nano-composite polymer electrolyte membranes: Study of effect of active/passive filler particle dispersal on conductivity R C Agrawal*, Dinesh K Sahu, Y K Mahipal & Rehana Ashrafi	320
Study of diffusion and conduction in gamma irradiated solid polymer electrolytes by fractal model structure Subhasish Ghosal, Ruma Ray*, T K Ballabh & S Tarafdar	324
Structural and electrical transport studies in CuI substituted AgI-oxysalt glass-ceramic nanocomposites formed during crystallization Neha Gupta & Anshuman Dalvi*	328

Electronic absorption studies on CO ²⁺ doped lithium phosphate glasses Prashant Dabas & K Hariharan*	331
Development of a new fast ionic system based on antimony iodide and silver phosphate S Austin Suthanthiraraj* & R Sarumathi	336
Structural and electrical conductivity studies of nanocrystalline Li ₂ NiTiO ₄ material Rajesh Cheruku, Lakshmi Vijayan & G Govindaraj*	343
Influence of nano filler on conductivity in PEO-PMMA-AgNO ₃ polymer blend Poonam Sharma, Dinesh Kumar Kanchan*, Nirali Gondaliya, Manish Jayswal & Prajakta Joge	346
Effect of nano-filler on electrical properties of PVA-PEO blend polymer electrolyte Prajakta Joge, Dinesh Kumar Kanchan*, Poonam Sharma & Nirali Gondaliya	350
Ion transport characterization and cell potential discharge performance studies of hot-press casted solid polymer electrolyte (SPE): [(1-x)PEO: xAg(ClO ₄)] R C Agrawal*, Rehana Ashrafi, Dinesh K Sahu, Y K Mahipal & Alok Bhatt	354
Electrochemical studies on nanocomposite polymer electrolytes S K Tripathi*, Ashish Gupta, Amrita Jain & Manju Kumari	358
Investigation on electrical and dielectric properties of PVP:KClO ₄ polymer electrolyte films M Ravi, S Bhavani, Y Pavani & V V R Narasimha Rao*	362
Development of solid proton conductors based on doped polyvinyl alcohol S K Gedam*, A P Khandale & S S Bhoga	367
Electrical transport in Li ₂ SO ₄ -Li ₂ O-B ₂ O ₃ glass-ceramic composites Munesh Rathore & Anshuman Dalvi*	372
Effect of Sr doping on structural, electrical and electrochemical properties of Nd _{2-x} Sr _x NiO _{4+δ} mixed ionic-electronic conductors J D Punde*, A P Khandale & S S Bhoga	376
Synthesis, structure and electrical conductivity studies of inverse spinel Li _{0.5} Fe _{2.5} O ₄ Viswarupa Mohanty, Rajesh Cheruku, Lakshmi Vijayan & G Govindaraj*	381

Authors for correspondence are indicated by (*)