**Department of Physics**

**BIT Mesra**

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| **Research Papers Published** |
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| **2023**1. Manoj Kumar Rout, **Sunita Keshr**i,Crossover to the negative dielectric constant in La3+ and Dy3+ doped Co-Zn spinel nanoferrites,**Journal of Alloys and Compounds (Elsevier Publication) 965(2023) 171425**
2. Smit Anand & **Sanjay Kumar Sinha**,Mechanical, Structural, Corrosion, and Dielectric Properties of Hydroxyapatite Doped with Varying Concentrations of Cu to be Used as Orthopedic Implants,J. Mater. Eng. Perform. [https://doi.org/10.1007/s11665-023-08970-7**(2023)**](https://doi.org/10.1007/s11665-023-08970-7%282023%29)
3. Anuradha Mahanty , Ranbir Kumar , Deep Shikha, **S.K. Sinha,**Synthesis and characterization of new biomaterial ZnMg doped HAp for orthopaedic implant, Ceramics International **49(2023) 28965-28973**
4. S. Sahooa, T. Badapandaa, D. Kumar b, **S.K. Rout** b, S. Mohantyc, J. Rayc, Satya N. Tripathy, Structural, relaxor behavior, and energy storage performance of BaTiO3-Bi (Mg2/3Nb1/3)O3 solid solutions for potential MLCC application, **Ceramics International Volume 49,Issue23 ,PartA,December 2023 Pages 37700-37711**
5. Saswati Bagchi, Dhiraj Kumar Kushvaha, **Sanjeeb Kumar Rout,** Phase Formation Mechanism and Piezoelectric Behavior of NaNbO3 Ceramic, **ECS J. Solid State Sci. Technol, December 2023, 12(12)**
6. K Agrawal, B Behera, SC Sahoo, **SK Rout**, Electrical conduction mechanism in multiferroic Gd doped GaFeO3, **Chemical Physics Impact, Vol 7 Dec 2023, 100358**
7. Dhanranjan Kumar and **Sanjeeb Kumar Rout**\*, Significantly Enhanced Energy Storage Density and Efficiency at Low Electric field in Lead-free Bi0.5Na0.25K0.25TiO3-K0.5Na0.5NbO3 Piezoceramics, **ACS Applied Electronic Materials,**  2023, 5, 8, 4363–4376, <https://doi.org/10.1021/acsaelm.3c00607>
8. A. Hota , T. Badapanda , **S.K. Rout** , Satish B, Analysis of amplitude and frequency-dependent scaling behavior of dynamic hysteresis loop and thermal properties of BaZr0.05Ti0.95O3 **ceramic, Chemical Physics Impact , Vol 7 Dec 2023, 100304**
9. Naincy Kumari, **Sanjeeb Kumar Rout,** Structural and electrical properties of Ca2+- substituted barium magnesium niobate ceramics, J Mater Sci: Mater Electron, **J Mater Sci: Mater Electron (2023) 34:205**
10. Sudhir Minz, S. C. Sahoo**, S. K. Rout** & Banarji Behera, Structural, temperature/frequency dependence of dielectric, electrical and magnetic properties of Ni-doped inverse spinel CuFe2O4 nanoferrite, **J Mater Sci: Mater Electron, J Mater Sci: Mater Electron (2023) 34:649**
11. Subhashree Sahoo1, Tanmaya Badapanda, Archana Hota and **Sanjeeb Kumar Rout,** Investigation of Dielectric and Energy Storage Performance of (1-x)BaTiO3-xBi(Zn2/3Nb1/3)O3 Ceramic for Possible MLCC Application, ECS Journal of Solid State Science and Technology, 3 *ECS J. Solid State Sci. Technol.* **12** 053003**(2023)**
12. Dhal, S., Singh, S., Konar, K.,  **Paul, R. K**. Calculation of Cosmic microwave background radiation parameters using COBE/FIRAS dataset. **Exp Astron** **(2023).** <https://doi.org/10.1007/s10686-023-09904-w>
13. Somita Dhal & **R. K. Paul**, Investigation on CMB monopole and dipole using blackbody radiation inversion, **Sci Report  13, 3316 (2023**), [**https://doi.org/10.1038/s41598-023-30414-4**](https://doi.org/10.1038/s41598-023-30414-4)
14. Vignesh, D., and **Ela Rout**, Technological Challenges and Advancement in Proton Conductors: **A Review; Energy & Fuels, 37, 3428-3469 (2023)**
15. Preethi Kumari P, Anusha G, J.N.Cheerlin Mishma, **Rajeev K. Sinha,** Santosh L. Gaonkar, Heliyon, New benzisoxazole derivative:A potential corrosion inhibitor for mild steel in 0.5 M hydrochloric acid medium -Insights from electrochemical and density functional theory studies, [**Volume 9, Issue 10**](https://www.sciencedirect.com/journal/heliyon/vol/9/issue/10)**, October 2023, Heliyon (2023)**
16. Prajna N. D., Tom Devasia, **Rajeev K. Sinha,**Cardiovascular marker proteins detection in the blood serum using an LSPR chip based on Au nanobipyramid, **J. Biomed, Photonics & Eng.,** [**VOL 9, NO 3 (2023)**](https://jbpe.ssau.ru/index.php/JBPE/issue/view/177) **doi: 10.18287/JBPE23.09.030313**
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1. Swarnagowri Nayak, Santosh L. Gaonkar, Deepak Devadiga, T.N. Ahipa, **Rajeev K. Sinha** Synthesis, characterization and photo-physical properties of sugar hydrazone having indole and 1,3,4-oxadiazole moiety, , J**.  Lumin. 263, 120065 (2023).**
2. N Ullal, D Sunil, SD Kulkarni, **Rajeev K. Sinha,** PJ Anand, UK Bhat, Eco-friendly ink formulation of column purified carbon dots from GABA for antoicounterfeiting applications, **, J. Photochem. Photobiol**. **A: Chem., 114914 (2023)**
3. Srinivas Shenoy Heckadka, Raghuvir Pai Ballambat, Poornima Bhagavath, Manjeshwar Vijaya Kini, **Rajeev K Sinha,** M.K Sonali, and Diya Sen, Thermogravimetric analysis of flax, jute, and UHMWPE fibers and their composites with melamine and phenol formaldehyde resins **Cogent Eng.  10(1), 2209990 (2023).**
4. Samah Al-Qaisi, Habib Rached, Tahani A Alrebdi, S Bouzgarrou, Debidatta Behera, **Sanat Kumar Mukherjee**, Mohamed Khuili, Mohamed Adam, Ajay Singh Verma, Mohammed Ezzeldien, Study of mechanical, optical, and thermoelectric characteristics of Ba2XMoO6 (X = Zn, Cd) double perovskite for energy harvesting, ***Journal of Computational Chemistry*, 44(32)** **2442-2452 (2023)** (**Impact Factor 3.672**)
5. Debidatta Behera, Samah Al-Qaisi, Mumtaz Manzoor, Ramesh Sharma, Vipul Srivastava, Murefah mana Al-Anazy, E El Shiekh, **Sanat Kumar Mukherjee**, First principles studies on optoelectronics and transport properties of KSrY (Y= Sb, Bi) for renewable energy application, **Materials Science and Engineering: B, 297 16765 (2023) (Impact Factor 3.6)**
6. Debidatta Behera, Boumaza Akila, Rabie Amraoui, Salim Kadri, **Sanat Kumar Mukherjee**, Mostafa M Salah, Ahmed Saeed, Excellent Thermoelectric Performance in KBaTh (Th= Sb, Bi) Based Half-Heusler Compounds and Design of Actuator for Efficient and Sustainable Energy Harvesting Applications, **Crystals, 13(11) 1551 (2023) (Impact Factor 2.7**)
7. Aparna Dixit, A Dahshan, Santosh Kumar Tripathi, Anshuman Srivastava, Debidatta Behera, Ramesh Sharma, **Sanat Kumar Mukherjee**, R Khenata, S Bin Omran, Insight into the structural, electronic, optical, thermodynamic and thermoelectric properties of the cubic PbSiO3 Perovskite: A first-principles computation, **Chinese Journal of Physics (2023) (Impact Factor 3.957)**
8. Jisha Annie Abraham, Debidatta Behera, Kshitij Srivastava, Anshuman Srivastava, Ramesh Sharma, Murefah mana Al-Anazy, E El Shiekh, **Sanat Kumar Mukherjee**, Insight into the Structural, elastic, lattice dynamical, optical, and thermoelectric properties of novel Heusler Alloy LiCaBi by first-principles approach, **Chinese Journal of Physics (2023) (Impact Factor 3.957)**
9. Sangeeta Lakra, **Sanat K Mukherjee**, Sumit K Roy, Mrityunjay Kumar, Dielectric and Mechanical Properties of PZT Incorporated PVDF Nanocomposites Prepared by Solution Casting Method, **Materials Science Forum, 1097 107-113 (2023) (Impact Factor 0.211)**
10. Aparna Dixit, Debidatta Behera, Santosh Kumar Tripathi, Anshuman Srivastava, Ramesh Sharma, R Khenata, Hind Albalawi, Z Mahmoud, **Sanat Kumar Mukherjee**, Vibrational, mechanical, electronic and thermodynamic properties of rhenium-based perovskites XReO3 (X= Li, Be) by an ab-initio computation, **Materials Science and Engineering: B, 294 116545 (Impact Factor 3.6)**
11. Debidatta Behera, Boumaza Akila, **Sanat Kumar Mukherjee**, Tesfaye Abebe Geleta, Ahmed Shaker, Mostafa M Salah, Studies on Optoelectronic and Transport Properties of XSnBr3 (X = Rb/Cs): A DFT Insight, **Crystals, 13(10) 1437 (2023) (Impact Factor 2.7)**
12. Debidatta Behera, Batouche Mohammed, Seddik Taieb, Boudjelal Mokhtar, Samah Al-Qaisi**, Sanat Kumar Mukherjee**, First-principle investigations on optoelectronics and thermoelectric properties of lead-free Rb2InSbX6 (X = Cl, Br) double perovskites: for renewable energy applications, **The European Physical Journal Plus 138(6) 520 (2023) (Impact Factor 3.758)**
13. Z Aboub, T Seddik, B Daoudi, A Boukraa, Debidatta Behera, M Batouche, **Sanat Kumar Mukherjee**, Impact of La, Ni-doping on structural and electronic properties of SrTiO3 for photocatalytic water splitting**, Inorganic Chemistry Communications, 153 110871 (2023) (Impact Factor 3.428)**
14. D. Behera, **S. K. Mukherjee**, Insight to Structural, Electronic, Optical and Thermoelectric Properties of NaCaSb and KCaSb half Heusler Compounds: a DFT Approach, **JETP Letters ISSN 0021-3640 (2023) (Impact Factor 1.29)**
15. A.E. Nebatti, A. Zekri, Y. Zakaria, R. Singh, **S. K. Mukherjee,** A. S. Kadari, M. Guezzoul, K. D. Khodja, B. Amrani, B. Aissa, Compositional Mapping of Mo-doped ZnO thin films: Mechanical, nanp-surface and ToF-SIMS analyses, **Journal of Molecular Structure, 1286 135566 (2023) (Impact Factor: 3.841)**
16. Taieb Seddik, Debidatta Behera, Mohammed Batouche, Walid Ouerghui, Houda Ben Abdallah, Ram Krishna Sarkar, Mostafa M. Salah, Ahmed Shaker, **Sanat Kumar Mukherjee**, Electronic Properties, Linear and Nonlinear Performance of KAgCh(Ch=S, Se) Compunds: A First-Principles Study **Crystals 13 726 (2023) (Impact Factor: 2.670**).
