

## PROFORMA FOR FILLING OF INFORMATION REGARDING PUBLICATIONS

**List of publications of faculty members with Central University of Jammu as affiliations.**

**Name of Department:** Department of Physics and Astronomical Sciences

**Dr. Suram Singh**

| S.No . | Name of Head/Facult y | Designation               | No. of publications (Papers/Books/Other s) | Title of Publication   | Year of publication | Published In                | Remarks, if any |
|--------|-----------------------|---------------------------|--|--|---------------------|-----------------------------|-----------------|
| 1.     | Dr. Suram Singh       | Associate Professor & HOD | 23   | Linking space-time correlations for a class of self-organized critical systems                                 | December 2021       | PHYSICAL REVIEW E           | SCI             |
| 2      | Dr. Suram Singh       | Associate Professor & HOD |  | Quasiparticle structure of low-lying yrast energy levels and $\gamma$ -bands in $^{164}$ - $^{174}$ Hf nuclei. | September 2021      | European Physical Journal A | SCI             |
| 3      | Dr. Suram Singh       | Associate Professor & HOD |  | Microscopic insight into the structure of negative parity yrast bands in $^{99-117}$ Pd isotopes.              | June 2021           | Nuclear Physics A           | SCI             |
| 4      | Dr. Suram Singh       | Associate Professor & HOD |  | Systematic investigation of $\gamma$ -band structure of triaxial even-even neutron-deficient Os nuclei.        | May 2021            | Chinese Journal of Physics  | SCI             |

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| 5  | Dr. Suram Singh | Associate Professor & HOD |  | Structural evolution of yrast and near-yrast bands in even-even Pd isotopes using a self-consistent approach      | January 2021 | European Physical Journal Plus             | SCI          |
| 6  | Dr. Suram Singh | Associate Professor & HOD |  | A detailed study of nuclear structure of odd-mass Pm isotopes near N = 82 shell closure                           | January 2021 | European Physical Journal Plus             | SCI          |
| 7  | Dr. Suram Singh | Associate Professor & HOD |  | Systematic Study of odd-mass $^{151-161}\text{Pm}$ and $^{154,156}\text{Pm}$ Isotopes Using Projected Shell Model | August 2020  | Chinese Physics C                          | SCI          |
| 8  | Dr. Suram Singh | Associate Professor & HOD |  | Evolution of intrinsic nuclear structure in medium mass even-even Xenon isotopes from a microscopic perspective   | July 2020    | Chinese Physics C                          | SCI          |
| 9  | Dr. Suram Singh | Associate Professor & HOD |  | Quasi-particle structure of even-even cerium isotopes in a self consistent approach                               | May 2020     | AIP Conference Proceedings 2220(1):130 020 | Scopus Index |
| 10 | Dr. Suram Singh | Associate Professor & HOD |  | Study of yrast structure of odd-odd $^{94}\text{Nb}$ nucleus  | May 2020     | AIP Conference Proceedings 2220(1):130 035 | Scopus Index |

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|    |                 |                           |  |  |               |   |     |
| 11 | Dr. Suram Singh | Associate Professor & HOD |  | Phenomenological description of non-axial shapes of some doubly even neutron deficient Barium isotopes           | March 2020    | Journal of Physics G Nuclear and Particle Physics | SCI |
| 12 | Dr. Suram Singh | Associate Professor & HOD |  | Microscopic study of ground state bands in N=45 and 46 isotones in mass region A~70-80                           | January 2020  | Journal of Physics G Nuclear and Particle Physics | SCI |
| 13 | Dr. Suram Singh | Associate Professor & HOD |  | Microscopic insight into low level systematics and negative-parity yrast bands in odd-mass $^{111-127}\text{Cd}$ | October 2019  | European Physical Journal Plus                    | SCI |
| 14 | Dr. Suram Singh | Associate Professor & HOD |  | Microscopic insight into the quasi-particle structure of odd-mass terbium isotopes                               | August 2019   | Chinese Journal of Physics                        | SCI |
| 15 | Dr. Suram Singh | Associate Professor & HOD |  | Microscopic Insight into the Nuclear Structure Properties of Odd-mass $^{101-109}\text{Cd}$ Isotopes             | April 2019    | Nuclear Physics A                                 | SCI |
| 16 | Dr. Suram Singh | Associate Professor & HOD |  | Systematic study of two-quasiparticle structure of the neutron-rich odd-odd Rubidium nuclei                      | November 2018 | Chinese Journal of Physics                        | SCI |

