B.M.S COLLEGE OF ENGINEERING, BENGALURU-19
Autonomous Institute, Affiliated to VTU
Department of Physics

AY 2022-23 (1st of July 2022- 31st of June 2023)

1) Dr. B.L Suresha

HOD & Associate Professor, Dept. of Physics

July 15th, 2022: Dr. B.L Suresha, Associate Professor, Dept. of Physics attended one day national level (online) seminar on **"Digital Transformations under NEP 2020"** conducted by IQAC, BMSCE in association with National Assessment & Accreditation Council (NAAC).


B.M.S. COLLEGE OF ENGINEERING, BENGALURU 560019
(Autonomous Institute, Affiliated to VTU)

Certificate of Participation

This is to certify that **DR SURESHA B L** of **BMSCE** has attended one day national level (online) seminar on **"Digital Transformations under NEP 2020"** conducted by IQAC, BMSCE in association with National Assessment & Accreditation Council (NAAC) on 15th July 2022.

Dr. Shambhavi B. R.
Chief-Coordinator, IQAC, BMSCE

Dr. S. Muralidhara
Principal, BMSCE

August 03rd, 2022: Dr. B L Suresha, Associate Professor, Department of Physics published a research paper entitled "Biosynthesis, Characterization and Nonlinear Optical response of Spherical Flake shaped Copper Oxide Nanostructures" in Journal of Nonlinear Optical Physics & Materials. https://doi.org/10.1142/S0218863522500333

November 25th, 2022 – Dr. B.L Suresha, Associate Professor, Department of Physics has attended an online BOS Meeting as an external member conducted by Malnad college of Engineering, Hassan.

November 25th -26th - The Department Astronomy club known as "Singularity" in association with Phase shift 2022 has successfully organized three events entitled Moon Dust and Shadows, Data Mining in Space Exploration, Space land Intelligence and a workshop on AI in Space Exploration in collaboration with Augemnt. Dr. B.L Suresha, Associate Professor and Dr. Kaliprasad C.S, Asst. Professor co-ordinated the event

November 25th, 2022 – Dr. Suresha B. L, Associate Professor and Dr. Vinutha N, Assistant Professor of Department of Physics jointly published a research paper entitled "Dielectric, optical and absorption studies of f-MWCNTs dispersed nematic liquid crystal" in the journal Molecular Crystals and Liquid Crystals DOI: 10.1080/15421406.2022.2153544

December 9th, 2022: Dr. B.L Suresha, Associate Professor, Dept. of Physics published a research paper entitled "Green synthesis and characterization of Mn3O4 nanoparticles for photocatalytic and supercapacitors" in Ionics, Springer Nature Journal. Q2 journal with Impact factor 2.8 with Electronic ISSN 1862-0760, Print ISSN 0947-7047

https://doi.org/10.1007/s11581-022-04823-w

March 29th 2023 - The Department Astronomy club known as "Singularity" along with the faculty coordinator Dr. B.L Suresha, Associate Professor, Department of Physics, organised a one-day visit to Planetarium, Bengaluru. The students have interacted with the experts in the field of astronomy and also have benefited by the visit.

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2).Dr. Murugendrappa M.V

Associate Professor, Dept. of Physics

July 1st, 2022: Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics published a research paper entitled "Effect on electrical and dielectric properties of Te nanoparticle-doped PVA composite" in **Journal of Materials Science: Materials in Electronics (2022),** 33, 17382–17394 (2022). Springer Publishers, Q2 journal with impact factor 2.779,

https://doi.org/10.1007/s10854-022-08618-7

July 12th, 2022: Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics published a research paper entitled "Studies on room-temperature acetone sensing properties of

