

# School of Studies in Physics and Astrophysics

## Pt. Ravishankar Shukla University, Raipur

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### Publications

#### List of Publications from 2019 to 2025

2019-2020	
1	Investigation of structural and optical properties of gadolinium modified barium zirconium titanate ceramic, G Nag Bhargavi, T Badapanda, A Khare, PK Ray, N Brahme; Phase Transitions, 2019-2020, ISSN:0141-1594
2	Influence of Dy <sup>3+</sup> concentration on spectroscopic behaviour of Sr <sub>3</sub> MgSi <sub>2</sub> O <sub>8</sub> : Dy <sup>3+</sup> phosphors P Dewangan, DP Bisen, N Brahme, S Sharma, RK Tamrakar, IP Sahu Journal of Alloys and Compounds, 2019-2020 ISSN:0925-86388
3	Oxygen vacancy related conduction behavior in BaZr <sub>0.05</sub> Ti <sub>0.95</sub> O <sub>3</sub> ceramic GN Bhargavi, T Badapanda, A Khare, MS Anwar, N Brahme IOP Conference Series: Materials Science and Engineering, 2019-2020, ISSN:1757-8981
4	Synthesis and luminescence behavior of Ba <sub>2</sub> SiO <sub>4</sub> : Dy <sup>3+</sup> phosphors in presence of charge compensator ions GR Banjare, DP Bisen, N Brahme, C Belodhiya, AK Upadhyay IOP Conference Series: Materials Science and Engineering, 2019-2020, ISSN:1757-8981
5	Luminescent characterization of CaMgSiO <sub>4</sub> : Dy <sup>3+</sup> phosphor for white light emitting diodes BR Verma, RN Baghel, DP Bisen, N Brahme, A Khare, IOP Conference Series: Materials Science and Engineering, 2019-2020, ISSN:1757-8981
6	Thermoluminescence studies of Dy <sup>3+</sup> -doped calcium barium orthosilicate codoped with Li <sup>+</sup> ion GR Banjare, DP Bisen, N Brahme, C Belodhiya, P Dewangan, ... Journal of Thermal Analysis and Calorimetry, 2019-2020, ISSN:15882926
7	Structural characterization and effects of Dy concentration on luminescent properties of BaMgSiO <sub>4</sub> phosphors B Verma, RN Baghel, DP Bisen, N Brahme, A Khare

	Journal of Alloys and Compounds, 2019-2020, ISSN:0925-86388
8	Stellar cores in the Sh 2-305 H ii region R Pandey, S Sharma, N Panwar, LK Dewangan, DK Ojha, DP Bisen, ... The Astrophysical Journal, 2019-2020, ISSN:0004-637X (print); 1538-4357 (web)
9	Ground-based photometric survey to search for the pulsational variability in Bp, Ap, and Am stars Nhlapo D., Joshi S., Letarte B., Chakradhari N. K., Tiwari S. K. Bulletin de la Société Royale des Sciences de Liège, 2019-2020, ISSN:0037-9565
10	Optical and UV studies of type Ia supernovae SN 2009ig and SN 2012cg NK Chakradhari, DK Sahu, GC Anupama Monthly Notices of the Royal Astronomical Society , 2019-2020, ISSN:0035-8711
11	Flexible printed paper electrode with silver nano-ink for electrochemical applications T Kant, K Shrivias, V Ganesan, YK Mahipal, R Devi, MK Deb, R Shankar Microchemical Journal , 2019-2020, ISSN:0026265X
<b>2020-2021</b>	
1	Optical properties of rare earth (Ce) and transition metal (Ti) doped ZrO <sub>2</sub> phosphors U Kurrey, N Brahme, DP Bisen IOP Conference Series: Materials Science and Engineering, 2020-2021, ISSN:1757-8981
2	Generation of cold white light by using energy transfer process in single phase Ce <sup>3+</sup> /Tb <sup>3+</sup> co-doped CaSrAl <sub>2</sub> SiO <sub>7</sub> phosphor S Sharma, N Brahme, DP Bisen, P Dewangan, R Gupta Optics & Laser Technology, 2020-2021, ISSN:0030-3992
3	Study of Photoluminescence, Thermoluminescence, and Afterglow properties of Dy <sup>3+</sup> doped Ba <sub>2</sub> ZnSi <sub>2</sub> O <sub>7</sub> phosphor Y Patle, N Brahme, DP Bisen, T Richhariya, E Chandrawanshi Optik, 2020-2021, ISSN:0030-4026
4	Studies on structural properties, luminescence behavior and zeta potential of Dy <sup>3+</sup> doped alkaline earth ortho-silicate phosphors GR Banjare, DP Bisen, N Brahme, C Belodhiya Materials Science and Engineering: B, 2020-2021, ISSN:0921-5107