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|----|-----------------|---------------------------|--|---|---------------|--------------------------------|--------------|
| 17 | Dr. Suram Singh | Associate Professor & HOD |  | Investigation of quasi-particle structure of proton-hole indium nuclei  | November 2018 | European Physical Journal Plus | SCI          |
| 18 | Dr. Suram Singh | Associate Professor & HOD |  | Theoretical investigation of nuclear structure properties of $^{144}\text{Gd}$ , $^{146}\text{Dy}$ and $^{148}\text{Er}$ isotones | August 2018   | AIP Conference Proceedings     | Scopus Index |
| 19 | Dr. Suram Singh | Associate Professor & HOD |  | Rotational structure of the odd-odd nuclide $^{86}\text{Rb}$  | August 2018   | AIP Conference Proceedings     | Scopus Index |
| 20 | Dr. Suram Singh | Associate Professor & HOD |  | Band structure of neutron-deficient iodine nucleus  | August 2018   | AIP Conference Proceedings     | Scopus Index |
| 21 | Dr. Suram Singh | Associate Professor & HOD |  | Analysis of band structure of $^{85,87}\text{Zr}$   | August 2018   | AIP Conference Proceedings     | Scopus Index |
| 22 | Dr. Suram Singh | Associate Professor & HOD |  | Microscopic study of band structure of $^{102}\text{Nb}$  | August 2018   | AIP Conference Proceedings     | Scopus Index |

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|----|-----------------|---------------------------|--|---|------|--|---------------|
|    |                 |                           |  |   |      |  |               |
| 23 | Dr. Suram Singh | Associate Professor & HOD |  | National Conference on Recent Advances in Experimental and Theoretical Physics(RAETP2018) | 2018 | American Center for Physics, College Park, USA | International |

### **Dr. Vinay Kumar**

|    |                 |                 |      |   |      |                                 |     |
|----|-----------------|-----------------|------|---|------|---------------------------------|-----|
| 1. | Dr. Vinay Kumar | Associate Prof. | (32) | Surface and luminescent properties of $Mg_3(PO_4)_2:Dy^{3+}$ phosphors  | 2021 | OPTIK                           | SCI |
| 2  | Dr. Vinay Kumar | Associate Prof. |      | Spectral, surface and thermometric investigations of upconverting $Er^{3+}/Yb^{3+}$ co-doped $Na_3Y(PO_4)_2$ phosphor                                   | 2021 | Journal of Alloys and Compounds | SCI |
| 3  | Dr. Vinay Kumar | Associate Prof. |      | Investigation of thermoluminescence response and kinetic parameters of $CaMgB_2O_5: Tb^{3+}$ phosphor against UV-C radiation for dosimetric application | 2021 | J Mater Sci: Mater Electron     | SCI |
| 4  | Dr. Vinay Kumar | Associate Prof. |      | Structural and spectral studies of highly pure red-emitting $Ca_3B_2O_6:Eu^{3+}$ phosphors for white light emitting diodes                              | 2021 | Journal of Alloys and Compounds | SCI |

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|----|-----------------|-----------------|--|---|------|--|--------------|
| 5  | Dr. Vinay Kumar | Associate Prof. |  | Study of luminescence from terbium doped strontium borate nanophosphors in PMMA   | 2021 | Applied Physics A                                      | SCI          |
| 6  | Dr. Vinay Kumar | Associate Prof. |  | Influence of an adjoining cation on the luminescence performance of the Dy <sup>3+</sup> doped A <sub>3</sub> Gd(PO <sub>4</sub> ) <sub>2</sub> ; (A <sup>1/4</sup> Na,K) phosphors                     | 2020 | Journal of Alloys and Compounds                        | SCI          |
| 7  | Dr. Vinay Kumar | Associate Prof. |  | Sr <sub>4</sub> Al <sub>14</sub> O <sub>25</sub> : Eu <sup>2+</sup> ,Dy <sup>3+</sup> @ZnO nanocomposites as highly efficient visible light photocatalysts for the degradation of aqueous methyl orange | 2020 | Journal of Alloys and Compounds                        | SCI          |
| 8  | Dr. Vinay Kumar | Associate Prof. |  | Red emitting non-rare earth doped LiMgBO <sub>3</sub> phosphor for light emitting diodes  | 2020 | Journal of Alloys and Compounds                        | SCI          |
| 9  | Dr. Vinay Kumar | Associate Prof. |  | The structural and spectrals tudy of LiSrVO <sub>4</sub> :Tb <sup>3+</sup> phosphorfor UV-shift-dimaging devices  | 2020 | Materials Today :Proceedings                           | Scopus Index |
| 10 | Dr. Vinay Kumar | Associate Prof. |  | Effects of cationic substitution on the luminescence behaviour of Dy <sup>3+</sup> dopedorthophosphate phosphor   | 2019 | Journal of Alloys and Compounds                        | SCI          |
| 11 | Dr. Vinay Kumar | Associate Prof. |  | Excitation wavelength andEu <sup>3+</sup> / Tb <sup>3+</sup> content ratio dependent tunable photoluminescence fromNaSrBO <sub>3</sub> :Eu <sup>3+</sup> /Tb <sup>3+</sup> phosph or                    | 2019 | Journal of Materials Science: Materials in Electronics | SCI          |

