



ICAMSMD 2022

09 - 10 DECEMBER, 2022

International conference on
Advances in Materials, Sensors
and Microelectronic Devices

e-Certificate of Participation

This is to certify that Prof. /Dr. /Ms. /Mr. *Vaibhav Neema* of *Devi Ahilya University, Indore* has presented a research paper titled "*Proposed Approximate Hybrid Memory Architecture for Handheld Multimedia Devices*", paper id: 8193 online mode in International Conference on Advances in Materials, Sensors and Microelectronic Devices (ICAMSMD 2022) at GLA University, Mathura on December 09 - 10, 2022.

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66th DAE Solid State Physics Symposium

Organised by: Bhabha Atomic research centre, Mumbai

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CERTIFICATE

of Participation

Sharad Chaudhary

has presented a paper and participated in this symposium
held at Birla Institute of Technology Mesra, Ranchi,
during 18 - 22 December 2022

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Dated: 22 Dec 2022



Topological insulators (TI) are centered on the objective that a spin-locked surface state exhibits exceptional spin transport properties with insulating bulk. In the present work, we predict biaxial strain-induced topological phase transition in non-centrosymmetric compound AgCaAs using first-principles calculations. Under ambient conditions AgCaAs exhibits trivial nature with insulating gap however, on applying biaxial strain the system hosts Dirac semi-metallic behaviour indicating towards topological phase transition. At 2% biaxial strain the non-trivial topological phase emerges which is verified by the orbital inversion across the Fermi level with a massless Dirac cone along the surfaces. Such spinorbit coupling induced topological phase transition is further confirmed by computing and analysing the Z₂ invariants, surface states, slab band structure and evolution of Wannier charge centers. Our findings deliver new insights into nextgeneration nano-electronics.

a0006

Study of Thermophysical And Elastic Properties of Actinide Monobismuthides

Sharad. Chaudhary¹, and Swarna. Shriya²¹ Department of Mechanical Engineering, IET, Devi Ahilya University, Indore 452001, India.² Department of Physics, C M Science College, Lalit Narayan Mithila University, Darbhanga 846004, India.

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The pressure and temperature dependent mechanical properties as volume collapse, second order Cauchy discrepancy, anisotropy, melting temperature, hardness and Debye temperature of XBi (X = U, Am, Cm and Cf) are studied in NaCl- CsCl type (B1-B2).. The rare earth actinides pnictides showed a structural phase transition (B1-B2) at a transition pressure (PT) of 4.8GPa (UBi), 14.3GPa (AmBi) 11.9 (CmBi) and 10.8GPa (CfBi). Pressure dependence of melting temperature (TM) discerns an increase inferring the hardening or stiffening of the lattice as a consequence of bond compression and bond strengthening. Suppressed TM as functions of temperature infers the weakening of the lattice results in bond weakening in XBi (X = U, Am, Cm and Cf) Vickers Hardness (HV), Debye temperature of XBi (X = U, Am, Cm and Cf) demonstrates that XBi (X = U, Am, Cm and Cf) is mechanically stiffened and thermally softened on applied pressure and temperature.

a0008

Superfluid, Phase-separation, Supersolid and Density Wave Phases in Extended Bose-Hubbard Model

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We study the one-dimensional extended Bose-Hubbard model in incommensurate densities using the density matrix renormalization group with the mean-field (CMFT+DMRG) and density matrix renormalization group (DMRG) methods. We focus on the region of the phase diagram where onsite interaction (U) is smaller than the nearest-neighbor interaction (V). We determine the superfluid and the density wave order parameters to identify superfluid, phaseseparated, supersolid, density wave phases, and obtain the phase diagram in the density-onsite interaction (ρ, U) plane for fixed nearest-neighbor interaction. The supersolid and phase-separation phases exist for a wide range of densities. The density range for which the phase-separation is seen shrinks with the increase in the onsite interaction.

a0009

Composition and Temperature Dependent Phase Evolution of $(1-x)\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3-x\text{CaTiO}_3$ Solid Solution

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Spectroscopic Perspective of $\text{La}_2\text{LiSbO}_6$ Double Perovskite with Mn^{4+} and Zn^{2+} as Plant Growth LED