5	<p>Synthesis and concentration dependent luminescent characterization of BaMgSiO<sub>4</sub>: Eu<sup>3+</sup> phosphor</p> <p>B Verma, RN Baghel, DP Bisen, N Brahme, A Khare, Journal of Alloys and Compounds, 2020-2021, ISSN:0925-86388</p>
6	<p>Investigation of structural and thermal response of Sm<sup>3+</sup> doped Sr<sub>3</sub>MgSi<sub>2</sub>O<sub>8</sub> phosphors</p> <p>P Dewangan, DP Bisen, N Brahme, S Sharma, RK Tamrakar, IP Sahu Optical and Quantum Electronics, 2020-2021, ISSN: 03068919, 1572817X</p>
7	<p>Photoluminescence and comparative thermoluminescence studies of UV/γ-irradiated Dy<sup>3+</sup> doped bismuth silicate phosphor</p> <p>E Chandrawanshi, DP Bisen, N Brahme, G Banjare, T Richhariya, Y Patle Journal of Materials Science:Materials in Electronics, 2020-2021, ISSN:0957-4522 (print); 1573-482X (web)</p>
8	<p>A comparative photoluminescence and Judd–Ofelt study on alumino silicate phosphors</p> <p>T Richhariya, N Brahme, DP Bisen, A Choubey, Y Patle, ... Journal of Materials Science:Materials in Electronics, 2020-2021, ISSN:0957-4522 (print); 1573-482X (web)</p>
9	<p>Photoluminescence, Synthesis, Characterization of MgO Nanophosphors Influenced by Dy<sup>3+</sup> Ions Concentrations</p> <p>G Sahu, AS Gour Journal of Ravishankar University, 2020-2021, ISSN:2277 – 6362</p>
<b>2021-2022</b>	
1	<p>Investigation of structural and conduction mechanism of Europium modified BaZr<sub>0.05</sub>Ti<sub>0.95</sub>O<sub>3</sub> ceramic prepared by solid-state reaction method</p> <p>Nag Bhargavi, G., Badapanda, Applied Physics A: Materials Science and Processing, 2021, ISSN:1432-0630</p>
2	<p>Optical properties of rare earth (Ce) and transition</p> <p>U Kurrey, N Brahme, DP Bisen IOP Conference Series: Materials Science and Engineering, 2021, ISSN:17578981</p>
3	<p>Enhanced thermoluminescence properties of CaSrAl<sub>2</sub>SiO<sub>7</sub>:Ce<sup>3+</sup>,Tb<sup>3+</sup> phosphor</p> <p>Sharma, S.S., Brahme, N., Bisen, D.P., ...Vidhale, S.G., Mendhe, G.S. Journal of Materials Science: Materials in Electronics 2021, ISSN: 0957-4522</p>

4	<p>Luminescence properties of blue-emitting Ce<sup>3+</sup>-doped series of Ca<sub>2</sub>Al<sub>2</sub>SiO<sub>7</sub> and Sr<sub>2</sub>Al<sub>2</sub>SiO<sub>7</sub> phosphors</p> <p>Richhariya, T., Brahme, N., Bisen, D.P., ...Chandrawanshi, E., Shah, N.</p> <p>Journal of Materials Science: Materials in Electronics, 2021, ISSN:0957-4522</p>
5	<p>Thermoluminescence Glow Curve Analysis with Variable Concentration of Erbium-Doped Y<sub>2</sub>O<sub>3</sub> Phosphor</p> <p>Kaur, M., Sahu, P.K., Bisen, D.P., Panse, V.R., Singh, P.</p> <p>Macromolecular Symposia, 2021, ISSN:1022-1360</p>
6	<p>Studies on structural properties, luminescence</p> <p>GR Banjare, DP Bisen, N Brahme, C Belodhiya</p> <p>Materials Science and</p> <p>2021, ISSN: 0921-5107</p>
7	<p>Synthesis and optical characterization of Dy<sup>3+</sup> doped barium alumino silicate phosphor</p> <p>Richhariya, T., Brahme, N., Bisen</p> <p>Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, ISSN:0921-5107</p>
8	<p>Judd-Ofelt analysis and luminescent characterization of Eu<sup>3+</sup> activated Li<sub>2</sub>Zr (PO<sub>4</sub>)<sub>2</sub> phosphor</p> <p>Verma, B., Baghel, R.N., Bisen</p> <p>Optical Materials, 2021, ISSN:0925-3467</p>
9	<p>Generation of cold white light by using energy</p> <p>S Sharma, N Brahme, DP Bisen, P Dewangan, R Gupta</p> <p>Optics &amp; Laser, 2021, ISSN:0030-3992</p>
10	<p>Study of Photoluminescence, Thermoluminescence, and Afterglow properties of Dy<sup>3+</sup> doped Ba<sub>2</sub>ZnSi<sub>2</sub>O<sub>7</sub> phosphor</p> <p>Y Patle, N Brahme, DP Bisen, T Richhariya, E Chandrawanshi</p> <p>Optik, 2021, ISSN:0030-4026</p>
11	<p>Efficient white light-emitting Mg<sub>21</sub>Ca<sub>4</sub>Na<sub>4</sub>(PO<sub>4</sub>)<sub>18</sub>: Dy<sup>3+</sup>, Tb<sup>3+</sup>, Eu<sup>3+</sup> triple-doped glasses: a multipurpose glass for WLEDs, solar cell efficiency enhancement, and smart windows applications</p> <p>T.S., Kadam, A.R., Brahme, N.,</p> <p>Materials Today, 2022, ISSN:2468-5194</p>