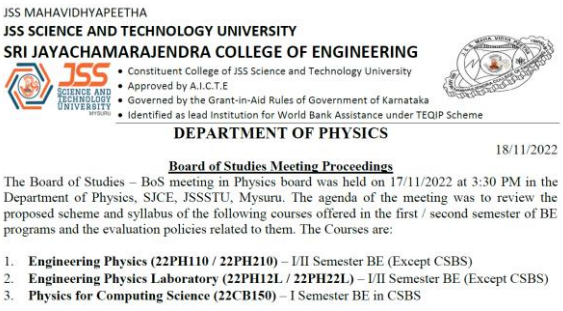
$ZnCo_2O_4$/PPy and $MnCo_2O_4$/PPy nanocomposites for diabetes diagnosis" in **Applied Physics A,** 128, Article number: 669 (2022) Springer Publishers, Q2 journal with impact factor 2.983,

https://doi.org/10.1007/s00339-022-05792-7

October 28th, 2022 - Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics was appointed as external examiner by VTU for Pre-Ph.D Comprehensive viva-voce examination of research scholar Mr. Vishvalinga Prasad bearing USN- 4VM19PPY01 by Department of Physics, Vidya Vikas Institute of Engineering and Technology, Mysuru.

November 17th, 2022 – Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics was deputed to attend a meeting with VTU College Principals as a subject expert for discussion on new syllabus for Physics, Chemistry, Mathematics held at Atria Hotel Bengaluru.

November 17th, 2022 – Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics has attended an online BOS Meeting as an external member at JSS Science and Technology University, Sri Jayachamarajendra College of Engineering, Mysuru.



JSS MAHAVIDHYAPEETHA
JSS SCIENCE AND TECHNOLOGY UNIVERSITY
SRI JAYACHAMARAJENDRA COLLEGE OF ENGINEERING
- Constituent College of JSS Science and Technology University
- Approved by A.I.C.T.E
- Governed by the Grant-in-Aid Rules of Government of Karnataka
- Identified as lead Institution for World Bank Assistance under TEQIP Scheme

DEPARTMENT OF PHYSICS

18/11/2022

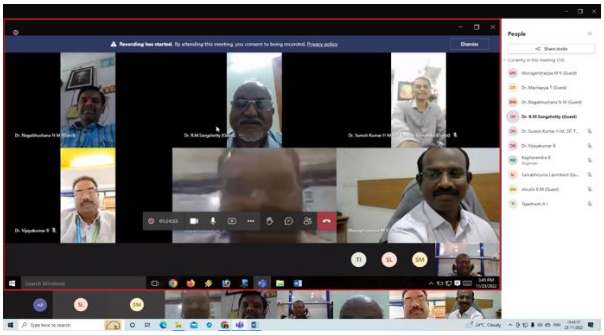
Board of Studies Meeting Proceedings

The Board of Studies – BoS meeting in Physics board was held on 17/11/2022 at 3:30 PM in the Department of Physics, SJCE, JSSSTU, Mysuru. The agenda of the meeting was to review the proposed scheme and syllabus of the following courses offered in the first / second semester of BE programs and the evaluation policies related to them. The Courses are:

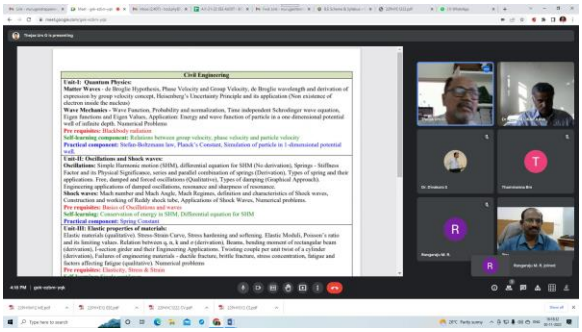
1. **Engineering Physics (22PH110 / 22PH210)** – I/II Semester BE (Except CSBS)
2. **Engineering Physics Laboratory (22PH12L / 22PH22L)** – I/II Semester BE (Except CSBS)
3. **Physics for Computing Science (22CB150)** – I Semester BE in CSBS

November 23th, 2022 – Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics has attended the BOS Meeting as an external member at Siddaganga Institute of Technology, Tumakuru.

November 23th, 2022 – Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics has attended an online BOS Meeting as an external member conducted by Bellary Institute of Technology and Management, Bellary.



November 30th, 2022 – Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics has attended the BOS Meeting as an external member at PESCE, Mandya.



December 17th, 2022 – Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics delivered an invited talk in on the topic "Conducting Polymers for Sensors Applications" in "National Conference on Advances in Material Science (NCAMS-2022)" organized by, Department of Physics, REVA University, Bengaluru.