17. Debidatta Behera, Ahmed Azzouz Rached, Abdessalem Bouhenna, Mostafa M. Salah, Ahmed Shaker, **Sanat Kumar Mukherjee,** First-Principles Studies on the Physical Properties of the Half Heusler RbNbCd and RbNbZn Compounds: A Promising Material for Thermoelectric Applications, **Crystals, 13 618 (2023) (Impact Factor: 2.670).**
18. Mumtaz Manzoor, Debidatta Behera, Ramesh Sharma, Muhammad Waqas Iqbal, **S. K. Mukherjee**, First principles insights on the structural, mechanical, dynamical, thermoelectric and thermodynamics properties of novel topological (ScSb) semi-metal, **Materials Science and Engineering: B 291, 116372 (2023) (Impact Factor: 3.407)**
19. Debidatta Behera, Mumtaz Manzoor, Ramesh Sharma, Mostafa M. Salah, Ivan Stich and **Sanat Kumar Mukherjee**, A Comprehensive First-Principles Investigation of SnTiO3 Perovskite for Optoelectronic and Thermoelectric Applications, **Crystals, 13 408 (2023) (Impact Factor: 2.670)**
20. Debidatta Behera, Mumtaz Manzoor, Ramesh Sharma, Muhammad Waqas Iqbal**, Sanat Kumar Mukherjee**, First principle insight on structural, opto-electronic and transport properties of novel zintl-phase AMg2Bi2 (A=Sr, Ba), **Journal of Solid State Chemistry, 123860 (2023) (Article in Press) (Impact Factor: 3.6)**
21. Mumtaz Manzoor, Debidatta Behera, Ramesh Sharma, Muhammad Waqas Iqbal, **Sanat Kumar Mukherjee**, Rabah Khenata, Saleh S Alarfaji, Huda A Alzahrani, Investigation of the structural, mechanical, optoelectronic and, thermoelectric characteristics of cubic GeTiO3: An ab initio study, **Materials Today Communications 34 105053 (2023) (Impact Factor: 3.662)**
22. Debidatta Behera, Aparna Dixit, Binayaka Nahak, Anshuman Srivastava, Ramesh Sharma, R Khenata, S Bin-Omran, Shaimaa AM Abdelmohsen, Ashraf MM Abdelbacki, **Sanat Kumar Mukherjee**, Theoretical insight on the electronic band structure, mechanical, vibrational and thermodynamic characteristic of antiperovskites RE3InN (RE= Y and La), **Materials Today Communic*ations* 35 105618 (2023) (Impact Factor: 3.662)**
23. Debidatta Behera, **Sanat Kumar Mukherjee,** First-principles calculations to investigate structural, optoelectronics and thermoelectric properties of lead free Cs2GeSnX6 (X = Cl, Br) **Materials Science and Engineering: B 292, 116421 (2023) (Impact Factor: 3.407)**
24. A Bajpai, **R Sharma** [Atmospheric pressure plasma jet: Formation of Wenzel’s model supportive surface modification on PMMA](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=YMB9zncAAAAJ&citation_for_view=YMB9zncAAAAJ:TFP_iSt0sucC) **Advances in Materials and Processing Technologies 9 (1), 332-350( 2023)**
25. N Sharma, S Mondal, HO Yadav, **R Sharma** [Graphene Oxide-Silver Nanocomposite Induced Apoptosis in Human Hepatoma (HepG2) Cells Through Oxidative Stress and Caspase Dependent Signalling Pathway](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=YMB9zncAAAAJ&citation_for_view=YMB9zncAAAAJ:JV2RwH3_ST0C) **Indian Journal of Engineering & Materials Sciences 30, 298-304(2023)**
26. A Bajpai, N Sharma, PK Dwivedi, **R Sharma** [Rapid Fabrication of Graphene Layers Over Polymeric Substrates Using Atmospheric Pressure Plasma Jet](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=YMB9zncAAAAJ&citation_for_view=YMB9zncAAAAJ:maZDTaKrznsC) **IEEE Transactions on Plasma Science 51 (3), 726-732(2023)**
27. Apurba Tewari, **Nishi Srivastava** (Corresponding Author), Impact of Covid Lockdowns on Spatio-Temporal Variability in Land Surface Temperature and Vegetation Index, **Environmental Monitoring and Assessment, 2023 , Volume 195, article number 507**
28. S Chauhan, S Mandal, V Yadav, PK Jaiswal, **M Priya**, MD Shrimali, Machine learning based prediction of phase ordering dynamics**, Chaos: An Interdisciplinary Journal of Nonlinear Science 33 (6) (2023).**
29. D Ganguly, and **M Priya**,Host-Parasite Coevolution: **A Review of Statistical Models, Horizons in World Physics, Volume 310, Nova Science Publishers (2023).**
30. S Suvarna **and M Priya,** Cooperation: An Essential Coevolution Phenomenon, **Horizons in World Physics, Volume 310, Nova Science Publishers (2023)**
31. Rakesh K. Prasad, **Dilip K. Singh**, Kinetics and Parameters of Epitaxial Monolayered Continuous large area Molybdenum disulfide Growth. **ACS Omega 2023,** 8, 12, 10930–10940, <https://doi.org/10.1021/acsomega.2c07408>
32. Rakesh K. Prasad, Manisha Kumari and **Dilip K. Singh,** Controlled Nucleation Sites with Large Coverage Area for Continuous Monolayered WS2 Growth by Using the CVD Process, **ACS Crystal Growth & Design,2023, DOI:**[**10.1021/acs.cgd.3c00527**](http://dx.doi.org/10.1021/acs.cgd.3c00527)
33. Rakesh K. Prasad, Koushik Ghosh, Pravat K. Giri, Dai-Sik Kim, and **Dilip K. Singh,** High-Efficiency Photodetector Based on a CVD-Grown WS2 Monolayer , **ACS Applied Electronic Materials,** [**https://doi.org/10.1021/acsaelm.3c00366**](https://doi.org/10.1021/acsaelm.3c00366)**, (2023) 5, 7, 3634–3640**
34. Aradhana Kumari, Rahul Marathe and **Sourabh Lahiri**,Exploring outputs from concatenated stochastic heat engines [**Journal of Statistical Mechanics: Theory and Experiment**](https://iopscience.iop.org/journal/1742-5468)**,**[**Volume 2023**](https://iopscience.iop.org/volume/1742-5468/2023)**, (August 2023)  DOI 10.1088/1742-5468/ace714**
35. Ashutosh Kumar , **Sourabh Lahiri** , Trilochan Bagarti , Subhashish Banerjee Thermodynamics of one and two-qubit nonequilibrium heat engines running between squeezed thermal **reservoirs** [**Physica A: Statistical Mechanics and its Applications**](https://www.sciencedirect.com/journal/physica-a-statistical-mechanics-and-its-applications)[**Volume 623**](https://www.sciencedirect.com/journal/physica-a-statistical-mechanics-and-its-applications/vol/623/suppl/C)**, 1 August 2023, 128832**
36. **Dr. R. K. Dewanjee,** Search for Higgs boson pairs deacying to WW\*WW\*, 2W2tau and 4tau in proton-proton collsions at sqrt(s) = 13 TeV, **Journal of High Energy Physics, JHEP07(2023)095**
37. **Dr. R. K. Dewanjee**, Observation of enhanced long-range elliptic anisotropies inside high-multiplicity jets in pp collisions at sqrt(s) = 13 TeV, **Physical Review Letters, arXiv:2312.17103v1 [hep-ex] 28 Dec 2023**
38. **Dr. R. K. Dewanjee,** Search for long-lived heavy neutral leptons with lepton flavor conserving or violating deacys to a jet and a charged lepton, **Journal of High Energy Physics, 2023, https://doi.org/10.1007/JHEP03(2024)105,, JHEP03(2024)105**
39. Urmimala Dey, Jeroen van den Brink, and **Rajyavardhan Ray**, Correlation between electronic polarization and shift current in cubic and hexagonal LiZnX (X=P, As, Sb), accepted 20 November 2023; published 15 February 2024, **Phys. Rev. Materials 8, 025001**
40. **Pawan K. Tiwari,** Ravindra Kumar, Kritika Halder & Yeon Soo Lee, Maxwell–Boltzmann and Druyvesteyn Distribution Functions Expressing the Particle Velocity and the Energy in Sheath Plasmas, **Journal of Russian Laser Research, Volume 44, Number 5, September, 2023**

**2022**1. **Sunita Keshri** and Sonali Biswas, Synthesis, physical properties, and biomedical applications of magnetic nanoparticles: a review; **Progress in Biomaterials**- **2022 Dec;11(4):347-372. doi: 10.1007/s40204-022-00204-8. Epub 2022 Sep 26.**
2. Sonali Biswas, Piotr Wisniewski, and **Sunita Keshri**, Study of the structural,  electrical and magnetic properties of the   La0.67Pb0.33-xPbxMnO3  nano crystalline materials, **Journal of  Low Temperature  Physics (Springer Publication**[**)**](file:///C%3A%5CUsers%5CPhy%5CDesktop%5C%29)**volume 206, pages400–412 (2022)**[**https://doi.org/10.1007/s10909-021-02654-z**](https://doi.org/10.1007/s10909-021-02654-z)
3. Shomaila Khanam, **Sanjeeb Kumar Rout** Improved photocatalytic activity of hydrothermally prepared Bi2WO6 in degradation of Rhodamine B and Methylene blue, , **Indian Journal of Pure & Applied Physics, 60 (2022) 590-599 .**
4. A. Singha, S. Praharaj, **S. K. Rout,** D. Rout, Composition Dependent Crossover from Ferroelectric to Relaxor-Ferroelectric in NBT-ST-KNN Ceramics, **Current Applied Physics 36 (2022) 160–170.**
5. Shomaila Khanam, **Sanjeeb Kumar Rout** Synergetic effect of silver molybdenum tungsten oxide heterostructures for enhanced photocatalytic reaction, , **Chemical Physics Impact 5, (2022), 100093.**
6. Khusboo Agrawal, Banarji Behera, S. C. Sahoo, **S. K. Rout**, Ashok Kumar, Dhiren K. Pradhan, Piyush R. Das Dielectric, ferroelectric, magnetic and electrical properties of Sm?doped GaFeO3 , **Applied Physics A 128 (2022) 156 (17 pages).**
7. Sipun Mohanty, **Rishi Sharma**, **Sanjeeb Kumar Rout,** Samrat Mukherjee, Evidence of structural and two magnetic phase transitions in Cu doped La2FeMnO6 double perovskites, **Journal of Alloys and Compounds, 918 (2022) 165694 (13p)**
8. Saumya Shalu, Sunanda Roy, Anindita Mukherjee, Trishna Bal, **Sanjeeb KumarRout**, Barnali Dasgupta Ghosh Effect of Mn-doping on the morphological and electrical properties of (Ba0·7Sr0.3) (MnxTi1−x) O3 materials for energy storage application, , **Ceramics International 48 (2022) 25816–25825.**
9. S.P. Muduli, S. Parida, S.K. Behura, S Rajput, **S K Rout**, S. Sareen Synergistic effect of graphene on dielectric and piezoelectric characteristic of PVDF-(BZT-BCT) composite for energy harvesting applications, , **Polym Adv Technol. (2022), 3628-3642.**
10. D.K. Kushvaha, **S.K. Rout**, B. Tiwari, Significant modulation in field-induced energy storage capability of BNKT-BN **Ceramics, Physica B, 640 (2022) 414030..**