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|----|-----------------|-----------------|--|---|------|---|-----|
| 12 | Dr. Vinay Kumar | Associate Prof. |  | Analysis of writing/ printing paper via Thermogravimetric Analysis: Application in forensic science   | 2019 | Australian Journal of Forensic Sciences | SCI |
| 13 | Dr. Vinay Kumar | Associate Prof. |  | X-ray photoemission and spectral investigations of Dy <sup>3+</sup> activated magnesium pyrophosphate phosphors   | 2019 | Journal of Alloys and Compounds         | SCI |
| 14 | Dr. Vinay Kumar | Associate Prof. |  | Synthesis and optical studies of KCaVO <sub>4</sub> :Sm <sub>3+</sub> /PMMA nanocomposites  | 2019 | Vacuum                                  | SCI |
| 15 | Dr. Vinay Kumar | Associate Prof. |  | Synthesis and tribological investigation of Al-SiC based nano hybrid composite  | 2019 | Alexandria Engineering Journal          | SCI |
| 16 | Dr. Vinay Kumar | Associate Prof. |  | A potential green emitting citrate gel synthesized NaSrBO <sub>3</sub> :Tb <sup>3+</sup> phosphor for display application   | 2018 | Physica B:Condensed Matter              | SCI |
| 17 | Dr. Vinay Kumar | Associate Prof. |  | Potential of Sm <sup>3+</sup> doped LiSrVO <sub>4</sub> nanophosphor to fill amber gap in LEDs  | 2018 | Physica B:Condensed Matter              | SCI |
| 18 | Dr. Vinay Kumar | Associate Prof. |  | Optical properties of Sr <sub>3</sub> B <sub>2</sub> O <sub>6</sub> :Dy <sup>3+</sup> /PMMA polymer nanocomposites  | 2018 | Physica B: Condensed Matter             | SCI |
| 19 | Dr. Vinay Kumar | Associate Prof. |  | Combustion synthesis and characterization of blue long lasting phosphor CaAl <sub>2</sub> O <sub>4</sub> :Eu <sup>2+</sup> , Dy <sup>3+</sup> and its novel application in latent finger print and lip mark detection | 2018 | Physica B :CondensedMatter              | SCI |
| 20 | Dr. Vinay Kumar | Associate Prof. |  | Surface and spectral studies of Sm <sup>3+</sup> doped  | 2018 | Journal of Alloys and Compounds         | SCI |

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|----|-----------------|-----------------|--|--|------|-----------------------------|--------------|
|    |                 |                 |  | $\text{Li}_4\text{Ca}(\text{BO}_3)_2$ phosphors for white light emitting diodes  |      |                             |              |
| 21 | Dr. Vinay Kumar | Associate Prof. |  | Synthesis and thermoluminescence studies of UV-C exposed $\text{Li}_4\text{Ca}(\text{BO}_3)_2:\text{Dy}^{3+}$ phosphors                  | 2018 | Vaccum                      | SCI          |
| 22 | Dr. Vinay Kumar | Associate Prof. |  | Blue photons excited highly chromatic red light emitting $\text{K}_3\text{La}(\text{PO}_4)_2:\text{Pr}^{3+}$ white light emitting diodes | 2018 | Materials Research Bulletin | SCI          |
| 23 | Dr. Vinay Kumar | Associate Prof. |  | Multivariate analysis for forensic characterization, discrimination, and classification of marker pen inks                               | 2018 | Spectroscopy Letters        | SCI          |
| 24 | Dr. Vinay Kumar | Associate Prof. |  | A potential amber-emitting $\text{KCVO}_4:\text{Sm}^{3+}$ nanophosphor for near-UV LEDs  | 2018 | AIP Conference Proceedings  | Scopus Index |
| 25 | Dr. Vinay Kumar | Associate Prof. |  | Synthesis and luminescent properties of $\text{Sm}^{3+}$ doped zinc aluminate phosphor   | 2018 | AIP Conference Proceedings  | Scopus Index |
| 26 | Dr. Vinay Kumar | Associate Prof. |  | Spectral properties of $\text{Dy}^{3+}$ -doped $\text{ZnAl}_2\text{O}_4$ phosphor  | 2018 | AIP Conference Proceedings  | Scopus Index |
| 27 | Dr. Vinay Kumar | Associate Prof. |  | Microscopic elemental and molecular spectroscopic investigations of root-knot nematode okra plant roots                                  | 2018 | Vaccum                      | SCI          |