January 05th-8th, 2023 - Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics was deputed as for Indo Universal Collaboration For Engineering Education (IUCEE) Foundation Tenth International Conference on 'Transformations in Engineering Education' (ICTIEE)-2023 with the Theme: Transforming Engineering Education for Sustainable Development' at Vidyavardhaka College of Engineering (VVCE), Mysuru.

January 27th, 2023 - Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics invited as an external subject expert to conduct the doctoral committee meeting of research scholar Shilpa T N (1RN17PGA01) at Department of Physics, RNS Institute of technology, Bengaluru.

March 09th 2023 - Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics, published a research paper entitled "Structural, AC conductivity, dielectric and impedance studies of polypyrrole/praseodymium calcium manganite nanocomposites" in Digest Journal of Nanomaterials and Biostructures, 18 (1), 2023, 343-365. Impact factor - 0.899, Q3 journal.

https://doi.org/10.15251/DJNB.2023.181.343

March 15th 2023 - Dr. Murugendrappa M V, Associate Professor and Head, Department of Physics, published a research paper entitled "Structural, DC Conductivity and Electric Modulus Studies of Polypyrrole Praseodymium Manganite Nanocomposites" in Indian Journal of Pure and Applied Physics 61, 2023, 165-174. Impact factor - 0.846, Q4 journal.

DOI: **10.56042/ijpap. v61i3.70065**

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3) Dr. Latakumari

Asso. Professor, Dept. of Physics

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4) Dr. K.E Ganesh

Asso. Professor, Dept. of Physics

July 20th, 2022: Dr. K.E Ganesh, Associate Professor, Department of Physics published a research paper entitled "Assessment of learning outcomes for online and offline modes of teaching: A comparative study" in
IJRDO-Journal of Educational Research with the Volume-8 | Issue-7 | July, 2022, ISSN: 2456-2947.

December 29th, 2022 - Dr. K E Ganesh, Associate Professor, Dept. of Physics, published a research paper entitled "Studies on the influence of particulate load in the atmosphere in attenuating the incoming solar radiation for two Indian mega cities" in Arabian Journal of Geosciences, Q2 Journal (2023) 16:45: Article number: 45 (2023) Volume 16 Issue 1, January 2023,with impact factor 1.827 (2020) ISSN 18667538, 18667511 https://doi.org/10.1007/s12517-022-11134-x

January 01st 2023 - Dr. K E Ganesh, Associate Professor, Dept. of Physics, published a research paper entitled "Spatiotemporal, Morphological and source analysis of Ultra fine particulates (PM1) over Bengaluru, Karnataka, India" in MAUSAM, Journal (2023), 74, 1, 187-198 DOI: https://doi.org/10.54302/mausam.v74i1.815 with impact factor **0.636**

February 15th 2023 - An article was published in Bangalore Mirror news paper regarding air quality study conducted by
by Dr.K.E Ganesh Associate Professor, Dept. of Physics.

https://bangaloremirror.indiatimes.com/bangalore/others/fuming-city/articleshowprint/97927618.cms?prtpage=1

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5) **Dr. Kaliprasad**

Asst. Professor, Dept. of Physics

September 23rd, 2022: Dr. Kaliprasad C.S, Assistant Professor, Department of Physics published a research paper titled “Dependence of natural radioactivity on physico-chemical parameters of soils in Belagavi region of Karnataka, India” in Environmental Forensics Q3, WoS, IF: 1.76 https://doi.org/10.1080/15275922.2022.2125113

November 22nd, 2022: Dr. Kaliprasad C.S, Assistant Professor, Department of Physics published a research paper entitled “Effect of tungsten oxide thin films deposited on cerium oxide nano rods for electrochromic applications” in Optical Materials Q1 Journal, Volume 134, Part A, December 2022, 113220,Impact factor - 3.754, ISSN 0925-3467 (print); 1873-1252 (web) https://doi.org/10.1016/j.optmat.2022.113220