11. D, Vignesh ; **Ela Rout**, Structural and Electrophysical Perturbations in Y3+ Doped BaCeO3 Proton Conducting Electrolyte: A First Principles Approach” **Computational Condensed Matter 33, e00763 (2022)**
12. D, Vignesh ; Sonu, Bibek; **Rout, Ela** , "Factors Constituting Proton Trapping in BaCeO3 and BaZrO3 Perovskite Proton Conductors in Fuel Cell Technology: A Review" ,  **Energy & Fuels 36,7219-7244 (2022)**
13. D, Vignesh ; **Rout, Ela** , “ Analysis of Symmetry Variation as a Function of Rare Earth Dopant Concentration in Proton Conducting Solid Oxide Fuel Cells”, **Materials Today: Proceedings, 66 3416-3421 (2022)**
14. **Nishi Srivastava** and Mousam Kumar, Comprehensive Study of Aerosols Properties over various Terrain Types, **Environmental Monitoring and Assessment, PMID 36260142, (DOI: 10.1007/s10661-022-10536-4)(2022)**
15. **Nishi Srivastava**, Jaya Divyam, Upamanyu Ghosh, **Madhu Priya**, Nisheeth Saxena, and Manoj Kumar, Statistical and Spectral Analysis of Wind over a Strategic Location, **Journal of Water and Climate Change, Vol 13 No 9, 3305 doi: 10.2166/wcc.2022.113 (Q2) (2022)**
16. Syed Shuja Hasan Zaidi, Prabhat K. Jaiswal, **Madhu Priya,** and Sanjay Puri, Universal fast mode regime in wettingkinetics,**Phys.Rev.E., 106, L052801 (2022)**
17. D Behera, **SK Mukherjee** [Theoretical Investigation of the Lead-Free K2InBiX6 (X = Cl, Br) Double Perovskite Compounds Using Ab Initio Calculation](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=F-hDjWQAAAAJ&citation_for_view=F-hDjWQAAAAJ:bEWYMUwI8FkC) **JETP Letters 116 (8), 537-546 (2022)**
18. D. Behera, A. Dixit, K. Kumari, A. Srivastava, **R. Sharma, S. K. Mukherjee**, R. Khenata, A. Boumaza, S. Bin-Omran, Structural, elastic, mechanical, and thermodynamic characteristic of NaReO3 and KReO3 perovskite oxides from first principles study, **Eur. Phys. J. Plus 37:1345 (2022)** (Impact Factor: 3.911)
19. Mumtaz Manzoor, Debidatta Behera, Suman Chowdhury, Ramesh Sharma, Muhammad Waqas Iqbal, **S.K. Mukherjee,** Saleh S Alarfaji, Huda A. Alzahrani, First-principles calculations to investigate structural, dynamical, thermodynamic and thermoelectric properties of CdYF3 perovskite, **Computational and Theoretical Chemistry 1217 113928 (2022)** (Impact factor 2.292).
20. Debidatta Behera, Mumtaz Manzoor, Manashish Maharana, Muhammad Waqas Iqbal, Tausif Zahid, Sangeeta Lakra, **S.K.Mukherjee\*,** Saleh S.Alarfaji, Structural, electronic, optical, and thermoelectric re, sponse of zintl phase AAg2S2 (A= Sr/Ba) compounds for renewable energy applications, **Physica B: Condensed Matter 649,  414446 (2023)** (Impact factor 2.436).
21. Sabrina Tair, Abdelkader Nebatti Ech-Chergui, **Sanat Kumar Mukherjee**, Abdelwaheb Boukhachem, Rajan Kr. Singh, et al., Structural and Compositional Analyses of Spray Pyrolysis α-Lanthanum Sulphide (α-La2S3) Thin Films, Brazilian **Journal of Physics 52, 207 (2022)** (Impact Fator: 1.326)
22. Debidatta Behera, Mumtaz Manzoor, **Sanat Kumar Mukherjee**,Incorporation of Te in enhancing thermoelectric response of AeAg2SeTe (Ae = Sr, Ba) compounds: A DFT insight, **Computational Condensed Matter, e00757 (2022)**
23. Debidatta Behera, Aparna Dixit, Binayaka Nahak, Anshuman Srivastava, Shubha Dubey, Ramesh Sharma, Abhishek Kumar Mishra, **Sanat Kumar Mukherjee,** Structural, electronic, elastic, vibrational and thermodynamic properties of antiperovskites Mg3NX (X = Ge, Sn): A DFT study, **Physics Letters A 453 128478 (2022)** (Impact Factor 2.654)
24. Mumtaz Manzoor, Debidatta Bahera, Ramesh Sharma, Faisal Tufail, Muhammad Waqas Iqbal, **Sanat Kumar Mukerjee,** Investigated the structural, optoelectronic, mechanical, and thermoelectric properties of Sr2BTaO6 (B = Sb, Bi) for solar cell applications, **International Journal of Energy Research, https://doi.org/10.1002/er.8669 (2022)** (Impact Factor 4.672)
25. Debidatta Behera, Jisha Annie Abraham, Ramesh Sharma, **Sanat Kumar Mukerjee**, Ekta Jain, First Principles Study of New d Half-Metallic Ferromagnetism in CsBaC Ternary Half-Heusler Alloy, **Journal of Superconductivity and Novel Magnetism (2022) (**Accepted) (Impact Factor 1.675)
26. D. Behera, **S. K. Mukherjee**, Optoelectronics and Transport Phenomena in Rb2InBiX6 (X = Cl, Br) Compounds for Renewable Energy Applications: A DFT Insight, **Chemistry 4, 1044-1059 (2022) (ESCI).**
27. J. A. Abraham, D. Behera, K. Kumari, A. Srivastava, **R. Sharma, S. K. Mukherjee**, A comprehensive DFT analysis on structural, electronic, optical, thermoelectric, SLME properties of new double perovskite oxide Pb2ScSiO6, **Chemical Physics Letters, 806, 139987 (2022)** (Impact Factor: 2.71)
28. Sabrina Tair, Prashant Ghediya, Abdelkader Nebatti Ech Chergui, Mhamed Guezzoul, **Sanat Kumar Mukherjee, et al.,** n-type SnS2 thin films spray-coated from transparent molecular ink as a non-toxic buffer layer for solar photovoltaics, **Physica Scripta, 97 095810 (2022) (Impact Factor: 3.081)**
29. Debidatta Behera, Mumtaz Manzoor, Muhammad Waqas Iqbal, Sangeeta Lakra, **S. K. Mukherjee\*,** Revealing excellent electronic, optical, and thermoelectric behavior of Eu based EuAg2Y2 (Y= S/Se): For solar cell applications, **Computational Condensed Matter, 32, e00723 (2022) (Impact Factor: 1.789)**
30. Rajan Singh, Mukul Gupta, D. M. Phase, **S. K. Mukherjee\*,** XANES and XRR study on phase evolution of TiO2 films using HiPIMS, **Materials Science and Engineering B, 283, 115827 (2022) (Impact Factor: 4.051)**
31. Ali Sadek Kadari, Abdelkader Nebatti Ech–Chergui, Brahim Aissa, **Sanat Kumar Mukherjee**, Nourddine Benaioun, et. al., Growth and Characterization of transparent vanadium doped zinc oxide thin films by means of a spray pyrolysis process for TCO application, **Journal of Sol-Gel Science and Technology,**[**https://doi.org/10.1007/s10971-022-05875-0**](https://doi.org/10.1007/s10971-022-05875-0)**(2022) (Impact Factor: 2.326)**
32. Rajan Singh, **S. K. Mukherjee\*,** Correlation of structural, electrical  and optical properties of Al-doped ZnO TCOs, **Journal of Materials Science: Materials in Electronics, 33, 6969-6980 (2022) (Impact Factor: 2.478)**
33. Rajan Singh, Mukul Gupta, **S. K. Mukherjee\*,** Effect of Ag layer thickness on optical and electrical properties of ion-beam sputtered TiO2/Ag/TiO2 multilayer thin film, **Journal of Materials Science: Materials in Electronics, 33, 6942-6953 (2022) (Impact Factor: 2.478)**
34. K. P. Mishra, A. Kumawat, A. Bandopadhyay, B. Modak, **S. K. Mukherjee**, P. D. Babu, S. Kabi, S. Chattopadhyay, R. K. D. Misra, Structural analysis and magnetic properties of cobalt-doped nano titania, **Materials Science and Engineering B, 282, 115761 (2022) (Impact Factor: 4.051)**
35. D. Behera, R. Sharma, H. Ullah, H. S. Waheed, **S. K. Mukherjee**\*, Electronic, optical, and thermoelectric investigations of Zintl phase AAg2Se2 (A = Sr, Ba) compounds: A first-principle approach, **Journal of Solid State Chemistry, 312, 123259 (2022)** **(Impact Factor: 3.498)**
36. R. Chatterjee, **S. K. Mukherjee**, B. Paul, S. Chattopadhyaya, Evaluation of spectroscopic analysis, performance and emissions of enriched Jatropha and Madhuca methyl ester for clean environment, **Clean Technologies and Environmental Policy,**[**https://doi.org/10.1007/s10098-022-02322-0**](https://doi.org/10.1007/s10098-022-02322-0)**(2022) (Impact Factor: 3.636)**
37. Neha Chakraborty, **Rishi Sharma**, Rajan Kumar Singh, **Sanat Kumar Mukherjee**, Neelima Sharma; PEDOT:PSS doped graphene oxide as an alternative to hole transport material and transparent conducting electrode; **NANO (2022) (Comments Received on 27.05.22)**
38. Abhilash Bajpai and **Rishi Sharma**; Atmospheric Pressure Plasma Jet: Formation of Wenzel's model supportive surface modification on PMMA; **Advances in Materials and Processing Technologies (2022) DOI:**[**10.1080/2374068X.2022.2092683**](https://doi.org/10.1080/2374068X.2022.2092683)
39. Kanak Pal S. Parmar, Jeong Hun Kim, Amita Bist, Piyush Dua, **Pawan K. Tiwari,**Anukorn Phuruangrat and Jae Sung Lee\*, [Superparamagnetic and Perfect-Paramagnetic Zinc Ferrite Quantum Dots from Microwave-Assisted Tunable Synthesis](https://pubs.acs.org/doi/10.1021/acsomega.2c04668), **ACS Omega 2022, 7, 35, 31607–31611 Cite This:** [**https://doi.org/10.1021/acsomega.2c04668**](https://doi.org/10.1021/acsomega.2c04668)
40. **Pawan K. Tiwari** , Yeon Soo Lee , George A. Johny , Tanvi Gaurav , Riya Pandey , Sanjukta Roy Choudhury , Kirti Sharma, Suman Pandey, Machine Learning Algorithms and Modalities in Enhancing Healthcare Decisions, **Majlesi Journal of Mechatronic Systems Vol. 11, No. 2, June 2022**
41. Niharika Verma , Soumyadeep C. Sarkar , **Pawan Kumar Tiwari**\*, K. P. S. Parmar, Stimulation of Waves and Instabilities in Response to Irradiation of Electromagnetic Fields into Plasmas, **Majlesi Journal of Electrical Engineering Vol. 16, No. 1, March 2022**
42. Vivek Sharma and **Suman Ghosh**, Geodesic congruences in 5D warped Ellis–Bronnikov spacetimes, **Eur. Phys. J. Plus (2022) 137:881, 01 August 2022, [DOI:10.1140/epjp/s13360-022-03086-8]**
43. Vivek Sharma and **Suman Ghosh**, Geodesics in Generalised Ellis-Bronnikov Spacetime Embedded in Warped 5D Background, **Eur. Phys. J. C (2022) 82:702, 13 August 2022 [DOI: 10.1140/epjc/s10052-022-10682-6],**
44. **N Srivastava**, J Divyam, U Ghosh, M Priya, N Saxena, M Kumar statistical and spectral analysis of wind over a strategic location, , **Journal of Water and Climate Change 13 (9), 3305-3322 (2022).**
45. SSH Zaidi, PK Jaiswal, M Priya, S Puri, Universal fast mode regime in wetting kinetics, Physical Review E 106 (5), L052801 (2022).