12	Investigation of structural, photoluminescence, and thermoluminescence properties of Praseodymium doped CaWO <sub>4</sub> phosphor R.Paikaraya, T.Badapandaa, H.Mohapatraa, T.Richhariya, Satya N.Tripathy, NameetaBrahme Materials Today Communications, 2022, ISSN:2352-4928
13	Luminescence properties of a novel cyan-blue light emitting Ce <sup>3+</sup> -doped SrZrSi <sub>2</sub> O <sub>7</sub> phosphor Baghel, S.K., Brahme, N., Bisen, Optical Materials, 2022, ISSN:0925-3467
14	Structural, luminescent properties and Judd-Ofelt analysis of CaMgSiO <sub>4</sub> :Eu <sup>3+</sup> phosphor for solid state lighting Verma, B., Baghel, R.N., Bisen Optical Materials, 2022, ISSN:0925-3467
15	Sh 2-301: A Blistered H ii Region Undergoing Star Formation Pandey, R., Sharma, S., Dewangan, L.K., ...Ghosh, A., Sinha, T. The Astrophysical Journal, 2022, ISSN:1538-4357
16	Gaia 20 cae: A newly discovered episodically arresting young star Arpan Ghosh, Saurabh Sharma, Joe P. Ninan, Devendra K. Ojha, Bhuwan C. Bhatt, Shubham Kanodia, Suvrath Mahadevan, Gudmundur Stefansson, R. K. Yadav, A. S. Gour, J. MNRAS, 2021, ISSN:1538-4357
17	Study of chemically peculiar stars - I. High-resolution spectroscopy and K2 photometry of Am stars in the region of M44 Joshi, S., Trust, O., Semenko, E., ...Letarte, B., Karinkuzhi, D. Monthly Notices of the Royal Astronomical Society, 2022, ISSN:0035-8711
18	Quest for the Upcoming Periastron Passage of an Episodic Dust Maker and Particle-accelerating Colliding-wind Binary: WR 125 Arora, B., Pandey, J.C., De Becker, M., ...Sharma, S., Kumar, B. Astronomical Journal, 2021, ISSN:1538-3881
19	Investigation of ZnO nano-filler-dispersed nano-composite polymer electrolytes and their ion transport property Kumar, N., Sahu, M., Sahu, D.K., Mahipal, Y.K. Journal of Solid State Electrochemistry, 2022, ISSN:1432-8488