December 09th, 2022 – Dr. Kaliprasad C.S, Assistant Professor, Department of Physics published a research paper entitled “Distribution of radionuclides and activity utilisation index estimation of construction materials using in Mangalore district, India” in International Journal of Environmental Analytical Chemistry, Q2 Journal, Impact factor – 2.7, Print ISSN: 0306-7319 Online ISSN:1029-0397 https://doi.org/10.1080/ 03067319.2022.2153335

February 14th 2023 - Dr. C.S Kaliprasad, Assistant Professor, Dept. of Physics, published a research paper entitled “Evaluation of natural radioactivity and assessment of health risk due to the consumption of medicinal plants grown in the Western Ghat region of India” in the International Journal of Environmental Analytical Chemistry with impact factor **2.731** , Q 2 Journal, ISSN **10290397, 03067319**

https://doi.org/10.1080/03067319.2023.2176230

February 27th 2023 - Dr. Kaliprasad C.S, Assistant Professor, Dept. of Physics, published a research paper entitled “Evaluation of radiological hazards and trace element contamination around thermal power plant at Udupi on the Southwest coast of India" Acta Geophysica (2023) with impact factor 2.336 (Web of science Q1) Electronic ISSN 1895-7455

DOI: https://doi.org/10.1007/s11600-023-01048-x

March 08th 2023 - Dr. Kaliprasad C.S, Assistant Professor, Department of Physics, published a research paper entitled "Electrical conductivity and electromagnetic interference shielding effectiveness of elastomer composites: Comparative study with various filler systems," in Inorganic Chemistry Communication, 151, 2023, 110578. Impact factor - 3.42, Q1 journal.

DOI: https://doi.org/10.1016/j.inoche.2023.110578

May 31st, 2023 - Dr. Kaliprasd C.S, Assistant Professor, Dept. of Physics, published a research paper entitled "Effect of post annealing on DC magnetron sputtered tungsten oxide (WO_3) thin films for smart window applications" in Physica B: Condensed Matter, **Q1** Impact Factor **2.89,** Volume 664. ISSN: 0921-4526. DOI: https://doi.org/10.1016/j.physb.2023.414996

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6) Dr. Karthik Kumara K

Asst. Professor, Dept. of Physics

September 1st, 2022 – Dr. Karthik Kumara, Assistant Professor, Department of Physics published a research paper titled "Copper(I) complexes with quinolone appended 1,8-naphthalimide conjugates: structural characterization, DNA and protein binding and cytotoxicity studies" in New Journal of Chemistry, 2022. (Impact factor 3.925, Elsevier, Q1 Journal) https://doi.org/10.1039/D2NJ02655D

September 1st, 2022 – Dr. Karthik Kumara, Assistant Professor, Department of Physics published a research paper titled "Gallic acid-butyramide monohydrate cocrystal: Crystal growth, Structural insights, Theoretical calculations and Molecular docking studies against COVID-19 main protease" in Current Chemistry Letters, 11,2022. (Impact factor 0.872, Scopus Indexed, Q4 Journal) DOI: 10.5267/j.ccl.2022.6.004

September 07th, 2022 – Dr. Karthik Kumara, Assistant Professor, Department of Physics published a research paper titled "Influence of Counter Ions on Supramolecular Structures of Copper (II) Complexes Derived from 1,8-Naphthalimide Tecton" in Journal of Molecular Structure,134086, 2022. (Impact factor 3.841, Q2 Journal) https://doi.org/10.1016/j.molstruc.2022.134086

October 01st, 2022 – Dr. Karthik Kumara, Assistant Professor, Department of Physics published a research paper titled "Structural investigations and theoretical insights of a polymethoxy

chalcone derivative: Synthesis, crystal structure, 3D energy frameworks and SARS CoV-2 docking studies" in Journal of Molecular Structure, 1272, 134226, 2022. (Impact factor 3.841, Q2 Journal).

https://doi.org/10.1016/j.molstruc.2022.134226

November 01st, 2022 – Dr. Karthik Kumara, Assistant Professor, Department of Physics Published a research paper titled "2,6-disubstituted imidazothiadiazole 5-carbaldehyde: Synthesis, crystal structure elucidation and in-silico studies" in Chemical Data Collections. Q3 Journal, with impact factor 3.1, Volume 42, December 2022, 100962, ISSN 2405-8300, https://doi.org/10.1016/j.cdc.2022.100962