46. Sayema Chowdhury, **Anupam Roy,** Md Hasibul Alam, Tanmoy Pramanik, Jessica Depoy, Robert Chrostowski, Filippo Mangolini, Deji Akinwande and Sanjay K Banerjee Role of hydrogen in suppressing secondary nucleation in chemical vapor-deposited MoS2, , **ACS Appl. Electron. Mater. 4, 6133-6141 (2022)**
47. **Anupam Roy,** Tanmoy Pramanik, Sayema Chowdhury and Sanjay K Banerjee Phase-field modeling of chemical vapor-deposited 2D MoS2 domains with varying morphology for electronic devices and catalytic applications, , **ACS Appl. Nano Mater. 5, 15488-15497 (2022)**
48. Md Hasibul Alam, Sayema Chowdhury, **Anupam Roy**, Xiaohan Wu, Ruijing Ge, Michael A Rodder, Jun Chen, Yang Lu, Chen Stern, Lothar Houben, Robert Chrostowski, Scott R Burlison, Sung Jin Yang, Martha I Serna, Ananth Dodabalapur, Filippo Mangolini, Doron Naveh, Jack C Lee, Sanjay K Banerjee, Jamie H Warner and Deji Akinwande Wafer-scalable single-layer amorphous molybdenum trioxide, **ACS Nano 16, 3756-3767 (2022)**

**2021**1. Rohit Mukherjee and **S.Konar** "Electromagnetically Induced Grating and Parity-time Symmetry in Coupled Quantum Wells", **Chinese Journal of Physics** [**Volume 74**](https://www.sciencedirect.com/journal/chinese-journal-of-physics/vol/74/suppl/C)**, December 2021, Pages 440-453**
2. Tribhuwan Kishore Mishra, A Kumar and **S.K.Sinha**, Experimental investigation and study of HVOF sprayed WC-12Co, WC-10Co-4Cr and Cr3C2-25NiCr coating on its sliding wear behaviour, **International Journal of Refractory Metals and Hard Materials,Volume 94, January 2021, 105404** [**https://www.sciencedirect.com/science/article/pii/S0263436820302808**](https://www.rediffmail.com/cgi-bin/red.cgi?red=https%3A%2F%2Fwww%2Esciencedirect%2Ecom%2Fscience%2Farticle%2Fpii%2FS0263436820302808&isImage=0&BlockImage=0&rediffng=0&rogue=e9534672228e687112ae760a6c5c786ef1ecf0bf&rdf=UGcDYANoBXABNw==&els=5e9eac211e6a1fb8ed80eff128e96187)
3. T. K. Mishra, A. Kumar, **S. K. Sinha**, Sliding Wear Behavior of Thermally Sprayed WC-20Cr3C2-7Ni and La2O3 Composite Coatings**,  Emerging Materials Research Volume 10 Issue 2,  pp. 1-9, ISSN 2046-0147 | E-ISSN 2046-0155, June 2021** [**https://doi.org/10.1680/jemmr.20.00138**](https://doi.org/10.1680/jemmr.20.00138)
4. Deep Shikha, **S. K. Sinha**, S. Murugesan, Microstructure, Corrosion resistance and Wettability of HAP and AgHAP,  **Journal of Surface Science and Technology,**  **Vol 37, No 1-2 (2021), Pagination: 23-34**
5. **S Konar**, Parity-time symmetry in photonics with the emphasis to semiconductor quantum wells, **Asian Journal of Physics, Vol 30, No 1, (2021)**
6. Rohit Mukherjee, **S. Konar** , and Puspashree Mishra "Phase-sensitive modulation instability in asymmetric coupled quantum wells" **PHYSICAL REVIEW A 103, 033517 (2021)**
7. Vikash Kumar, Neha Singh, Soumita Jana, **Sanjeeb Kumar Rout**, Ratan Kumar Dey, Gajendra Prasad Singh, Surface polar charge induced Ni loaded CdS heterostructure nanorod for efficient photo-catalytic hydrogen evolution**, International Journal of Hydrogen Energy 46 (30), (2021),16373-16386**.
8. Khusboo Agrawal, Banarji Behera, S.C. Sahoo, **S.K. Rout**, Ashok Kumar, Piyush R. Das , Mn doped multiferroic in Ga0.97Nd0.03FeO3electroceramics, , **Journal of Magnetism and Magnetic Materials, 536 (2021) 168121.**
9. Arpita Singha, Swetapadma Praharaj, **Sanjeeb Kumar Rout**, Rolly Verma, Dibyaranjan Rout,Electric Field and Temperature Induced Abnormal Phase Transitions in 0.78Na0.5Bi0.5TiO3-0.2SrTiO3-0.02K0.5Na0.5NbO3 Lead Free Ceramic Materials Research Bulletin, **Materials Research Bulletin, (142),( 2021), 111407**
10. Sameer Kumar Tiwari, Anterdipan Singh, Pritam Yadav, Bibek Kumar Sonu, Rolly Verma, **S. K. Rout, Ela Sinha**, Structural and dielectric properties of Cu-doped α-ZnMoO4 ceramic system for enhanced green light emission and potential microwave applications, , **Journal of Materials Science: Materials in Electronics, 32, (2021), 12881–12889.**
11. Shomaila Khanam, **S K Rout**, Decolorisation of Rhodamine B and Methylene Blue Dyes in the presence of Bismuth Tungstates: A detailed investigation on the effect of grain size, , **Bulletin of Materials Science**, **44(2021)**
12. Konar, K., **Bose, K. & Paul, R.K**. Revisiting cosmic microwave background radiation using blackbody radiation inversion. **Sci Rep 11, 1008 (2021).**
13. BK Sonu, **E. Sinha**, Structural, thermal stability and electrical conductivity of zirconium substituted barium cerate ceramics, **Journal of Alloys and Compounds     860, 158471 (2021).**
14. **Nishi Srivastava**, D. Vignesh, and N. Saxena, Investigation of Artificial Neural Network Performance in the Aerosol Properties Retrieval**, Journal of Water and Climate Change, Accepted (2021)**
15. Ashish Gaurav, Deepali Sinha, Rakesh K. Prasad, **Dilip K. Singh**,Single step synthesis of size-controlled carbon quantum dots using electrochemical etching of graphite.J. of Nanoscience & Nanotech (2021, Under revision)  **arXiv:2011.03217v1 [physics.app-ph]**
16. Mritunjoy Prasad Ghosh, Subhadeep Datta, **Rishi Sharma**, Kamar Tanbir, Manoranjan Kar, Samrat Mukherjee, Copper doped nickel ferrite nanoparticles: Jahn-Teller distortion and its effect on microstructural, magnetic and electronic properties, **Materials Science & Engineering B, Vol 263 (2021) 114864.**
17. **S. Lah**iri and A. M. Jayannavar, Stochastic Energetics and Thermodynamics at Small Scales, **Resonance 26, 523 (2021).**
18. Soumyadeep C. Sarkar, Niharika Verma , **Pawan K. Tiwari,** Electrical Discharges: An Emerging Modality in Sterilization, Disinfection, and Therapeutics, Vol. 10, No. 1, March 2021, **Majlesi Journal of Telecommunication Devices**
19. **Pawan K.Tiwari,** Mugdha Sahu, Gagan Kumar, Mohsen Ashourian, A Review on the Pivotal Role of Quantum Dots in the Advancement of Healthcare ResearchComputational Intelligence and Neuroscience, **Hindawi Publications** **PMID:**34413883 **PMCID:**[**PMC8369165**](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc8369165/) **DOI:**[**10.1155/2021/2096208**](https://doi.org/10.1155/2021/2096208)

**2020**1. Tanushree Bhattacharya, Tripta Narayan, Soubhik Chakraborty, **Swapan Konar**, Shilpi Singh; Statistics as a Technology to Predict the Seasonal Variation of Air Pollution; **International Journal of Innovative Technology and Exploring Engineering (IJITEE) 9, 1426-1431 (2020). (Scopus)**
2. Rohit Mukherjee and **S. Konar;** Parity-Time Symmetry and Asymmetric Diffraction of Light in four-level Triple Quantum Wells; **Journal of Optics 22, 105402 (2020) (Impact Factor: 2.379).**
3. Rohit Mukherjee, **S. Konar**; Effect of quintic nonlinearity on self-phase modulation and modulation instability in multiple coupled quantum wells under electromagnetically induced transparency; **Results in Physics 17, 103090 (2020) (Impact Factor: 4.019).**
4. M. Sharma, V. Dixit, **S Konar**, K Ahmed, V. Dhasarathan; Endlessly single-mode photonic crystal fiber with high birefringence for sensing applications; **Modern Physics Letters B 34 (06), 2050077(2020). (Impact Factor: 0.94).**
5. Tripta Narayan Tanushree Bhattacharya,  Soubhik Chakraborty, **Swapan Konar**; Application of Multiple Linear Regression and Geographically Weighted Regression Model for Prediction of PM2.5   ;  Proc. Natl. **Acad. Sci., India, Sect. A Phys. Sci.** DOI: [**10.1007/s40010-020-00718-5**](http://dx.doi.org/10.1007/s40010-020-00718-5) **(Impact Factor: 0.921).**
6. Sonali Biswas, and **Sunita Keshri**, Large magnetocaloric effect near room temperature in La0.67(Sr,K/Pb)0.33MnO3 manganite nanomaterials, [**Journal of Materials Science: Materials in Electronics**](https://www.rediffmail.com/cgi-bin/red.cgi?red=https%3A%2F%2Flink%2Espringer%2Ecom%2Fjournal%2F10854&isImage=0&BlockImage=0&rediffng=0&rogue=17748ee9e332adf8802df7886f7462e1622afbb0&rdf=X2gEZwJpVyIHMQ==&els=021ed33998119f60ea1e2b3a3b363c4e)**(Springer Publication), 31, 2020, 21896–21912**
7. Parthasarathi Mohanty and **Sunita Keshri**, ­ Octahedral distortion and oxidation reduction in corundum type Co4Ta2O9 and Co4Nb2O9 ceramics and their correlated electrical conduction, **Physica Scripta 95, 2020, 045802.**
8. [Deep Shikha,](https://www.sciencedirect.com/science/article/pii/S246802302030016X?via%3Dihub#!)M[d. Shahid,](https://www.sciencedirect.com/science/article/pii/S246802302030016X?via%3Dihub#!)**S**[**anjay K.Sinha**](https://www.sciencedirect.com/science/article/pii/S246802302030016X?via%3Dihub#!), Improvement in adhesion of HAP deposited on alumina after Ar+ ions implantation and its physiochemical properties, **Surfaces and Interfaces (Elsevier) 19(2020)100485 Feb** 2020. [**https://www.sciencedirect.com/science/article/pii/S246802302030016X?via%3Dihub**](https://www.sciencedirect.com/science/article/pii/S246802302030016X?via%3Dihub)[**https://doi.org/10.1016/j.surfin.2020.100485**](https://doi.org/10.1016/j.surfin.2020.100485)