20	<p>A graphene-printed paper electrode for determination of H<sub>2</sub>O<sub>2</sub> in municipal wastewater during the COVID-19 pandemic</p> <p>Kant, T., Shrivastava, K., Karbhari, I., ... Mahipal, Y.K., Ganesan, V.</p> <p>New Journal of Chemistry, 2022, ISSN:1144-0546</p>
<b>2022-2023</b>	
1	<p>Structural, Photoluminescence, And Thermoluminescence Behaviors Of Samarium Doped CaWO<sub>4</sub> Phosphor</p> <p>R Paikaray, T Badapanda, H Mohapatra, T Richhariya, N Brahme, ...</p> <p>Materials Science and Engineering: B 294, 11651, 2023, ISSN:0921-5107</p>
2	<p>Investigation Of Photoluminescence, Thermoluminescence, And Energy Transfer Mechanism In Ce/Dy Co-Doped Sr<sub>2</sub>Al<sub>2</sub>SiO<sub>7</sub></p> <p>T Richhariya, N Brahme, DP Bisen, T Badapanda, K Tiwari, A Jain</p> <p>Materials Science in Semiconductor Processing 159, 107396, 2023, ISSN:1873-4081</p>
3	<p>Exploration Of Crystal Structure, And Luminescence Behaviors Of Terbium-Activated CaWO<sub>4</sub> Phosphor</p> <p>R Paikaray, T Badapanda, H Mohapatra, T Richhariya, K Tiwari, ...</p> <p>Journal of Molecular Structure, 135902, 2023, ISSN:0022-2860</p>
4	<p>Luminescence Studies Of Sm<sup>3+</sup> Doped CaWO<sub>4</sub> Phosphors</p> <p>K Thakkar, R Sharma, N Brahme, DP Bisen, A Verma, T Richhariya</p> <p>Journal of Materials Science: Materials in Electronics 34 (14), 1151, 2023, ISSN:1573-482X</p>
5	<p>Luminescence Investigation Of Ca<sub>2</sub>Al<sub>4</sub>SiO<sub>12</sub>:Dy<sup>3+</sup> Phosphor Synthesized By Sol-Gel Method</p> <p>A Verma, R Sharma, DP Bisen, N Brahme, K Thakkar, S Tigga, ...</p> <p>Luminescence 38 (5), 576-584, 2023, ISSN:1872-7883</p>
6	<p>Yttrium Aluminum Garnet Based Novel And Advanced Phosphor Synthesized By Combustion Route Activated By Dy, Eu, And Tb Rare Earth Metals</p> <p>A Verma, DP Bisen, N Brahme, IP Sahu, AK Singh</p> <p>Journal of Materials Science: Materials in Electronics 34 (7), 644, 2023, ISSN:1573-482X</p>
7	<p>Tale Of Grb 171010A/Sn 2017Htp And Grb 171205A/Sn 2017Iuk: Magnetar Origin?</p> <p>A Kumar, SB Pandey, R Gupta, A Aryan, AK Ror, S Sharma, N Brahme</p> <p>New Astronomy 97, 101889, 2022, ISSN:1384-1092</p>

8	<p>Photoluminescence Property Of Erbium-Doped Yttrium Oxide: Doping Concentration And Its Effect</p> <p>P Singh, M Kaur, N Brahme, DP Bisen, R Umam, VR Panse, A Said, ...</p> <p>Integrated Ferroelectrics 230 (1), 100-107, 2022, ISSN:1607-8489</p>
9	<p>Analysis Of Thermoluminescence Glow Curve And Evaluation Of Trapping Parameters Of Cerium Activated <math>M_2Al_2SiO_7</math> (M= Ca And Sr) Phosphor For Tld Application</p> <p>T Richhariya, N Brahme, DP Bisen, T Badapanda, K Tiwari, ...</p> <p>Materials Chemistry and Physics 287, 126273, 2022, ISSN:0254-0584</p>
10	<p>Investigation Of Structural, Luminescence And Anti-Bacterial Properties Of Novel <math>Zn_{1-x}Eu_{x}Al_2-Y_0.4Sr_y</math> Phosphor</p> <p>A Verma, DP Bisen, S Nema, IP Sahu, T Ray, N Brahme, A Verma, ...</p> <p>Journal of Materials Science: Materials in Electronics 33 (19), 15858-15878, 2022, ISSN:1573-482X</p>
11	<p>Microstructural, Luminescence Properties And Judd-Ofelt Analysis Of <math>Eu^{3+}</math> Activated <math>K_2Zr (PO_4)_2</math> Phosphor For Lighting And Display Applications</p> <p>B Verma, RN Baghel, DP Bisen, N Brahme, V Jena</p> <p>Optical Materials 129, 112459, 2022, ISSN:<b>0925-3467</b></p>
12	<p>Investigation Of Structural, Photoluminescence, And Thermoluminescence Properties Of Praseodymium Doped <math>CaWO_4</math> Phosphor</p> <p>R Paikaray, T Badapanda, H Mohapatra, T Richhariya, SN Tripathy, ...</p> <p>Materials Today Communications 31, 103802, 2022, ISSN:2352-4928</p>
13	<p>Efficient White Light-Emitting <math>Mg_{21}Ca_4Na_4 (PO_4)_{18}: Dy^{3+}, Tb^{3+}, Eu^{3+}</math> Triple-Doped Glasses: A Multipurpose Glasses For Wleds, Solar Cell Efficiency Enhancement, And Smart ...</p> <p>TS Dhapodkar, AR Kadam, N Brahme, SJ Dhoble</p> <p>Materials Today Chemistry 24, 100938, 2022, ISSN:2468-5194</p>
14	<p>Luminescence Properties Of A Novel Cyan-Blue Light Emitting <math>Ce^{3+}</math> Doped <math>Sr_{2-x}Si_2O_7</math> Phosphor</p> <p>SK Baghel, N Brahme, DP Bisen, Y Patle, T Richhariya, E Chandrawanshi, ...</p> <p>Optical Materials 126, 112141, 2022, ISSN:<b>0925-3467</b></p>

