

Programme Schedule

Oral Presentations

International Conference on Multifunctional Materials (ICMN2020)

December 28-30, 2020

**Manipal University Jaipur,
Jaipur, Rajasthan, India**

Day 1: December 28, 2020

| Time | Title | Authors |
|------------------|---|---|
| 04:30 - 04:40 PM | Designing of Triple Band Octagonal Ring Antenna for Flexible and Wearable Application | S. K. Vijay, B. H. Ahmad, S. Rawat, K. Ray |
| 04:40 - 04:50 PM | Improvement in properties of Mn-Zn Ferrite Nanoparticles by Rare Earth doping | Anjali Shrivastava, A. K. Shrivastava |
| 04:50 - 05:00 PM | Theoretical study of photo-luminescence emission using the line shape function for semiconductor quantum dots | P Hari Krishna, Devaanshi Jagwani, Meera Ramrakhiani |
| 05:00 - 05:10 PM | Investigation of electrical and thermoelectric properties of ZnO/rGO composites prepared by conventional solid-state reaction method | Suraj Mangavati, Ashok Rao, Dheeraj Devadiga, M. Selvakumar, Monika Saxena, G. S. Okram |
| 05:10 - 05:20 PM | 3D FDM Printable Polymer Composites and Polymer Nanocomposites: State of the Art | Akash Ahlawat, Ravinder Kumar Sahdev, R. K. Gupta, Deepak Chhabra |
| 05:20 - 05:30 PM | Chemical approach based ZnS-ZnO nanocomposite synthesis and assessment of their structural, morphological and photocatalytic properties | Parita Basnet, Dhrubajyoti Samanta, Somenath Chatterjee |
| 05:30 - 05:40 PM | Python – A Tool For Percolation Analysis In Triangular Lattice | N. Gupta, M. Nath, S. Chakraborty, A. Bandyopadhyay |

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| 05:40 - 05:50 PM | Optical properties of CuS nanoparticles embedded polyvinyl alcohol (PVA) films | L. S. Chongad, Amit Jain, G. S. Mukherjee, M. Banerjee |
| 05:50 - 06:00 PM | Morphological and Electrical Characterization of SiNWs Synthesized by Electroless Metal Assisted Chemical Etching Method | Rabina Bhujel, Sadhna Rai, Utpal Deka, Joydeep Biswas, Bibhu Prasad Swain |
| 06:00 - 06:10 PM | Influence of Impurity on the Properties of Chemically Synthesized Calcium Hydroxide | Harish, Jyoti Kumari, Pushpendra Kumar, Anoop Kumar Mukhopadhyay and Rajendra P. Joshi |
| 06:10 - 06:20 PM | Band Gap Reduction And Petal-Like Nanostructure Formation In Heavily Ce-Doped Zno Nano Poweders | Kamakhya Prakash Misra, Ashok Kumawat, Priyanka Kumari, Susruta Samanta, Nilanjan Halder, Saikat Chattopadhyay |
| 06:20 - 06:30 PM | Electrical Properties And Magnetic Field Dependent I-V Characteristics Of Nanocrystalline Cobalt Dopped Nickel Ferrite | P. Ghosh, P. Mitra |
| 06:30 - 06:40 PM | In-situ Synthesis of Mixed Vanadium(IV and V) Oxides/Reduced Graphene Oxide Using <i>Centella asiatica</i> Extract | Sadhna Rai, Rabina Bhujel, Amrita Gupta, Bibhu Prasad Swain, Joydeep Biswas |
| 06:40 - 06:50 PM | Design And Comparative Analysis Of Compact Bioinspired Leaf-Shaped Antenna Using Different Substrate Material For UWB And X-Band Applications | Ushaben Keshwala, Sanyog Rawat and Kanad Ray |
| 06:50 - 07:00 PM | Extracellular Synthesis of Zinc Oxide Nanoparticles Using Thermo-Halotolerant <i>Aeribacillus pallidus</i> strain SJP 27: Characterization and Antibacterial Potential | Jagdish Parihar, Ashok Kumawat, Kamakhya Prakash Misra, and Ashima Bagaria |
| 07:00 - 07:10 PM | Optimization of FDM Printing Parameters for Surface Quality Improvement of Carbon based Nylon | Sandeep, Deepak Chhabra, R. K. Gupta |