9. TK Mishra, A Kumar, **SK Sinha**, Investigation of sliding wear behaviour of Ni-WC microwave cladding. **Materials Today: Proceedings**[**26( 2**](https://www.sciencedirect.com/science/journal/22147853/26/part/P2)**) Pages 1418-1422, 2020.**
10. A. K. Sahu, S. K. Satpathy, **S.K. Rout**, and Banarji Behera, Dielectric and frequency dependent transport properties of Gadolinium doped Bismuth Ferrite, **Trans. Electr. Electron. Mater. 21, 217–226 (2020).**
11. A. F. Gouveia, V. E. M. Vieira, J. C. Sczancoski, P. S. Lemos, **S. K. Rout**, N. S. Arul, E. Longo and L. S. Cavalcante, Electronic ucture, Morphological Aspects, and Photocatalytic Discoloration of Three Organic Dyes with MgWO4 Powders Synthesized by the Complex Polymerization Method. **J Inorg Organomet Polym 30 (2020)2952-2970.**
12. Avishek Satapathy, **Ela Sinha, S K Rout**, Structural and proton conductivity study of BaZr1-xRExO3-δ (RE= Dy, Sm) for intermediate temperature solid oxide fuel cell electrolyte, **Journal of Solid State Electrochemistry, 24 (2020) 1463–1473.**
13. P. Yadav, Praba Dev Bhuyan, **S. K. Rout,** Yogesh Sonvane, Sanjeev K. Gupta, and **E. Sinha\*,** Correlation between experimental and theoretical study of scheelite and wolframite-type tungstates,**Materials Today Communication, 25 (2020) 101417.**
14. Sakti P. Muduli, Sabyasachi Parida, Sasmita Nayak**, Sanjeeb K. Rout**, Effect of Graphene Oxide loading on ferroelectric and dielectric properties of hot pressed Poly(vinylidene fluoride) matrix composite film, **Polymer Composites. 41 (2020) 2855–2865**
15. D. K. Kushvaha, B. Tiwari**, S. K. Rout**, Enhancement of electrical energy storage ability by controlling grain size of polycrystalline BaNb2O6 for high density capacitor application, **Journal of Alloys and Compounds 829 (2020) 154573.**
16. D. K. Kushvaha, **S. K. Rout,** B. Tiwari, Density Dependent Ionic Transport in Polycrystalline SrNb2O6 Ceramic, Physica B, 579 (2020) 411910-8p.
17. SK Tiwari, A Singh, P Yadav, BK Sonu, R Verma, **SK Rout, E Sinha**, [Structural and dielectric properties of Cu-doped α-ZnMoO 4 ceramic system for enhanced green light emission and potential microwave applications](https://link.springer.com/article/10.1007/s10854-020-04225-6),**Journal of Materials Science, 1-9 (2020)**
18. **Srivastava, N.** Association of modeled PM2.5 with aerosol optical depth: model versus satellite. **Nat Hazards 102, 689–705 (2020). https://doi.org/10.1007/s11069-019-03590-8**
19. **Madhu Priya**, Flow behaviour of a model colloid-polymer mixture using mode-coupling theory, **AIP Conference Proceedings 2265 (1), 030233 (2020).**
20. **Madhu Priya**, Prabhat K. Jaiswal, and Manish Dev Shrimali, Host–parasite coevolution: Role of selection, mutation, and asexual reproduction on evolvability**, Chaos 30, 073103 (2020).**
21. **Madhu Priya,** and  Prabhat K. Jaiswal, Enhanced attraction between particles in a bidisperse mixture with random pair-wise interactions, **Phase Transitions 93, 895 (2020).**
22. Abhilash Bajpai and **Rishi Sharma,** Atmospheric Pressure Plasma Jet: A complete tool for surface enhanced Raman spectroscopy substrates preparation, **Vacuum, Vol. 172, 109033 (2020).**
23. A. Kumari, P. S. Pal, A. Saha and **S. Lahiri,** Stochastic heat engine using an active particle, **Phys. Rev. E 101, 032109 (2020).**
24. Rakesh K Prasad and **Dilip K Singh** Low cost electrical probe station using etched tungsten nanoprobes: role of cathode geometry   arXiv:2006.09971 [physics.ins-det]**Nano Express (IOP) 1, 2 (2020)**
25. **Pawan K. Tiwari** , K. P. S. Parmar, Suman Pandey, Optical Signal Transmission through Masked Aperture to Extend the Depth of Focus in Optical Coherence Tomography, Vol. 14, No. 4, December 2020, Majlesi Journal of Electrical Engineering

**2019**1. Nitu Borgohain, S. Konar; Broadband mid-infrared supercontinuum generation in three-level multiple quantum wells using short optical pulses; Optics and Laser Technology 120, 105684 (2019). (Impact Factor: 3.319).
2. Mohit Sharma, Vigneswaran Dhasarathan, Julia S. Skibina, Murugan Senthil Mani Rajan, S. Konar, Thu Trang Hoang, and Quang Minh Ng; Giant Nonlinear AlGaAs-Doped Glass Photonic Crystal Fibers for Efficient Soliton Generation at Femto-Joule Energy; IEEE Photonics Journal 11, 7102411(2019) (Impact Factor: 2.833).
3. Sonali Biswas, Sunita Keshri, Room temperature magnetoimpedance magnetoimpedance of La0.67 Sr0.33-x Pbx MnO 3   manganites, 92, 2019 (<https://doi.org/10.1080/01411594.2019.1566826>)
4. Avishek Satapathy, Ela Sinha, Bibek K Sonu, S. K Rout, Conduction and relaxation phenomena in barium zirconate ceramic in wet N2 environment, Journal of Alloys and Compounds, 811 (2019) 152042.
5. Rolly Verma, S K Rout, Frequency dependent ferro-antiferro phase transition and internal bias field influenced piezoelectric response of donor and acceptor doped bismuth sodium titanate ceramics, Journal of Appl. Physics, 126 (2019) 094103.
6. Sakti Prasanna Muduli, S. Parida, S.K. Rout, Shailendra Rajput, Manoranjan Kar, Effect of hot press temperature on -phase, dielectric and ferroelectric properties of solvent casted Poly (vinyledene fluoride) films, Mater. Res. Express, 6 (2019) 095306
7. Avishek Satapathy, Ela Sinha, S.K. Rout, Investigation of proton conductivity in Sc and Yb co-doped barium zirconate ceramics, Mater. Res. Express, 6 (2019) 056305
8. D. K. Kushvaha, S. K. Rout, B. Tiwari, Structural, piezoelectric and highdensity energy storage properties of lead-free BNKT-BCZT solid solution,Journal of Alloys and Compounds, 782 (2019) 270-276.
9. Anterdipan Singh, Sameer Kumar Tiwari, Pritam Yadav, Bibek Kumar Sonu, Rolly Verma, Ela Sinha, S. K. Rout, Effect  of Molybdenum on structural, optical and microwave dielectric properties of copper tungstate, Journal of Materials Science: Materials in Electronics, 30 (23), (2019) 20758–20769.
10. P Yadav, E Sinha, Structural, photophysical and microwave dielectric properties of α-ZnMoO4 phosphor, Journal of Alloys and Compounds 795, 446-452 (2019)
11. A Satapathy, E Sinha, A comparative proton conductivity study on Yb-doped BaZrO3 perovskite at intermediate temperatures under wet N2 environment, Journal of Alloys and Compounds 772, 675-682 (2019)
12. A Satapathy, E Sinha, SK Rout, Structural and proton conductivity study of BaZr1-xRExO3-δ(RE = Dy, Sm) ceramics for intermediate temperature solid oxide fuel cell electrolyte,Journal of Solid State Electrochemistry, 1-11 (2019)
13. Sagarika Chandra, Nishi Srivastava (Corresponding Author), Manoj Kumar, Vertical structure of atmospheric boundary layer over Ranchi during the summer monsoon season Meteorology and Atmospheric Physics (2018). https://doi.org/10.1007/s00703-018-0600-y; ISSN 0177-7971, August 2019, Volume 131, [Issue 4](https://link.springer.com/journal/703/131/4/page/1), pp 765–773
14. Kumar Amit, Rishi Sharma, Gaurav Pransu, and R. L. Boxman, Evaluation of the Photo Electrode Degradation in Dye Sensitized Solar Cells, Russian Journal of Electrochemistry, Vol. 55, No. 9 (2019) 829
15. Rajan Singh, Mukul Gupta, D. M. Phase, S. K. Mukherjee, Phase growth analysis of sputtered TiO2 thin films at low oxygen partial pressures using XANES and XRR, Material Research Express 6 (11) (2019)
16. Nalin Prashant Poddar, S. K. Mukherjee, Effect of substrates and post-deposition annealing on rf-sputtered Al-doped ZnO (AZO) thin films, [Journal of Materials Science: Materials in Electronics](https://link.springer.com/journal/10854) 30, 14269–14280 (2019)
17. Rajeshwari Chatterjee, Sanat Kumar Mukherjee, Sustainanble development of biodiesel production for cleaner environment, International Journal of Environmental Technology and Management, 22(1) (2019)
18. Sumit K. Roy, Satyendra N. Singh, Sanat K. Mukherjee, Kamal Prasad, Structure and dielectric studies of (1-x)Ba0.06(Na0.5Bi0.5)0.94TiO3-xBa(Fe0.5Nb0.5)O3 lead-free ceramics, Processing and Application of Ceramics, 13(4), 418-426 (2019)
19. Ravi Kumar, Prabir Pal, S. R. Dhakate, Raj Kumar, Devesh K. Avasthi, Dilip K. Singh Creation of uniformly dispersed nitrogen-vacancy centers in Nano-diamonds by low energy ion-irradiation Material Research Express 6, 115097 (2019)
20. Ravi Kumar, Dilip K. Singh, Prashant Kumar, Raj Kumar, S. R. DhakateInfluence of degree of air oxidation and functionality on ensemble emission from nitrogen vacancy centers in nano-diamonds.Diamond and Related Materials 97, 107431 (2019)
21. R. Marathe and S. Lahiri, Convergence of thermodynamic quantities and work Fluctuation theorems in the presence of random protocols, Int. J. Mod. Phys. B 33, 1950220 (2019).