15	<p>The Effectiveness Of Sump Dimension Design: A Case Study In Nickel Mining</p> <p>ER Kapugu, AAIA Adnyano, R Prastowo, A Zamroni, M Kaur, N Brahme</p> <p>International Journal of Hydrological and Environmental for Sustainability 1 ...</p> <p>2022, ISSN:2828-5050</p>
16	<p>Thermoluminescence Studies Of Cdb4O7: Sm<sup>3+</sup> Phosphor</p> <p>K Thakkar, R Sharma, N Brahme, DP Bisen</p> <p>Materials Today: Proceedings 66, 622-626, 2022, ISSN:2214-7853</p>
17	<p>Structural, Luminescent Properties And Judd-Ofelt Analysis Of Camgsio<sub>4</sub>: Eu<sup>3+</sup> Phosphor For Solid State Lighting</p> <p>B Verma, RN Baghel, DP Bisen, N Brahme, V Jena</p> <p>Optical Materials 123, 111787, 2022, ISSN:0925-3467</p>
18	<p>Type Ia Supernovae Sn 2013Bz, Psn J0910+ 5003, And Asassn-16Ex: Similar To 09Dc-Like?</p> <p>S Tiwari, NK Chakradhari, DK Sahu, GC Anupama, B Kumar, KR Sahu</p> <p>Monthly Notices of the Royal Astronomical Society 521 (4), 5207-5223, 2023, ISSN:1365-2966</p>
19	<p>Can The Violent Merger Of White Dwarfs Explain The Slowest Declining Type Ia Supernova Sn 2011Aa?</p> <p>A Dutta, GC Anupama, NK Chakradhari, DK Sahu</p> <p>The Astrophysical Journal Letters 938 (2), L22, 2022, ISSN:2041-8213</p>
20	<p>Modeling The Late-Time Merger Ejecta Emission In Short Gamma Ray Bursts</p> <p>A Ghosh, K Misra, SV Cherukuri, L Resmi, KG Arun, A Omar, Dimple, ...</p> <p>Journal of Astrophysics and Astronomy 43 (2), 66, 2022, ISSN:0973-7758</p>
21	<p>Search For Merger Ejecta Emission From Late Time Radio Observations Of Short Grbs Using Gmrt</p> <p>A Ghosh, CS Vaishnava, L Resmi, K Misra, KG Arun, A Omar, ...</p> <p>arXiv preprint arXiv:2207.10001, 2022, ISSN:0035-8711,</p>
22	<p>Study Of Chemically Peculiar Stars – I. High-Resolution Spectroscopy And K2 Photometry Of Am Stars In The Region Of M44</p> <p>S Joshi, O Trust, E Semenko, PE Williams, P Lampens, P De Cat, ...</p> <p>Monthly Notices of the Royal Astronomical Society 510 (4), 5854-5871, 2022, ISSN: 0035-8711,</p>