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| | (PA-CF) Composite Material Fabricated Parts using Evolutionary Algorithm | |
| 07:10 - 07:20 PM | Synthesis and Characterization of Multiwalled Carbon Nanotubes (MWCNTs) Dispersed ZnS Based Photocatalytic Activity | Rajesh Sahu, S.K. Jain, Balram Tripathi |
| 07:20 - 07:30 PM | Annealing induced Red-Shift in the Absorption Edge of TiO₂ Films prepared by Sol-gel Technique | Kamakhya Prakash Misra, Saikat Chattopadhyay, Deepal Dey, Prarbdh Bhatt, Nilanjan Halder |
| 07:30 - 07:40 PM | Band Gap Enhancement and Temperature Dependent PL in Sol-Gel Synthesized Ce doped ZnO Nanoparticles | Ashok Kumawat, Saikat Chattopadhyay, Nilanjan Halder, Kamakhya Prakash Misra |
| 07:40 - 07:50 PM | Influence of Fine Supplementary Cementitious Materials on Compressive Strength of Concrete – A State of Art Review | Vaibhav Jain, Gaurav Sancheti, Bhupesh Jain |
| 07:50 - 08:00 PM | Effect of stir casting process parameters on mechanical properties of aluminium matrix composites: experimental investigation and Predictive modelling | Manu Khare and Ravi Kant Gupta |
| Day 2: December 29, 2020 | | |
| 11:00 - 11:10 AM | Application of Nano Sized Materials for Mitigating the Corrosion in Concrete-A Review | Bhupesh Jain, Gaurav Sancheti, Vaibhav Jain |
| 11:10 - 11:20 AM | Diamond Tools Processing For Marble And Granite: Cutting & Wear | Ravi Kant Gupta, Bhanu Pratap |
| 11:20 - 11:30 AM | Visual naked eye colorimetric determination of phorate pesticide using nanotechnology | Rajat Singh, Naveen Kumar |
| 11:30 - 11:40 AM | Nanoparticle Self Assembly at Liquid-Liquid Interface | Akash Mishra, Sunita Srivastava |

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| 11:40 - 11:50 AM | Bonding analysis of [Au (3.16 nm)/Co (1.5 nm)]_{x35}/Si (100) Multilayer thin film | R. Bisen, J. Tripathi, D. Kumar, J. Singh, A. Sharma |
| 11:50 - 12:00 AM | Effect of Heat Treatment on Band Gap of V₂O₅ | Rashi Nathawat, Ashish K Kumawat, Satyapal S Rathore, Anoop K Mukhopadhyay, K. Kabra |
| 12:00 - 12:10 PM | Integration of Finite Element Analysis, 3D Printing and Biopolymers to Enhance Research in Orthopedics | D. Yadav, R.K. Garg |
| 12:10 - 12:20 PM | Less arduous novel synthesis of hierarchically porous 3D-nanostructured mixed Ni-Co hydroxide semiconducting films for supercapacitor electrode material | Raj Kumar, Rajesh Kumar |
| 12:20 - 12:30 PM | Enhancement of Localized Surface Plasmon Resonance on silver nanoparticles utilizing Graphene coating and ZnO nanowires | Kavita Sharma, Rajneesh Kumar Verma |
| 12:30 - 12:40 PM | Deformation Studies Of Cylindrical Nanostructured Silica Aerogels By Using Phase Shifting Digital Holographic Interferometry (PSDHI) | Prashant P. Chikode, Ravi J. Kamble, Smita S. Mahajan, Sandip R. Sabale, Sandip D. Patil , Rajiv S. Vhatkar and Vijay J. Fulari |
| 12:40 -12:50 PM | A-site Substituted BiFeO₃ Ceramics: A Study of Structural And Electrical Properties | Nikita Karma, M. Saleem, Poornima Karil, N. Kaurav and H.S. Dager |
| 12:50 -01:00 PM | Nanolath Martensite-Austenite Structures Engineered Through DQ&P Processing for Developing Tough, Ultrahigh Strength Steels | Sumit Ghosh, Ilkka Miettunen, Mahesh C. Somani, Sakari Pallaspuuro, Jukka Kömi, David Porter |
| 04:00 - 04:10 PM | Photoluminescence from Zinc oxide Nanoflowers | Anu Katiyar, Nishant Kumar, R. K. Shukla, Anchal Srivastava |