22. 2018
23. Tripta Narayan, Tanushree Bhattacharya, Soubhik Chakraborty, Swapan Konar;  Long-Term Statistical Characteristics of Air Pollutants  in a Traffic-Congested Area of Ranchi, India; Communications in Math. Stat. 6, 141–162(2018). (Impact Factor: 1.50).
24. U. Ray , D. Banerjee, B. Das , N.S. Das, S.K. Sinha , K.K. Chattopadhyay, Aspect ratio dependent cold cathode emission from vertically aligned hydrophobic silicon nanowires, Materials Research Bulletin, 97 (2018) 232–237.
25. T. K. Mishra, A. Kumar, S. K. Sinha, B. Gupta, Wear behavior and XRD analysis of reinforced copper matrix composite reinforced with Cerium Oxide (CeO2), [Volume 5, Issue 14, Part 2](https://www.sciencedirect.com/science/journal/22147853/5/14/part/P2), 2018, Pages 27786-27794,  <https://doi.org/10.1016/j.matpr.2018.10.014>
26. T. K. Mishra, A. Kumar, S. K. Sinha, Investigation of sliding wear behavior of HVOF carbide coating Materials Today Proceedings 5 (9), (2018) 19539-19546
27. Suman Choudhury & Sanjay Kumar Sinha, A comparative study of Mo films deposited on AISI 310SS and Al2O3 surface using anodic vacuum arc, International Journal of Multidisciplinary Research and Modern Education (IJMRME), ISSN (Online): 2454 – 6119 (www.rdmodernresearch.org) Volume 4, Issue 1, 2018 146-151
28. Suman Choudhury, Suraj Kumar & Sanjay Kumar Sinha,  Study of TiAlN deposited on Si wafer using magnetron sputtering, International Journal of Multidisciplinary Research and Modern Education (IJMRME), ISSN (Online): 2454 – 6119 (www.rdmodernresearch.org) Volume 4, Issue 1, 2018 152-157.
29. Sarit K Ghosh, Kaushik Mallick, B Tiwari, E Sinha and S K Rout, Relaxor-ferroelectric BaLnZT (Ln=La, Nd, Sm, Eu, and Sc) ceramics for actuator and energy storage application Mater. Res. Express 5 (2018) 015509.
30. S. K. Rout, V. Chauhan, D. K. Kushvaha, E. Sinha, A. Hussain, B. Tiwari, Impact of multiple phases on ferroelectric and piezoelectric performances of BNKT-BZT ceramic, J Mater Science: Materials in Electronics, 29(22), (2018) 19524-19531.
31. Sreeja Loho Choudhury, R. K. Paul, "A new approach to the generalization of Planck’s law of black-body radiation", Annals of Physics(2018) Vol 395, Pages 317 - 325.
32. A Satapathy, E Sinha, Optical band gap and photoluminescence studies of samarium-doped barium zirconate perovskite prepared by solid state reaction route, Journal of Applied Spectroscopy 84 (6), 948-953 (2018)
33. Kumar Amit and Rishi Sharma, The role of pressure to quantify the defects and its effect on the morphology of graphene layers, Surface Review and Letters, Vol. 25, No. 4 (accepted on May 24, 2017) 1850055-1 1850055-14.
34. Nalin Prashant Poddar, S. K. Mukherjee, Mukul Gupta, Anatase phase evolution and its stabilization in ion beam sputtered TiO2 thin films, Thin Solid Films, 666, 113-120 (2018)
35. Rajeshwari Chatterjee, Sanat Kumar Mukherjee, Spectroscopic analysis and performance studies of Jatropha extracted bio-diesel, Waste and Biomass Valorization, 9, 1579-1585 (2018)
36. Ravi Kumar, Priyanka Pandit, Prabir Pal, S. R. Dhakate, R. P. Pant, Raj Kumar, Devesh K. Avasthi, Dilip K. Singh\*Bright Fluorescent Nano-diamonds through Optimized Engineering of Nitrogen-vacancy (NV) Centers.AIP Advances 8, 085023 (2018)
37. A. Barvat, N. Prakash, G. Kumar, Dilip K. Singh, A. Dogra, S. Khanna, P. PalElectronic structure of the PLD grown mixed phase MoS2/GaN interface and its thermal annealing effect.Current Applied Physics 18, 170–177 (2018)

**2017**1. N. Ayyanar, D. Vigneswaran, Mohit Sharma, M. Sumati, M.S. Mani Rajan and S.Konar, “Hydrostatic pressure sensor using highly birefringence photonic crystal fibers”, IEEE Sensors Journal   17, [Issue: 3](http://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=7811156), 650-656 (2017).
2. Nitu Borgohain and  S. Konar;  Supercontinuum generation in quantum wells facilitated by electromagnetically induced transparency,  Journal of  Modern Optics 64, 462-470 (2017).
3. Sunita Keshri, Parthasarathi Mohanty, Vibha Rani Gupta, ­ Study on microwave dielectric properties of corundum type(Mg1-x COx)4 Nb2 O9 (x =0-0.6)  ceramics for designing a microstrip branch-line coupler , Journal of Materials Science: Materials in Electronics (Springer publication), 28, 2017, 14436–14445.
4. Sunita Keshri, Khushboo Singh, Temperature stable ZnTa2O6 dielectric ceramic with 2% W6+ ion substitution in Ta5+ site: Phase Transitions (Taylor & Fransis Publitions), 90, 2017, 1121-1127.
5. Pankaj Kumar Singh, Arbind Kumar, Sanjay Kumar Sinha, Aman Aggarwal, Gajendra Prasad Singh, Enhancement of Surface Properties of Nanocrystalline TiN Coated Plasma Nitrided AISI 310 Austenitic Stainless Steel, Int. J. Surface Science and Engineering, Vol. 11, No. 6, (2017) 547-562.
6. Deep Shikha, Rakesh Tirky and S. K. Sinha, Biocompatibility studies of silver doped HAP/alumina by sol-gel method, International journal of Multidisciplinary Research and Modern Education, 3(1) (2017) 490-495.
7. Pankaj Kumar Singh, Arbind Kumar, Sanjay Kumar Sinha & Gajendra Prasad Singh COMPARISON OF STRUCTURAL, SURFACE HARDNESS, CORROSION RESISTANCE AND INTERFACIAL CONTACT RESISTANCE PROPERTIES OF AISI 304, 310 AND 316 STAINLESS STEEL, , International Journal of Multidisciplinary Research and Modern Education (IJMRME), Impact Factor: 6.725, ISSN (Online): 2454 – 6119, Volume 3, Issue 1, 2017.
8. S. K. Sinha, Hari Mahato, Md. Shahid, D. Shikha, S. Murugesan, E. Mohandas, Preparation of MnO2 from manganese natural ore, Carbon – Sci. and Tech. 9/1 (2017) 1-6.  ISSN 0974 – 0546
9. S. K. Rout, Aks Raj & S. K. Ghosh, Compositional effect on dielectric and ferroelectric properties of lead free Zr modified BNT ceramic,Ferroelectrics, 518(1), (2017), 66-72.
10. P. Yadav, S. K. Rout and Ela Sinha, Correlation between optical properties and environmental parameter of ZnWO4 ceramic using complex chemical bond theory Journal of Alloys and Compounds, 726 (2017) 1014-1023.
11. S. K. Ghosh, V. Chauhan, Ali Hussain and S. K. Rout, Phase transition and energy storage properties of BaTiO3-modified Bi0.5(Na0.8K0.2)0.5TiO3 ceramics Ferroelectrics, 517(1), (2017) 97-103.
12. Sabyasachi Parida and S. K. Rout, Effect of zirconia on the structural and optical properties of strontium titanate ceramic, Ferroelectrics, 517(1), (2017), 81-89.
13. Prabal Dev Bhuyan, Deobrat Singh, Shivam Kansara, Pritam Yadav, Sanjeev K. Gupta, Yogesh Sonvane, Sanjeeb K. Rout, and Ela Sinha, Experimental and theoretical analysis of electronic and optical properties of MgWO4, J Mater Science,52(9), (2017)4934-4943.
14. S. K. Ghosh, S. K. Deshpande and S. K. Rout, Concentration-driven structural stability and dielectric dispersion in lead free (Ba1-xSc2x/3)Zr0.3Ti0.7O3 ceramics,J Mater Science: Materials in Electronics, 28(2), (2017) 1336–1351.
15. E. Sinha  and P. Yadav, Study of structural and optical properties of CaMoO4 ceramic synthesized by solid state reaction route, Ferroelectrics 517,1-7 (2017)
16. P. Yadav, S. K. Rout and E. Sinha, Correlation between optical properties and environmental parameter of ZnWO4 ceramic using complex chemical bond theory, Journal of Alloys and Compounds, 726, 1014-1023 (2017 )
17. Prabal  Dev Bhuyan, Deobrat Singh, Shivam Kansara, Pritam Yadav, Sanjeev K. Gupta, Yogesh Sonvane, Sanjeeb K. Rout, E.Sinha,  Experimental and Theoretical Study on Electronic and Optical Properties of MgWO4,Journal of Material Science, 52, 4934-4943 (2017)
18. Rishi Sharma, Kumar Amit, P. K. Barhai and R. L. Boxmann, Book Chapter: Evaluating the performance of Dye Sensitized Solar Cell with the various key components like Electrodes, Dyes & Electrolytes, Book Title: Proceedings of the International Conference on Nano-electronics, Circuits & Communication Systems, Editors: Vijay Nath, Series Volume 403, eBook ISBN 978-981-10-2999-8, DOI 10.1007/978-981-10-2999-8, 2017, Springer Nature.
19. Sunit K. Roy, S. N. Singh, S. K. Mukherjee, K. Prasad, Ba0.06(Na1/2Bi1/2)0.94TiO3Ba(Fe1/2Ta1/2)O3: Gaint permitivity lead-free ceramics, [Journal of Materials Science: Materials in Electronics](https://link.springer.com/journal/10854) 28, 4763–4771 (2017)
20. A. Barvat, N. Prakash, S. Singha, G. Kumar, Dilip K. Singh, A. Dogra, S. Khanna, A. Singha, and P. Pal.Emerging photoluminescence from bilayer 2H-MoS2 films grown by pulsed laser deposition on different substrates.Journal of Applied Physics 122, 015304 (2017)
21. Ashish Gupta, Sanjay R. Dhakate, Prabir Pal, Anamika Dey, Parameswar K. Iyer, Dilip K. Singh Spectroscopic Study of Effect of Graphitization Temperature on Crystallinity and Electrical Conductivity of Poly-acrylonitrile based Carbon Nano-fibers Diamond and Related Materials (2017).  https://doi.org/10.1016/j.diamond.2017.07.006
22. Munu Borah, Abhishek K Pathak, Dilip K Singh, Prabir Pal and Sanjay R Dhakate Role of limited hydrogen and flow interval on the growth of single crystal to continuous graphene by low-pressure chemical vapor deposition.Nanotechnology 28(7), 075602 (2017).
23. Madhu Priya and Yitzhak Rabin, Shear induced thermophoresis in a compressible Lennard-Jones fluid, arXiv:1703.10461.
24. Sourabh Barua, M. Ciomaga Hatnean, M. R. Lees and G. Balakrishan. "Signatures of the Kondo effect in VSe2", **Scientific Reports 7, 10964, 2017. (DOI:10.1038/s41598-017-11247-4)**

**2016**1. Nitu Borgohain, Milivoj Belic, Swapan Konar; Infrared supercontinuum generation in multiple quantum well nanostructures,  J. Optics  18,  115001 (2016).  (Impact Factor: 2.753).