November 29th, 2022 – Dr. Karthik Kumara, Assistant Professor, Department of Physics Published a research paper titled "One-pot reproducible Sonosynthesis of trans-[Br(NΠN')Cu(μBr)2Cu(NΠN')Br] dimer:[H….Br S(9)] synthons, spectral, DFT/XRD/HSA, thermal, docking and novel LOX/COX enzyme inhibition" in Journal of Molecular Structure. Q2 Journal, with impact factor 3.841, Volume No 1275,Page No 134626, ISSN 0022-2860, https://doi.org/10.1016/j.molstruc.2022.134626

February 01st 2023 - Dr. Karthik Kumara, Assistant Professor, Department of Physics published a research article titled "Structural elucidation of 1:4:4 stochiometric form of thymine-gallic acid cocrystal hydrate: Hirshfeld surface analysis, 3D energy framework, DFT calculations, and SARS CoV-2 docking studies" in Journal of Molecular Structure, 135072, 2023. (Impact factor 3.841, Q2 Journal)

https://doi.org/10.1016/j.molstruc.2023.135072

February 24th 2023 - Dr. Karthik Kumara, Assistant Professor, Department of Physics published a research article titled "Sulfur Nanoparticle as an Effective HEK-293 Anticancer Agent" in Moroccan Journal of Chemistry, 11(2), 434-443 , 2023. (Impact factor 1.03, Q3 Journal).

https://doi.org/10.48317/IMIST.PRSM/morjchem-v11i2.37722

February 28th, 2023 – Dr. Karthik Kumara, Assistant Professor, Department of Physics was invited as a chief guest for the National Science Day celebration and he has delivered two talks on "Opportunities in Basic Sciences" and "Structural Diversity in Materials" in the Government First Grade college, Chintamani- 563125, Karnataka. About 150+ students have attended the guest lecture and get benefited.

May 09th 2023 - Dr. Karthik Kumara, Assistant Professor, Department of Physics, published a research paper entitled "Synthesis, characterization, E/Z-isomerization, DFT, optical and 1BNA docking of new Schiff base derived from naphthalene-2-sulfonohydrazide" in Moroccan Journal of Chemistry, 11(3), 613-622, 2023. Impact factor -1.03, Q3 journal.

DOI:https://doi.org/10.48317/IMIST.PRSM/morjchem-v11i3.39715

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7) Dr. Manjunatha S.O

Asst. Professor, Dept. of Physics

August 13th, 2022: Dr. Manjunatha S.O, Assistant Professor, Department of Physics published a research paper entitled "Effect of Eu_{3+} on the Structural, Magnetic and Mössbauer Spectroscopy Studies of Copper Ferrite" in Journal of Magnetism and Magnetic Materials (Q2 Standard with impact factor 3.097), Volume 562, 15, 2022,Page No - 169789.https://doi.org/10.1016/j.jmmm.2022.169789

September 22nd, 2022: Dr. S.O Manjunatha, Assistant Professor, Department of Physics, published a research paper titled "High performance EMI shielding applications of $CO_{0.5}Ni_{0.5}Ce_xSm_yFe_{2-x-y}O_4$ nanocomposite thin films" in Ceramics International, https://doi.org/10.1016/j.ceramint.2022.09.189, impact factor **5.532 (Q1)**

September 24th, 2022: Dr. S.O Manjunatha, Assistant Professor, Department of Physics Published a research paper titled "Role of Superparamagnetic Nanoparticles in Humidity Sensing Behavior of Holmium doped Manganese-Bismuth ferrites for Relative Humidity Sensor applications" in Journal of Materials Science: Materials in Electronics, https://doi.org/10.1007/s10854-022-09151-3 with impact factor **2.78 (Q2**

November 02nd, 2022 – Dr. S.O Manjunatha, Assistant Professor, Department of Physics Published a research paper titled "Effect of Sc^{3+} Doping on the Optical and Magnetic Properties

of Cobalt Chromite Nanoparticles" in Journal of Superconductivity and Novel Magnetism, IF 1.675, SJR Q3. https://doi.org/10.1007/s10948-022-06433-z