23	Effect Of Tio <sub>2</sub> On Ion Transport Properties And Dielectric Relaxation Of Sodium Ion-Conducting Novel Peo/Pan-Blended Solid Polymer Electrolyte N Kumar, DK Sahu, YK Mahipal Journal of Materials Research 38 (9), 2506-2518, 2023, ISSN:2044-5326
24	Electrical And Thermal Analysis On Na <sup>+</sup> -Ion Conducting Novel Blended Solid Polymer Electrolyte Membranes N Kumar, M Sahu, YK Mahipal Materials Today: Proceedings 83, 33-38, 2023, ISSN:2214-7853
25	Physical And Electrical Property Studies On Sodium (Na <sup>+</sup> )-Ion Conducting Nano-Composite Polymer Electrolyte Membranes M Sahu, N Kumar, DK Sahu, RC Agrawal, YK Mahipal Materials Today: Proceedings 83, 69-74, 2023, ISSN:2214-7853
26	Investigation Of Zno Nano-Filler-Dispersed Nano-Composite Polymer Electrolytes And Their Ion Transport Property N Kumar, M Sahu, DK Sahu, YK Mahipal Journal of Solid State Electrochemistry 26 (8), 1613-1626, 2022, ISSN:1433-0768
27	A Graphene-Printed Paper Electrode For Determination Of H <sub>2</sub> O <sub>2</sub> In Municipal Wastewater During The Covid-19 Pandemic T Kant, K Shrivastava, I Karbhal, S Yadav, S Sahu, YK Mahipal, V Ganesan New Journal of Chemistry 46 (3), 1362-1370, 2022, ISSN:1369-9261
<b>2023-2024</b>	
1	Achieving structural, photoluminescence, temperature dependent photoluminescence and thermo-luminescence properties of SrAl <sub>2</sub> O <sub>4</sub> :Dy <sup>3+</sup> +Eu <sup>3+</sup> phosphor for A Verma, D Sahu, DP Bisen, N Brahme, P Barik, IP Sahu, C Kumari, ... Emergent Materials, 1-23, 2024, ISSN:2522-5731
2	Unveiling the Potential of Sm <sup>3+</sup> Doped Li <sub>2</sub> SrSiO <sub>4</sub> Phosphor for UVC Dosimetry: Comprehensive Analysis with Synthesis, Morphological, Elemental and ... K Tiwari, B Sharma, N Brahme, DP Bisen, T Richhariya, D Sahu, K Verma, ... ACS Applied Optical Materials, 2024, ISSN:2771-9855

3	<p>Studies on structural, photo and thermoluminescence properties of Sm<sup>3+</sup> activated Ca<sub>3</sub>MgSi<sub>2</sub>O<sub>8</sub> phosphors for solid-state lighting</p> <p>P Dewangan, DP Bisen, N Brahme, DS Kshatri, S Mishra, VK Jain, ...</p> <p>Journal of Materials Science: Materials in Electronics 35 (13), 898, 2024, ISSN:0957-4522</p>
4	<p>Spectroscopic investigation by incorporation of charge compensator ions in CaBaSiO<sub>4</sub>:Dy<sup>3+</sup> phosphors for solid-state lighting applications</p> <p>GR Banjare, DP Bisen, N Brahme, C Belodhiya</p> <p>Indian Journal of Physics, 1-14, 2024, ISSN:0973-1458</p>
5	<p>Investigation of photoluminescence and thermoluminescence properties of UV &amp; <math>\gamma</math> irradiated Li<sub>4</sub>SrCa(SiO<sub>4</sub>)<sub>2</sub>:Dy<sup>3+</sup> phosphor</p> <p>D Sahu, A Verma, DP Bisen, N Brahme, C Belodhiya, K Tiwari, A Sahu</p> <p>Journal of Materials Science: Materials in Electronics 35 (7), 527, 2024, ISSN:0957-4522</p>
6	<p>Study of morphological, elemental, optical and excitation wavelength dependent red photoluminescence in Eu<sup>3+</sup> doped Li<sub>2</sub>SrSiO<sub>4</sub> for solid state lighting</p> <p>K Tiwari, BG Sharma, N Brahme, DP Bisen, T Richhariya, A Verma, ...</p> <p>Materials Science in Semiconductor Processing 171, 107997, 2024, ISSN:1369-8001</p>
7	<p>Investigation of Latent Fingerprint Detection and Cheiloscopy Development Using Li<sub>2</sub>SrSiO<sub>4</sub>:Tb<sup>3+</sup> Phosphor for Forensic-Based Applications</p> <p>K Tiwari, BG Sharma, N Brahme, DP Bisen, T Richhariya, A Verma, ...</p> <p>ACS Applied Optical Materials 2 (3), 433-444, 2024, ISSN:2771-9855</p>
8	<p>Other emerging applications of mechanoluminescence and outlook</p> <p>K Tiwari, N Brahme</p> <p>Mechanoluminescence in Organic and Inorganic Compounds, 241-264, 2024, ISSN:9.78032E+12</p>
9	<p>Photoluminescence studies of Eu<sup>3+</sup> doped bismuth silicate based phosphor for plant grow LEDs</p> <p>E Chandrawanshi, DP Bisen, N Brahme</p> <p>Materials Letters: X 20, 100220, 2023, ISSN:2590-1508</p>
10	<p>Exploration of crystal structure, and luminescence behaviors of Terbium-activated CaWO<sub>4</sub> phosphor</p> <p>R Paikaray, T Badapanda, H Mohapatra, T Richhariya, K Tiwari, ...</p> <p>Journal of Molecular Structure 1290, 135902, 2023, ISSN:0921-5107</p>