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| 04:10 - 04:20 PM | Unique Observations in Nanoscale Dynamic Contact of Glass | P. Bandyopadhyay, A K Mukhopadhyay |
| 04:20 - 04:40 PM | Effect of Realistic Boundary Condition On Natural Convection Of Nanofluids – A Computational Aspect | Asish Mitra |
| 04:40 - 04:50 PM | Investigation on Water Absorption and Mechanical Properties of Chemically Treated and Untreated Acacia Fiber Reinforced with Polyester Composite | K. Sakthivadivel, P. Govindasamy |
| 04:50 - 05:00 PM | The Dielectric Properties of PMMA/CdO NanoComposite Film | Anita Rajkumar Ghandhe, Basavaraja Sannakki |
| 05:00 - 05:10 PM | Effect Of Co Substitution On Structural And Magnetic Properties Of $\text{Ni}_{0.6}\text{Zn}_{0.4}\text{Fe}_2\text{O}_4$ Nanoferrite | Yatin P. Desai, Shantadurga Desai, Disha Sinai Sangaonkar, Manoj M. Kothawale, G. K. Naik |
| 05:10 - 05:20 PM | Morphological Analysis of Fibrous Webs Electrospun from Polycaprolactone, Polylactic acid and Their Blends in Chloroform Based Solvent Systems | J. Oztemur, I. Yalcin-Enis |
| 05:20 - 05:30 PM | Fabrication of p-type Polycrystalline Silicon Seed Layer using Aluminium Induced crystallisation process | Nikita Chhetri, Gaurab Das, Arindam Kole, Hiranmay Saha, Sripada Halder, Somenath Chatterjee |
| 05:30 - 05:40 PM | A Study of Structural and Dielectric Properties of Zn^{2+} Doped MnFe_2O_4 and NiFe_2O_4 Spinel Ferrites | Kaliram Patil, S. Phadke, A. Mishra |
| 05:40 - 05:50 PM | Review on Two Dimension Organic Semiconductor for Thin Film Transistor application | Ayushi Katariya, Jyoti Rani |
| 05:50 - 06:00 PM | Enhancement in visible emission by the doping of Ce in ZnO thin films | Nishant Kumar, Anu Katiyar, R. K. Shukla, Anchal Srivastava |

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| 06:00 - 06:10 PM | Effect of Graphene Oxide on Fresh, Hardened and Mechanical Properties of Cement Mortar | Keerthipati Sreeja , T. Naresh Kumar, K. V Maruthish |
| 06:10 - 06:20 PM | Effect of Al₂O₃ on electrical properties of polymer electrolyte for electrochemical device application | Nidhi, Sandhya Patel, Ranveer Kumar |
| 06:20 - 06:30 PM | Natural Rock's Minerals: Non Isothermal and Heat flow Analysis | C. M. Patel, C. D. Patel |
| 06:30 - 06:40 PM | Catalytic effect of TiO₂ on Hydrogen Storage Properties of MgH₂ | Deepak Kumar Yadav, Kanhaiya Chawla, Pooja, Nathu Lal, B.L. Choudhary, Chhagan Lal |
| 06:40 - 06:50 PM | Structural and Magnetic Properties of Y_{1-x}Dy_xFeO₃ Multiferroics | G. Padmasree, S. Shravan Kumar Reddy, N. Pavan Kumar, P. Yadagiri Reddy and Ch. Gopal Reddy |
| 06:50 - 07:00 PM | Comparative Study between Microwave and Infrared Assisted Peeling of Ginger | Dinesh Uthra, M.P. Sharma , Natasha Mendiratta , |
| 07:00 - 07:10 PM | Effect Of Ethylene Acrylic Acid Co-Polymer Coating On Bending And Thermal Properties Of Cotton Fabrics | Gurumurthy B. Ramaiah, Seblework Mekonnen, Eshetu Solomon, Pradeep Kumar , Dhananjay Kumar M. P , Nagesh. G. M |
| 07:10 - 07:20 PM | Structural, Thermal and Dielectric Studies of Mixed Spinel CoFe₂O₄ | Vipul Kumar Sharma, Rashi Nathawat, Satyapal Singh Rathore |
| 07:20 - 07:30 PM | Performance of Nanosilica on Strength and Durability Studies of Flyash based Blended Cement | T Naresh Kumar, N V Ramana |
| 07:30 - 07:40 PM | Characterization of Aluminum-fly ash Composite Fabricated by Stir Casting Technique | Sunil Kumar Tiwari, Akula Umamaheswara Rao, Ankit Dasgotraa, Srinivas Kona |
| 07:40 - 07:50 PM | Structural Thermal and FTIR studies of Mn Doped ZnO Nanoparticles Synthesised by Co-Precipitation method | N. A. Patel , I. B. Patel, V. L. Bharat |