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Phosphor-converted light-emitting diodes (pcLEDs) serves as artificial light sources for plant growth in a controlled environment. Spectroscopy plays a vital role in the design and development of plant growth LEDs. Spectroscopy is a fundamental tool for plant growth phosphors design. Plant growth spectral requirement is commonly known as Photosynthetically active radiation (PAR), classified into components such as blue wavelength of around 450 nm, which has strong influence on photosynthesis, red wavelength around 660 nm is helpful for phototropism, and far-red light of around 730 nm (700–740 nm) enhances photomorphogenesis. The far-red region (700–740 nm) of the spectrum has significant implications which can be generated by the deep red emitting phosphors with suitable activator sensitizer approach. In this regard, we have investigated Zn, Mn doped $\text{La}_2\text{LiSbO}_6$ ($\text{La}_2\text{Li}_{0.984}\text{Zn}_{0.016}\text{Sb}_{0.997}\text{Mn}_{0.003}\text{O}_6$) as a primary candidate for designing far red emitting phosphor and are characterized by X-ray diffraction technique (XRD) and Photoluminescence spectroscopy.

J002

Structural and Conductivity Study of Multiferroics NBT Based Composites

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In view of the success of multiferroics for various applications, lead-free magnetoelectric composites of composition $(x) \text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3-(1-x) \text{MnFe}_2\text{O}_4$ [$x=0.2, 0.4$] have been prepared via the solid-state reaction route. X-Ray profiles revealed the formation of multiphase multiferroic composites. The morphology information of the prepared composites has been analysed using FESEM. Analysis of DC conductivity of the composites reflects its linear variation with temperature (388–673)K exhibiting semiconducting nature of the material examined by Mott's Variable Range Hopping (VRH) model of small polarons. The activation energy and DC conductivity for the composites at lower and higher temperatures demonstrate the negative temperature coefficient behavior of resistance in the samples, making them suitable for semiconductor applications. The density of states ($N(E_f)$), hopping distance (R) and hopping energy (W) have been measured and found to be in accordance with those given by Mott's theory.

J0003

Study of Thermophysical and Elastic Properties of M_2O ($\text{M} = \text{Li, Na, K, and Rb}$)

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The pressure and temperature dependent mechanical properties of cubic alkali metal oxide M_2O ($\text{M} = \text{Li, Na, K, and Rb}$) are presented. The volume collapse, second order Cauchy discrepancy, anisotropy, Young modulus, melting temperature, and hardness are studied in NaCl-type (B1). Pressure dependence of melting temperature (TM) discerns an increase inferring the hardening or stiffening of the lattice as a consequence of bond compression and bond strengthening. Suppressed TM as functions of temperature infers the weakening of the lattice which results in bond weakening in cubic M_2O . Young modulus, Vickers Hardness (HV), of



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Patent Search

Invention Title	A SYSTEM AND METHOD FOR CROSS BROWSER INCONSISTENCY DETECTION WITH MUTUAL BROWSER CONFLICT DISCLOSURE
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Abstract:

ABSTRACT A SYSTEM FOR CROSS BROWSER INCONSISTENCY DETECTION WITH MUTUAL BROWSER CONFLICT DISCLOSURE A system (100) for cross browser inconsist detection with mutual browser conflict disclosure, the system (100) comprising: a processing module (102), configured to provide a first layer of predefined compone the predefined components comprises web pages having URLs, parser and browsers, provide a second layer of defined components, wherein the defined componer parse code, database and condition checking, parse the webpage using Java parser named Jsoup; implement the parse code, and check conditions, and provide a thi inconsistencies based on the implementation of parse code, wherein the inconsistencies comprises structural, behavioural and content inconsistencies, and a user ir (106), configured to display an information about inconsistencies. [Figure 1]

Complete Specification

Description:FORM 2
THE PATENTS ACT 1970
(39 of 1970)
&
THE PATENTS RULES, 2003
COMPLETE SPECIFICATION
[See section 10 and rule 13]

A SYSTEM AND METHOD FOR CROSS BROWSER INCONSISTENCY DETECTION WITH MUTUAL BROWSER CONFLICT DISCLOSURE

Chandra Prakash Patidar, an Indian citizen, resident of F Block IET DAVV Khandwa Road Indore MP India

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CERTIFICATE OF PARTICIPATION

This certificate is awarded to Mr. **Tapesh Sarsodia** for his paper presentation on the topic **A Survey on Different Application Areas Based on RSS (Received Signal Strength) and Possible Hardware and Software Tools for The Collection of RSS** in the Technical Competition held during the 2022, IEEE International Conference on Current Development in Engineering and Technology (CCET) held on Dec 23-24, 2022, at SAGE University, Bhopal, Madhya Pradesh, India.

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