11	<p>Luminescence Studies of CaY<sub>2</sub>Al<sub>4</sub>SiO<sub>12</sub>:Eu<sup>3+</sup> Phosphor by Sol–Gel Method</p> <p>A Verma, R Sharma, DP Bisen, N Brahme, T Richhariya, K Tiwari, ...</p> <p>Journal of Electronic Materials 52 (10), 6769-6777, 2023, ISSN:0361-5235</p>
12	<p>Thermoluminescence studies of Sm<sup>3+</sup> doped ZnB<sub>2</sub>O<sub>4</sub> phosphor</p> <p>K Thakkar, R Sharma, N Brahme, DP Bisen, A Verma, AP Goswami</p> <p>Journal of Physics: Conference Series 2576 (1), 012012, 2023, ISSN:1742-6596</p>
13	<p>Long Lasting Persistent Photo-Luminescence Properties of EuxM<sub>1-x</sub>MgAl<sub>10</sub>O<sub>17</sub> (M= Ba, Ca, Sr, Zn) Phosphors</p> <p>A Verma, DP Bisen, N Brahme, IP Sahu, P Barik</p> <p>Journal of Physics: Conference Series 2576 (1), 012011, 2023, ISSN:1742-6596</p>
14	<p>Structural, photoluminescence, and thermoluminescence behaviors of Samarium doped CaWO<sub>4</sub> phosphor</p> <p>R Paikaray, T Badapanda, H Mohapatra, T Richhariya, N Brahme, ...</p> <p>Materials Science and Engineering: B 294, 116511, 2023, ISSN:0921-5107</p>
15	<p>Investigation of photoluminescence, thermoluminescence, and energy transfer mechanism in Ce/Dy co-doped Sr<sub>2</sub>Al<sub>2</sub>SiO<sub>7</sub></p> <p>T Richhariya, N Brahme, DP Bisen, T Badapanda, K Tiwari, A Jain</p> <p>Materials Science in Semiconductor Processing 159, 107396, 2023, ISSN:1369-8001</p>
16	<p>Structural, Compositional and Photoluminescence Studies of Li<sub>4</sub>SrCa (SiO<sub>4</sub>)<sub>2</sub>: Eu<sup>3+</sup> Red Phosphor Synthesized by Solid State Reaction Method</p> <p>D Sahu, DP Bisen, N Brahme, K Tiwari, A Sahu</p> <p>Journal of Ravishankar University 36 (1), 104-112, 2023, ISSN:0970-5910</p>
17	<p>Luminescence studies of Sm<sup>3+</sup> doped CdB<sub>4</sub>O<sub>7</sub> phosphors</p> <p>K Thakkar, R Sharma, N Brahme, DP Bisen, A Verma, T Richhariya</p> <p>Journal of Materials Science: Materials in Electronics 34 (14), 1151, 2023, ISSN:1573-482X</p>
18	<p>Luminescence investigation of CaY<sub>2</sub>Al<sub>4</sub>SiO<sub>12</sub>:Dy<sup>3+</sup> phosphor synthesized by sol–gel method</p> <p>A Verma, R Sharma, DP Bisen, N Brahme, K Thakkar, S Tigga, ...</p> <p>Luminescence 38 (5), 576-584, 2023, ISSN:1522-7243</p>