January 25th 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Synthesis and study of transition metal (Co, Cu, and Ni) substituted ferrites for humidity sensor applications" J Mater Sci: Mater Electron (2023) 34:301 (SJR Q2 Journal) with impact factor 2.478, ISSN 0957-4522 (print) 1573-482X (web)

https://doi.org/10.1007/s10854-022-09694-5

February 04th 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Highly efficient EMI shielding applications of porous nickel–iron ferrite doped with yttrium nanocomposite thin films as a multifunctional material" J Mater Sci: Mater Electron (2023) 34:409 with impact factor **2.4**, ISSN 0957-4522 (print) 1573-482X (Electronic)

https://doi.org/10.1007/s10854-023-09844-3

February 06th 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Rare earth(Sm^{3+}) doped $CoCr_2O_4$ ceramics sensor towards room temperature detection of greenhouse methane gas" Ceramics International (2023) with impact factor **5.53**, ISSN 02728842 (print) 18733956 (Electronic)

https://doi.org/10.1016/j.ceramint.2023.01.215

February 26th 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Graphene-Cobalt chromate ceramics composite for humidity sensor Applications" Journal of Alloys and Compounds (2023) (In Press) with impact factor **6.37** ISSN 0925-8388 (print) 1873-4669 (Electronic)

DOI: https://doi.org/10.1016/j.jallcom.2023.169438

April 01st 2023 Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Synthesis and structural, microstructural and humidity sensing behavior of (x)rGo+(1-x) CoCr2O4 composite for humidity sensor applications" in Ceramics International (2023) Q 1 Journal, with impact factor 5.53 ISSN 0272-8842 (print) 1873-3956 (Electronic)

DOI: https://doi.org/10.1016/j.ceramint.2023.03.277

April 11th, 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Improved photocatalytic, antimicrobial and photoelectrochemical properties of

nanocrystalline Cu^{2+}-doped ZnO nanoparticles" in Ceramics International (2023) (In Press) with impact factor 5.53 ISSN 0272-8842 (print) 1873-3956 (Electronic)

DOI: **https://doi.org/10.1016/j.ceramint.2023.04.077**

April 16th, 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Chromium-doped ZnO nanoparticles synthesized via auto-combustion: Evaluation of concentration-dependent structural, band gap-narrowing effect, luminescence properties and photocatalytic activity" in Ceramics International (2023) (In Press) with impact factor 5.53 ISSN 0272-8842 (print) 1873-3956 (Electronic)

DOI: **https://doi.org/10.1016/j.ceramint.2023.04.113**

May 19th, 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Double perovskite structured $Ca_2MgWO_6:Sm^{3+}$ nanophosphor: Tailored for future -generation WLED s and dosimetry applications" in Journal of Alloys and Compounds (2023) (In Press) with impact factor 6.31 ISSN 0925-8388 (print) 1873-4669 (Electronic)

DOI: https://doi.org/10.1016/j.jallcom.2023.170662

May 22nd, 2023 - Dr. Manjunatha S.O, Assistant Professor, Dept. of Physics, published a research paper entitled "Various carbon-based $MgAl_2O_4$ adsorbents and their removal efficiency of CR dye and antibiotics in aqueous media: High selective adsorption capacity, performance prediction and mechanism insight" in Ceramics International (2023) (In Press) with impact factor 5.53 ISSN 0272-8842 (print) 1873-3956 (Electronic)
DOI: https://doi.org/10.1016/j.ceramint.2023.05.210.

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8) Dr. Sharanappa chapi

Asst. Professor, Dept. of Physics

May 24th, 2023 - Dr. Sharanappa Chapi, Assistant Professor, Dept. of Physics, published a research paper entitled "Thermal transport of MHD Casson–Maxwell nanofluid between two porous disks with Cattaneo–Christov theory" in Numerical Heat Transfer, Part A: Applications, **Q2** Impact Factor **2.569.** ISSN: 1040-7782 (Print) 1521-0634 (Online); DOI: https://doi.org/10.1080/10407782.2023.2214322