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|----|-----------------|-----------------|--|---|------|---|---------------|
| 28 | Dr. Vinay Kumar | Associate Prof. |  | Spectroscopic analysis of rhizomes of black turmeric( <i>Curcuma caesia</i> )   | 2018 | AIP Conference Proceedings                                  | Scopus Index  |
| 29 | Dr. Vinay Kumar | Associate Prof. |  | Synthesis and luminescent properties of Sm <sup>3+</sup> activated lithium zinc borate phosphor   | 2018 | AIP Conference Proceedings                                  | Scopus Index  |
| 30 | Dr. Vinay Kumar | Associate Prof. |  | Thermoluminescence response and kinetic parameters of UV irradiated K <sub>3</sub> La(PO <sub>4</sub> ) <sub>2</sub> :Pr <sup>3+</sup> phosphor | 2018 | AIP Conference Proceedings                                  | Scopus Index  |
| 31 | Dr. Vinay Kumar | Associate Prof. |  | National Conference on Recent Advances in Experimental and Theoretical Physics(RAETP2018)   | 2018 | American Center for Physics, College Park, USA              | International |
| 32 | Dr. Vinay Kumar | Associate Prof. |  | Recent Developments and Applications of Novel Analytical Techniques for the Analysis of Plant Materials   | 2017 | Technological Advancements in Plant Sciences Nova Publisher | National      |

#### Dr. Amit Tomar

|   |                |                     |    |   |      |                                |     |
|---|----------------|---------------------|----|---|------|--------------------------------|-----|
| 1 | Dr. Amit Tomar | Assistant Professor | 11 | Recent progress, fabrication challenges and stability issues of lead-free tin-based perovskite thin films in the field of photovoltaics | 2021 | Coordination Chemistry Reviews | SCI |
| 2 | Dr. Amit Tomar | Assistant Professor |    | Ultraviolet Quantum Cutting through down Conversion   | 2020 | Integrated Ferroelectrics      | SCI |

|   |                |                     |  |  |      |                           |     |
|---|----------------|---------------------|--|--|------|---------------------------|-----|
|   |                |                     |  | Luminescence Behaviour of Er <sup>3+</sup> Substituted Sr <sub>0.7</sub> Bi <sub>2.2</sub> Nb <sub>2</sub> O <sub>9</sub> (BLFS) Ceramics    |      |                           |     |
| 3 | Dr. Amit Tomar | Assistant Professor |  | Template Based Electrochemical Synthesis of Copper (Cu) Nanowires as CH <sub>2</sub> Cl <sub>2</sub> Sens                                    | 2020 | Integrated Ferroelectrics | SCI |
| 4 | Dr. Amit Tomar | Assistant Professor |  | Sol-gel synthesis of Zn doped MgO nanoparticles and their applications   | 2020 | Integrated Ferroelectrics | SCI |
| 5 | Dr. Amit Tomar | Assistant Professor |  | Morphological and optical characterization of sol-gel synthesized Ni-doped ZnO nanoparticles   | 2020 | Integrated Ferroelectrics | SCI |
| 6 | Dr. Amit Tomar | Assistant Professor |  | Influence of addition of nanoparticles of magnetic phase on structural, microstructural and dielectric properties of multiferroic composites | 2019 | Integrated Ferroelectrics | SCI |
| 7 | Dr. Amit Tomar | Assistant Professor |  | Improved properties in Dy <sup>3+</sup> substituted barium titanate  | 2018 | Integrated Ferroelectrics | SCI |

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|----|----------------|---------------------|--|---|------|----------------------------|--------------|
| 8  | Dr. Amit Tomar | Assistant Professor |  | Self-organized nanopatterning of Si (100) surface using ion beam irradiation  | 2018 | AIP Conference Proceedings | Scopus Index |
| 9  | Dr. Amit Tomar | Assistant Professor |  | Synthesis, structural and morphological studies of Er <sup>3+</sup> substituted bismuth layered perovskite Sr <sub>0.7</sub> Bi <sub>2.2</sub> Nb <sub>2</sub> O <sub>9</sub> ceramic | 2018 | AIP Conference Proceedings | Scopus Index |
| 10 | Dr. Amit Tomar | Assistant Professor |  | National Conference on Recent Advances in Experimental and Theoretical Physics (RAETP-2018)   | 2018 | AIP Conference Proceedings | Scopus Index |
| 11 | Dr. Amit Tomar | Assistant Professor |  | Optical tunability in Er <sup>3+</sup> substituted Sr <sub>0.7</sub> Bi <sub>2.2</sub> Nb <sub>2</sub> O <sub>9</sub> (BLFS) multifunctional ceramics                                 | 2018 | AIP Conference Proceedings | Scopus Index |
| 12 | Dr. Amit Tomar | Assistant Professor |  | Modification in properties of barium titanate on Sm <sup>3+</sup> substitution  | 2017 | Ferroelectrics             | SCI          |