19	<p>Yttrium aluminum garnet based novel and advanced phosphor synthesized by combustion route activated by Dy, Eu, and Tb rare earth metals</p> <p>A Verma, DP Bisen, N Brahme, IP Sahu, AK Singh</p> <p>Journal of Materials Science: Materials in Electronics 34 (7), 644, 2023, ISSN:1573-482X</p>
20	<p>Structural and luminescence studies of Eu<sup>3+</sup> doped K<sub>2</sub>BaSr (PO<sub>4</sub>)<sub>2</sub> phosphor</p> <p>A Shakya, AS Gour</p> <p>Journal of Physics: Conference Series 2576 (1), 012004, 2023, ISSN:12004</p>
21	<p>Photometric and Spectroscopic Studies of Supernova SN 2021mxx</p> <p>DK Sahu, M Kurre, GC Anupama, Y Patel, NK Chakradhari</p> <p>42nd meeting of the Astronomical Society of India (ASI, P157), 2024, ISSN:</p>
22	<p>Weak secondary cyclotron line in eclipsing high-mass X-ray binary Cen X-3</p> <p>P Dangal, R Misra, NK Chakradhari, Y Bhulla</p> <p>Monthly Notices of the Royal Astronomical Society 527 (3), 6981-6992, 2024, ISSN:0035-8711 ; 1365-2966</p>
23	<p>Search for merger ejecta emission from late-time radio observations of short GRBs using GMRT</p> <p>A Ghosh, CS Vaishnava, L Resmi, K Misra, KG Arun, A Omar, ...</p> <p>Monthly Notices of the Royal Astronomical Society 527, 8068, 2024, ISSN:0035-8711 ; 1365-2966</p>
24	<p>To Study the Effect of Nanoparticle TiO<sub>2</sub> on Sodium (Na<sup>+</sup>) – Ion Conducting Solid Polymer Electrolyte System: [80PEO:20NaPF<sub>6</sub>]</p> <p>M Sahu, N Kumar, RC Agrawal, YK Mahipal</p> <p>Macromolecular Symposia 413 (1), 2200212, 2024, ISSN:1521-3900</p>
25	<p>Effect of TiO<sub>2</sub> on ion transport properties and dielectric relaxation of sodium ion-conducting novel PEO/PAN-blended solid polymer electrolyte</p> <p>N Kumar, DK Sahu, YK Mahipal</p> <p>Journal of Materials Research 38 (9), 2506-2518, 2024, ISSN:2044-5326</p>
26	<p>Electrical and thermal analysis on Na<sup>+</sup>-ion conducting novel blended solid polymer electrolyte membranes</p> <p>N Kumar, M Sahu, YK Mahipal</p> <p>Materials Today: Proceedings 83, 33-38, 2023, ISSN:2214-7853</p>

27	<p>Physical and electrical property studies on sodium (Na<sup>+</sup>)–Ion conducting Nano–Composite Polymer Electrolyte membranes</p> <p>M Sahu, N Kumar, DK Sahu, RC Agrawal, YK Mahipal</p> <p>Materials Today: Proceedings 83, 69-74, 2023, ISSN:2214-7853</p>
<b>2024-2025</b>	
1	<p>A warm – orange light emitting eulytite type NaCaBi<sub>2-x</sub>(PO<sub>4</sub>)<sub>3</sub>: xSm<sup>3+</sup> phosphor for white light emitting diodes (W-LEDs) application</p> <p>Chitrkant Belodhiya, D.P. Bisen, <b>Nameeta Brahme</b>, Ganesh Ram Banjare , Sanjay Baghel , Dipti Sahu ,Yugbodh Patle, Pradeep Dewangan , A.S. Sai Prasad</p> <p>Optical Materials, <b>2025, ISSN:9253467</b></p>
2	<p>Investigation on luminescence enhancement via charge compensation mechanism in <math>\beta</math>-Ca<sub>2</sub>SiO<sub>4</sub>: A<sup>3+</sup> (A = Ce<sup>3+</sup>, Dy<sup>3+</sup>) phosphors for WLEDs</p> <p>Banjare, Ganesh; Bisen D.P.; <b>Brahme Nameeta</b>; Belodhiya; Chitrkant; Dewangan P.; Baghel,S.; Shukla V.K.; Sahu, B</p> <p><b>Indian J Phys</b>, 2025, ISSN:9731458</p>
3	<p>Luminescence Studies of Polycrystalline Eu<sup>3+</sup> doped Gadolinium Garnet Phosphor</p> <p>Suman Sao, Ravi Sharma, Nameeta Brahme, D.P. Bisen, Kamlesh Thakkar, Tripti Richharia, Kanchan Tiwari, Aksh kumar Verma, KK Dubey</p> <p><b>Journal of Electronic Materials</b>, 2025, ISSN:1543-186X</p>
4	<p>Achieving structural, photoluminescence, temperature dependent photoluminescence and thermo-luminescence properties of SrAl<sub>2</sub>O<sub>4</sub>:Dy<sup>3+</sup>,Eu<sup>3+</sup> phosphor for WLED application</p> <p>Verma, Akshkumar; Sahu, Dipti; Bisen D.P.;Brahme, Nameeta; Barik, Priya;Sahu I.P.;Kumari, Chandni; Gupta, Prerna</p> <p>Emergent Materials, <b>2024, ISSN:25225731</b></p>
5	<p>Spectroscopic investigation by incorporation of charge compensator ions in CaBaSiO<sub>4</sub>:Dy<sup>3+</sup> phosphors for solid-state lighting applications</p> <p>Banjare, Ganesh; Bisen D.P.; Brahme Nameeta,Belodhiya, Chitrkant</p> <p><b>Indian Journal of Physics</b>, <b>2024, ISSN:9731458</b></p>