2. Nitu Borgohain and S. Konar The effects of control field detuning on the modulation instability in a three-level quantum well system; Journal of Applied Physics  119, 213103 (2016)
3. Mohit Sharma and S.Konar; Broadband supercontinuum generation in lead-silicate photonic crystal fibers employing optical pulses of 50 W peak power; Optics Communications  380, 310–319(2016)
4. Nitu Borgohain, Mohit Sharma and S.Konar;  Broadband supercontinuum generation in photonic crystal fibers using cosh-Gaussian pulses at 835 nm wavelength"  Optik 127, 1630-1634 (2016)
5. Mohit Sharma  and  Swapan Konar;  Three octave spanning supercontinuum by red-shifted dispersive wave in photonic crystal fibers; Journal of  Modern Optics  63, 501–510 (2016).
6. A Sonali Biswas, Sunita Keshri, Sudipta Goswami, Jinu Isaac, Swastika Ganguli & Nikolai Perov Antibiotic loading and release studies of LSMO nanoparticles embedded in an acrylic polymer, Phase Transitions (Taylor & Fransis Publitions), 89, 2016, 1203-1212.
7. Parthasarathi Mohanty, Sunita Keshri, Manish Kumar Sinha, Vibha Rani Gupta, Study on microwave dielectric properties of corundum type (Mg1-x COx)4 Ta2 O9 (x =0-0.6) ceramics for designing a microwave low pass filter, Ceramics International (Elsevier Publication), [42,](http://www.sciencedirect.com/science/journal/02728842/42/5)2016, 5911–5920.
8. Sunita Keshri, Sonali Biswas and Piotr Wisniewski, Studies on characteristic properties of superparamagnetic La0.67 Sr 0.33-x Kx MnO3  nanoparticles, Journal of Alloys and Compounds (Elsevier Publication) 656, Jan 2016, 245-252.
9. Ashutosh Kumar, Sunita Keshri, Beauty Pandey, J. B. M. Krishna and Dipankar Das, Impact of N5+ ion implantation on optical and electrical properties of polycrystalline ZnO film, Radiation Effects and Defects (Taylor & Francis Publication), 169, 965, 2016.
10. Md Shahid, Deep Shikha, Sanjay Kumar Sinha, Corrosion and Thrombogenicity of Argon implanted HAP/alumina, Vol 55 (6), (2016) 54-58, , Materials Performance (SCI), March 2016
11. Pankaj Kumar Singh, Arbind Kumar, Sanjay Kumar Sinha, Aman Aggarwal, Gajendra Prasad Singh, “Improvement in surface properties with TiN thin film coating on plasma nitride austenitic 316 stainless steel,” International Journal of Engineering and Technology (e-ISSN : 0975-4024), Vol 8  No 1 Feb-Mar 2016, 350-356
12. S. K. Sinha, Hari Mahto Md. Shahid, D. Shikha, S.Murugesan, E. Mohandas, Synthesis and characterization of MnO2 nanoparticles from its natural ore, accepted Carbon Science and Technology, January, (2016) ISSN 0974 – 0546, [http://www.applied-science-innovations.com](http://www.applied-science-innovations.com/).
13. S. K. Ghosh, Sujoy Saha, T. P. Sinha, and S. K. Rout Large electrostrictive effect in (Ba1-xGd2x/3)Zr0.3Ti0.7O3 relaxor towards moderate field actuator and energy storage applications, , Journal of Applied Physics, 120(2016) 204101-9p.
14. T. Badapanda, S.Parida, S.K.Rout, Structural and optical properties of dysprosium doped barium zirconium titanate ceramic Materials Letters, 185 (2016) 415-419.
15. S. K. Ghosh and S. K. Rout, Induced instability in local structure and ferroelectric polarization of rare earth modified BZT relaxor ceramics, Current Applied Physics, 16 (2016) 989-1000.
16. M. Reddy Prakash, S.K. Rout, Avishek Satapathy, T. P. Sinha, S. Md Sariful, Dielectric and ferroelectric properties of samarium substituted BaBi4Ti4O15 Aurivillius oxides, Ceramic International, 42 (2016) 8798–8803
17. Vidhi Chauhan1, S. K. Ghosh, Ali Hussain, S. K. Rout Influence of niobium substitution on structural and opto-electrical properties of BNKT piezoelectric ceramics, J. Alloys and Compds, 674 (2016) 413-424.
18. Kumar Mohit, Vibha Rani Gupta and S K Rout, Two Element Magneto-Dielectric Resonator Antenna for Angle Diversity Frequenz,  70( 5-6) (2016)  203–210.
19. Kumar Mohit, V R Gupta and S K Rout, A CPW fed quad directional stacked magneto-dielectric resonator antenna for angle diversity application, Mocrowave and Optical Technology Lettes, 58(1), (2016) 61-64.
20. Nishi Srivastava, S.K. Satheesh, Modulation in Direct Radiative Forcing caused by Wind Generated Sea-Salt Aerosols, Aerosol and Air Quality Research (doi: 10.4209/aaqr.2015.07.0462) Vol 16, No. 11, Nov 2016, PP 2869-ISSN 1680-8584 (paper)ISSN 2071-1409 (electronic)
21. N. Srivastava, S.K. Satheesh, Nadege Blond and K. Krishna Moorthy, Simulation of aerosol fields over South Asia using CHIMERE – Part-I: Spatio-temporal characteristics and heterogeneity, CURRENT SCIENCE, Special Section, RAWEX-GVAX, VOL. 111, NO. 1, 10 JULY 2016 (pp. 76-82), Jul-2016  ISSN-0011-3891;  DOI: 10.18520/cs/v111/i1/76-82
22. N. Srivastava, S.K. Satheesh, Nadege Blond and K. Krishna Moorthy, Simulation of aerosol fields over South Asia using CHIMERE – Part-II: Performance evaluation, CURRENT SCIENCE, Special Section, RAWEX-GVAX, VOL. 111, NO. 1, 10 JULY 2016 (pp. 83-92), Jul-2016  ISSN-0011-3891; DOI: 10.18520/cs/v111/i1/83-92
23. Nishi Srivastava, S.K. Satheesh, Nadège Blond & K. Krishna Moorthy (February, 2016) Anthropogenic aerosol fraction over the Indian region: model simulations versus multi-satellite data analysis, International Journal of Remote Sensing, 37:4, 782-804, DOI:10.1080/01431161.2015.1136445 Print ISSN: 0143-1161 Online ISSN: 1366-5901
24. Mayukh Chakravarty, Rishi Sharma, Kumar Amit, Neelima Sharma, S. K. Pradhan; Synthesis and bio-compatibility study of thermal-CVD grown graphene, International Journal of nanoscience Vol. 15, (2016) 1660016.
25. Rishi Sharma, Neelima Sharma, Rahul Parmar, Vijay Chatterjee, Anoop Kumar, N. Woehrl, V. Buck and P. K. Barhai, Nanocrystalline Diamond Films as A Protective Coating For Implantable Bio-devices, Adv. Mater. Lett. 2016, 7(11), 903-909.
26. Nalin Prashant Poddar, S. K. Mukherjee, Characterization of TiO2 films deposited using dc magnetron sputtering, Carbon Scicence and Technology, 8(2), 1-8 (2016)
27. Sourabh Barua and K.P. Rajeev. "Robust quantum oscillations with non-zero Berry phase in Bi2Te3", Solid State Communications 248, 68, 2016. (http://dx.doi.org/10.1016/j.ssc.2016.09.014)
28. Ravi Kumar, S. J. Yoon, K. G. Lee, Prabir Pal, R. P. Pant, C. K. Suman, S. R. Dhakate, Raj Kumar, Devesh K. Avasthi, Dilip K. Singh Purification Method Dependent Fluorescence from Nitrogen-vacancy (NV) Centers of Nano-diamonds.RSC Advances 6 (52), 47164-47173 (2016)
29. Nisha Prakash, Kritika Anand, Arun Barvat, Prabir Pal, Dilip K. Singh, Mukesh Jewariya, Srinivasa Ragam, Sonachand Adhikari, Kamlesh K. Maurya, Suraj P. Khanna The impact of RF-plasma power in carrier relaxation dynamics of unintentional doped GaN epitaxial layers grown by MBE.Optical Materials 54, 26-31 (2016).

**2015**1. Nitu Borgohain, Milivoj Belic and S.Konar;  Giant parabolic nonlinearities at infrared in   lambda  type three level multiple quantum wells,  Annals of Physics 361, 107-119(2015)
2. Noushin Asif,  Anjan Biswas,  Z. Jovanoski and S.Konar; Interaction of Spatially Separated Oscillating Solitons in Biased Two-Photon  Photorefractive Materials;  Journal of  Modern Optics 62, 1–10 (2015).
3. Mohit Sharma , Swapan Konar, Kaisar R. Khan; Supercontinuum generation in highly nonlinear hexagonal photonic crystal fiber at very low power,  Journal  of  Nanophotonics    9, 093073-8 (2015)
4. S. Konar and  Nitu Borgohain, Self-phase modulation dominated supercontinuum generation employing cosh-Gaussian pulses in photonic crystal fibers;  Journal of  Nanophotonics  9, 093098-1 (2015)
5. S. Konar and  Vyacheslav A. Trofimov;   Some Aspects of Optical Spatial Solitons in Photorefractive Media and Their Important Applications;  Pramana-journal of Physics 85, 975–992 (2015).
6. Ruplata Kumari, Mohit Sharma and S.Konar; Lead silicate fiber with small dispersion and large nonlinearity at telecommunication wavelength;  Optik 126 (2015) 2659–2662
7. Ashutosh Kumar and Sunita Keshri, Effect of N5+ ion implantation on optical and gas sensing properties of WO3 films, Surf. Interface Anal. (John Wiley & Sons, Ltd.) 47, Issue 11 November 2015, Pages 1020–1028.
8. Anurag Gandhi and Sunita Keshri, Microwave Dielectric Properties of Double Perovskite CeramicsBa2  Zn(1-x) Cax WO6  (x=0-0.4)  Ceramics International (Elsevier Publication) 41, April 2015, Pages 3693–3700.
9. D Shikha, **S. K. Sinha**, Md. Shahid, U Jha, V.R.Reddy, S. Ojha, P. Kumar, D. Kanjilal, “Corrosion, wettability and thrombogenicity investigation of ion beam modified HAP/Al2O3”,   Materials Chemistry and Physics, 163 (2015) 272-278.
10. Deep Shikha, Usha Jha, **S. K. Sinha**, K G M Nair, A K Tyagi, Nitrogen Ion Beam modification of alumina for hard tissue implants, Macromol. Symp. 2015 , 347, 39–48, [Wiley-VCH](http://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&sqi=2&ved=0CDMQFjAD&url=http%3A%2F%2Fwww.wiley-vch.de%2Fpublish%2Fen%2Fjournals%2FalphabeticIndex%2F2265&ei=qAdFU73hE4yYrAf02ICIDg&usg=AFQjCNGCwqWiCofFSURcdjrMlqMlgBYPbw&bvm=bv.64507335,d.bmk)(SCI Journal).