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| 07:50 - 08:00 PM | Controlled Optical Properties of Chromophore-functionalized glutathione capped different sized gold nanoclusters: Origin of enhanced luminescence | Shivi Saxena, Guda Ramakrishna |
| Day 3: December 30, 2020 | | |
| 11:30 - 11:40 AM | Study of Structural, Dielectric, and Modulus Behaviour of Barium Modified YMnO₃ Manganite | Jyoti Shukla, Ashutosh Mishra |
| 12:20 - 12:30 PM | Impact of Cd content on properties of Ni_{1-x}Cd_xFe₂O₄ Nanoferrites prepared without post-preparation thermal treatment | R. Verma, S. N. Kane, U. P. Deshpande, F. Mazaleyrat |
| 12:30 - 12:40 PM | Method validation and quantification of flusilazole on apple by Gas chromatography mass spectrometry | Ishrat Jan, Ashraf Alam Wani, Alamgir A. Dar, Khurshid A. Sofi |
| 12:40 - 12:50 PM | A high performance solid state transformer for an efficient electric grid application: Design and analysis for advanced nanocrystalline core material | Eva Gupta, Sanjay Kumar Sinha, Nand Jee Kanu , Umesh Kumar Vates, and Sachin S. Chavan |
| 12:50 - 01:00 PM | Surfactant Assisted Synthesis of CuO Nanostructures for Nonenzymatic Glucose Sensor | A. S. Patil, R. T. Patil, Vijay J. Fulari |
| 01:00 - 01:10 PM | Comparative Investigations On As Deposited CdS Thin Films Using Thermal Evaporation And Chemical Bath Deposition Method | Lalita D. Deshmukha, Kalyan B. Chavana |
| 01:10 - 01:20 PM | Thermal Behavior and Thermodynamics Parameter of Selected Synthesized Metal Oxide Nanoparticles | J. M. Rami, C. D. Patel, C. M. Pate, M.V. Patel |
| 01:20 - 01:30 PM | Martensitic Transition, Structural and Magnetoresistive Properties of Shape Memory Heusler Melt Spun Ribbons | Jyoti Sharma, K. G. Suresh, M. Manivel Raja and Pravin Walke |
| 01:30 - 02:00 PM (Lunch Break) | | |

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| 02:00 - 02:10 PM | A Review - Nanosensors and promise materials | Chhaju Ram, Amarjeet |
| 02:10 - 02:20 PM | High Temperature Magnetic Behavior Of Ba _{0.5} Sr _{0.5} Fe ₁₂ O ₁₉ Nanoceramics For High Density Recording Media Applications. | Harendra Kumar Satyapala, Shama Farozana, Saurabh Sharma, Utpal Singh |
| 02:20 - 02:30 PM | Comparative Mathematical Study of MHD Mixed Convection Flow of Nano-Fluids in The Existence of Porus Media, Heat Generation and Radiation Through Upstanding Equidistant Plates | Ruchika Mehta, Sanju Jangid & Manoj Kumar |
| 02:30 - 02:40 PM | Computational Screening Of Trace Elemental Concentrations In <i>Hemidesmus Indicus</i> L. A Potential Herbal Plant Used Against Skin Diseases By ED-XRF-Technique | S. Jyothsna, G. Manjula, P. Chandar Rao, A. Mahesh Kumar, D. Sammaiah, A. S. Nageshwar Rao |
| 02:40 - 02:50 PM | Fabrication of Hydrophilic One Dimensional TiO ₂ Nanostructured surfaces by Hydrothermal method | Manisha, Vijay Kumar, Deepak Kumar Sharma |
| 02:50 - 03:00 PM | Localized surface plasmon resonance (LSPR) in silver nano particles | Malyaj Das, Abhishek Dashore, Divaker Sharma |
| 03:00 - 03:10 PM | Impact of Graphene Oxide on Mechanical Properties of Cementitious Materials: A Review | T. Naresh Kumar, K. Vishnu Vardhan, M. Hari Krishna, Puli Venkata Nagaraja |
| 03:10 - 03:20 PM | Green Synthesis of Silver Nanoparticles Using Leaf Extract of <i>Syngonium Podophyllum</i> and Its Antibacterial Activity | Romana Naaz, Vasi Uddin Siddiqui, Sami Ullah Qadir, Weqar Ahmad Siddiqi |
| 03:20 - 03:30 PM | Wear Analysis of Friction Stir Processed Aluminum Composite Reinforced by Boron Carbide | Harsh Sharma, Sunil Kumar Tiwari, Vijay Singh Chauhan, Rajeev Kumar, Piyush Gulati |
| 03:30 - 03:40 PM | Nature's Nano-Assets: Green Synthesis, Characterization Techniques and Applications - A Graphical Review | Devaanshi Jagwani, P. Hari Krishna |