Research Publications: In peer reviewed International/National Journals

2017

1. Mohan L Verma, B Keshav Rao
   Ab initio study of ionic nature of 0.75 AgI: 0.25 AgCl

2. Upma, Mohan L. Verma, Durga Verma
   First principle studies on electronic structure and charge density of potato starch

3. B Keshav Rao, Mohan L Verma
   First principle study of PEO-AgI polymer systems
4. B Keshav Rao, Mohan L Verma
   
   Modeling of space charge dielectric constant
   

5. Mohan L Verma, Homendra D Sahu
   
   Study on ionic conductivity and dielectric properties of PEO-based solid nanocomposite polymer electrolytes
   
   Ionics, 23(9), pp 2339–2350, Impact Factor: 2.062.

   
   Ab initio study of mechanical strength of solid polymer electrolyte (PEO) 5LiClO4
   

7. Rachna Singh, B Keshav Rao, Mohan L Verma
   
   Structural, electronic and transport properties of X3SnC (X= Cr/Mn/Cu) electrodes—first principle approach
   

2016

8. B Keshav Rao, Mohan L Verma
   
   Modeling of ionic charge density
   

9. B Keshav Rao, Mohan L Verma
   
   First principle study of 0.75 AgI: 0.25 AgCl: A density functional approach
10. Rachna Singh Mohan L. Verma

   **Electron Transport in Zigzag Silicon and Silicon mono-oxide Nanoribbons : Ab initio study**


2015

11. Nirbhay K. Singh Mohan L. Verma, Manickam Minakshi Sundaram

   **PEO nanocomposite polymer electrolyte for solid state symmetric capacitors**

   Bulletin of Materials Science, 2015, 38(5), pp. 1577–1588, **Impact Factor 1.02.**

12. Mohan L. Verma and Homendra D. Sahu

   **Ionic conductivity and dielectric behavior of PEO-based silver ion conducting nanocomposite polymer electrolytes**

   Ionics, 21(12), 29 July 2015, pp 3223–3231, **Impact Factor: 2.062.**


   **Capacitor with PEO/Activated Carbon based Electrode and Nanocomposite Polymer as Electrolyte**


14. Keshav Rao and Mohan L. Verma (Review Article)

   **Ionic mobility of (0.9)[0.75 AgI:0.25AgCl]:0.1SiO2 in space charge depolarization**

   Ionics, 2015, 21(3), pp.611-616, **Impact Factor: 2.062.**

15. Amar Bahadur, Mohan L. Verma and Madhukar Mishra
First principle study of structural, electronic and magnetic properties of silicon doped zigzag boron nitride nanoribbon.


16. Rajendra Prasad Gautam, Mohan Lal Verma, Jeevan Jyoti Nakarmi and Shiba Subedi

Theoretical study on Structural and Electronics Properties of Boron and Boron Nitride Nanodics: A Density Functional Approach


17. Aarti Choudhary, Youman Kumar Sahu, Anjali Oudhia, Mohan L Verma

Shape Dependent Structural and Electronic Properties of ZnO Nanostructures

Advanced Science Letters,2015, 21(9), pp.2677-2680,

DOI: https://doi.org/10.1166/asl.2015.6362

2014

18. Mohan L. Verma, Manickam Minakshi Sundaram and Nirbhay K. Singh

Structural and electrochemical properties of nanocomposite polymer electrolyte for electrochemical devices


19. Mohan L. Verma, Manickam Minakshi Sundaram and Nirbhay K. Singh

Synthesis and characterization of solid polymer electrolyte based on activated carbon for solid state capacitor
20. Mohan L. Verma and B. Keshav Rao

Modeling of ionic diffusion by space charge depolarization


2013


A density functional approach for the conductivity

CSVTU research journal, 2013, 6, pp - 13-16 2013. ISSN:0975-8725.

22. Mohan L. Verma and B. Keshav Rao

Modeling of ionic charge current density

CSVTU research journal, 2013, 6: 17-20 2013. ISSN:0975-8725.

2012

23. Mohan L. Verma and Nirbhay K. Singh

AC impedance spectroscopic of nano size Al2O3 Filler in PEO: AgI polymer electrolyte

Material Science Research India, 2012, 9(1), pp-139-146, ISSN Print: 0973-3469, Online: 2394-0565.

24. Mohan L. Verma and Nirbhay K. Singh

AC Impedance Analysis on PEO:AgI Polymer Electrolyte for Capacitor Application
25. **Mohan L. Verma** and Nirbhay K. Singh

Ultrabattery, fuel cell and supercapacitor based HEV a comparative study of performance


26. **Mohan L. Verma** and Arti Verma

Investigation on solid polymer electrolyte (SPE) membrane of composition [(1-x) PEO: x AgCl] prepared by hot press technique


### 2011

27. **Mohan L. Verma** and B. Keshav Rao

Modeling of Ag+ mobility in AgI by space charge depolarization process


28. **Mohan L. Verma** and Arti Verma

Structural and morphological characterization of Ag+ ion conducting nanocomposite polymer electrolyte membrane (1-x)[70 PEO: 30 Ag2SO4]: x Fe2O3 by hot press technique


29. **Mohan L. Verma** and Arti Verma

Study of membrane morphology of SEM image of polymer nanocomposite membrane by digital Image processing
Mohan L. Verma, Arti Verma and R.C. Agrawal

Characterization Study of Hot-Press-Synthesized Electro Active Polymeric Membranes by Image Processing


Mohan L Verma and Arti Verma

Ionic transport properties and characterization studies on Ag+ ion conducting polymeric nanocomposite electrolyte membrane (1-x)[70PEO: 30AgCl]: xTiO2 prepared by hot press technique.


2006

Mohan L. Verma, R.C. Agrawal and Mimi Mukherjee

Space charge depolarization of wurtzite or zinc blend structured silver iodide: modeling of preliminary studies


2000

R. C. Agrawal, Mohan L. Verma, R. K. Gupta and S Thaker
Characterization of basic transport properties in a new fast Ag+ ion conducting composite electrolyte system: (1− x)[0.75 AgI: 0.25 AgCl]: xZrO2


1999

35. R. C. Agrawal, Mohan L. Verma and R. K. Gupta

Studies on persistent-polarization/memory-type effect in Ag+ ion conducting quenched [0.75 AgI: 0.25 AgCl] mixed-system/solid-solution


Polarization/self-depolarization studies on Ag+ ion conducting quenched [0.75 AgI: 0.25 AgCl] mixed system/solid solution


1998

37. R. C. Agrawal, Mohan L. Verma and R. K. Gupta

A study of ionic transport properties on a new Ag+-ion-conducting composite electrolyte system: (1-x)[0.75 AgI: 0.25 AgCl]: xSiO2


38. R. C. Agrawal, R. K. Gupta and Mohan L. Verma

Studies of polarization/self-depolarization and electret-type effect in AgI

Summary: Total International: 36, Total National: 02

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