11. **S. K. Sinha**, K. G. M. Nair, A. K. Tyagi, Improvement in oxidation resistance of IMI834: comparison between implantation and coating; a quest, Macromol. Symp. 2015, 347, 58–67, Wiley – VCH (SCI Journal).
12. M. Shahid, D Shikha, **S. K. Sinha**, U Jha, S.Murugesan, E. Mohandas, D. C. Kothari, Morphological study of HAP coated alumina by sol-gel method for orthopedic implants, Advanced Materials Research Vol. 1086 (2015) pp 50-60, Trans Tech Publications, Swittzerland
13. S.K. Ghosh, S.K. Rout\*, A. Tiwari, P. Yadav, J.C. Sczancoski, M.G.R. Filho, L.S. Cavalcante, Structural refinement, Raman spectroscopy, optical and electrical properties of (Ba1-xSrx)MoO4 ceramics Journal of Materials Science: Materials in Electronics, 26 (2015) 8319-8335.
14. S. K. Ghosh, M. Ganguly, S. K. Rout, T. P. Sinha, Order-disorder correlation on local structure and photo-electrical properties of La3+ ion modified BZT ceramics, Eur. Phys. J. Plus 130 (2015) 68 (18p).
15. Sabyasachi Parida, A. satapathy, E. Sinha, Anurag Bisen, and S.K. Rout, Effect of Neodymium on Optical Bandgap and Microwave Dielectric Properties of Barium Zirconate Ceramic, Metallurgical and Materials Transactions A, 46A, (2015) 1277-1286.
16. R.K.Paul , “Investigation on the Feasibility of Fusion in a Compressed Beam of Ions Subject to an Electrostatic Field”  Journal of Plasma Physics (2015) vol 81, 905810107.
17. “A method of generating low energy ions for deposition of insulating nano-structured diamond like carbon film”, Patent Number: 276735; Date of Grant: 28/10/2016; Name of the inventors: P. K. Barhai and Rishi Sharma.
18. Mayukh Chakravarty, Rishi Sharma, Kumar Amit, Neelima Sharma, S. K. Pradhan; Synthesis and bio-compatibility study of thermal-CVD grown graphene, International Journal of nanoscience Vol. 15, (2016) 1660016.
19. Rishi Sharma, Neelima Sharma, Rahul Parmar, Vijay Chatterjee, Anoop Kumar, N. Woehrl, V. Buck and P. K. Barhai, Nanocrystalline Diamond Films as A Protective Coating For Implantable Bio-devices, Adv. Mater. Lett. 2016, 7(11), 903-909.
20. Dilip K. Singh, Jae Sung Ahn, Sukmo Koo, Taehee Kang, Joonyeon Kim, Sukho Lee, Namkyoo Park and Dai-Sik KimSelective Electric and Magnetic Sensitivity of Aperture Probes Opt. Express 23, 20820 (2015).
21. Jae Sung Ahn, Taehee Kang, Dilip K. Singh, Young-Mi Bahk, Hyunhwa Lee, Soo Bong  Choi and Dai-Sik KimOptical field enhancement of nanometer-sized gaps at near-infrared frequencies.Optics Express 23, 4897 (2015).
22. Munu Boraha, Dilip K. Singh, Kiran M. Subhedar and Sanjay R. Dhakatea, Role of Substrate Purity and its Crystallographic Orientation on the Defect Density of Chemical Vapor Deposition Grown Monolayer Graphene.RSC Advances 5, 69110 (2015).
23. S. S. Kushvaha, M. Senthil Kumar, A. K. Shukla, B. S. Yadav, Dilip K. Singh, M. Jewariya, S. R. Ragam and K. K. Maurya Structural, optical and electronic properties of homoepitaxial GaN nanowalls grown on GaN template by laser molecular beam epitaxy.RSC Adv. 5, 87818 (2015)
24. Qualitatively different collective and single particle dynamics in a supercooled liquid, Madhu Priya, Neeta Bidhoodi, and Shankar P. Das, Phys. Rev. E 92, 062308 (2015) arXiv:1511.00254.
25. Sourabh Barua, K. P. Rajeev and Anjan K Gupta. "Evidence for topological surface states in metallic single crystals of Bi2Te3", Journal of Physics: Condensed Matter, 27, 015601, 2015. (doi:10.1088/0953-8984/27/1/015601)
26. Simulation and mathematical analyses of AC electric field driven apoptosis via microtubule disintegration. Pawan K. Tiwari, Japanese **Journal of Applied Physics 54 (2015) 097301**.

**2014**1. Mohit Sharma, Nitu Borgohain, S. Konar;  Supercontinuum generation in photonic crystal fibers possessing high birefringence and large optical nonlinearity;  Phys. Express  4,  26 (2014).
2. Ashutosh Kumar and Sunita Keshri, Occurrence of low resistive p-type conductivity in ZnO film implanted by low energy N5+ ions, Nuclear Instruments and Methods in Physics Research Section B (Taylor & Francis Publication), Vol. 169, 965–979 (2014).
3. Shailendra Singh Rajput and Sunita Keshri,Structural and microwave properties of (Mg,Zn/Co)TiO3 dielectric ceramics, Journal of Materials Engineering and Performance (Springer-Verlag publication) 23 (2014) 2103–2109.
4. Sunita Keshri, Vivekanand Kumar, Piotr Wisniewski and Alexander S. Kamzin,Synthesis and characterization of LSMO manganite based biocomposite, Phase Transitions (Taylor & Francis Publication) 87 (2014) 468-476.
5. M.V. Tkachenko, L.P. Ol'khovik, A.S. Kamzin, S. Keshri, Bioceramics of calcium phosphate and a hexagonal M type ferrite Multifunctional medical applications: Technical  Physics Letters 40 (2014) 9-15
6. Sunita Keshri and Shailendra Singh Rajput, Investigation on Low Loss (1-x) Mg0.95Co0.05TiO3-(x) Ca0.6La0.8/3TiO3  Composite Series for achieving a nearly Zero Temperature Coefficient of Resonant Frequency, Ceramics International (Elsevier Publication),  40 (2014) 4257-4266.
7. Ashutosh Kumar, Sunita Keshri and Debdulal Kabiraj, Influence of annealing temperature on nanostructured thin films of tungsten trioxide; Materials Science in Semiconductor Processing (Elsevier Publication)  17 (2014) 43-52
8. Sunita Keshri and Shailendra Singh Rajput, Effect of BTO addition on the structural and magnetoresistive properties of LSMO, Phase Transitions (Taylor & Francis Publication) 87 (2014) 136-147.
9. M. Ganguly, S K Rout, Influence of rare earth ion on the structural and dielectric features of barium titanate. Phys. Express (2014) 4, 28
10. A. Bisen, S. Parida, E.Sinha, S.K.Rout, M. Kar, Structural, Optical Band Gap, Microwave dielectric properties and Dielectric Resonant Antenna studies of Ba(1-x)La(2x/3)ZrO3(0≤x≤0.1)Ceramics J. Alloys and Compds, 615(2014),1006-101
11. Kumar Mohit, V.R. Gupta, N. Gupta, S. K. Rout, Structural and Microwave Characterization of Ni0.2CoxZn0.8-xFe2O4 for Antenna Applications,Ceramics International, 40(1) (2014)1575-1586.
12. S.K.Ghosh, M.Ganguly, S.K.Rout, T.P.Sinha, Structural and dielectric relaxor properties of a-site deficient samarium doped Ba1-xSmx)(Zr0.3Ti0.7O3) ceramics J. Mater Sci 49 (2014) 5441–545
13. Kumar Mohit, V.R. Gupta, N. Gupta, S. K. Rout, Structural and Microwave Characterization of Ni0.2CoxZn0.8-xFe2O4 for Antenna Applications, Ceramics International, 40(1), (2014)1575-1586.
14. Kumar Mohi, Vibha R. Gupta, and Sanjeeb K. Rout, Microwave Dielectric Properties of Ni0.2CuxZn0.8-xFe2O4 for Application in Antenna,Progress In Electromagnetics Research B, Vol. 57, (2014) 157-175.
15. A. Bisen, A. Satapathy, S. Parida, E.Sinha, S.K. Rout , M. Kar, Structural, optical band gap, microwave dielectric properties and dielectric resonator antenna studies of Ba1-xLa2x/3ZrO3 (0≤x≤0.1)Journal of Alloys and Compounds, 615, 1006-1012, (2014)
16. N. Srivastava, S. K. Satheesh, Nadège Blond, Sensitivity of Meteorological Input and Soil Properties in Simulating Aerosols (Dust, PM10, and BC) using CHIMERE Chemistry Transport Model, Journal of Earth System Science, 123, No. 6, August 2014, pp. 1249–1264, ISSN: 0253-4126 (print version); 0973-774X (electronic version) DOI: 10.1007/s12040-014-0466-4
17. S. Mahanti, Rishi Sharma, Ashwini Kr. Singh, Neelima Sharma, S. K. Pradhan, and P. K. Barhai, Correlation of Mechanical Properties with Surface Morphology of Diamond-Like Carbon Films Deposited By Plasma Enhanced Chemical Vapour Deposition Technique, International Journal of Innovative Research in Science, Engineering and Technology, 3 (8) (2014), 15510-15517
18. Vijay Chatterjee, Rishi Sharma and P. K. Barhai, Effect Of Process Parameters On The Properties Of Ultrananocrystalline Diamond Films Deposited Using Microwave Plasma Enhanced Chemical Vapor Deposition,  Adv. Mat. Lett. 2014, 5(4), 172-179
19. Structural and electrical properties of Nb-doped TiO2 Films sputtered with plasma emission control, [S.K. Mukherjee](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [H.W. Becker](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [A.P. Cadiz Bedini](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [A. Nebatti](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [C. Notthoff](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [D. Rogalla](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [S. Schipporeit](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [A. Soleimani-Esfahani](http://www.sciencedirect.com/science/article/pii/S0040609014008086), [D. Mergel](http://www.sciencedirect.com/science/article/pii/S0040609014008086), Thin Solid Films, 568, 94-101 (2014)
20. Influence of thickness on the structural properties of radio frequency and direct current magnetron sputtered TiO2 anatase thin films, **S. K. Mukherjee**, A. Nebatti, F. Mohtascham, C. Schipporeit, C. Notthoff, D. Mergel, **Thin Solid Films**, 558, 443-448 (2014).
21. Sourabh Barua and K. P. Rajeev. "Status of surface conduction in topological insulators", AIP Advances, 4, 017135, 2014. (http://dx.doi.org/10.1063/1.4864058)
22. Sourabh Barua and K. P. Rajeev. "Thickness dependence of electrical transport: A test for surface conduction in topological insulators", AIP Conference Proceedings, 1583, 178, 2014. (doi: http://dx.doi.org/10.1063/1.4865630)
23. Manish Verma, Dilip K. Singh\*, P. Senthilkumaran, Joby Joseph, H. C. Kandpal, Ultrasensitive and fast detection of denaturation of milk by Coherent backscattering of light.Scientific Reports, 4, 7257 (2014).
24. Nonlinear rheology of dense colloidal systems with short-ranged attraction: A mode-coupling theory analysis, Mad**hu Priya** and Thomas Voigtmann, J**. Rheol. 58, 1163 (2014), arXiv:1401.7451.**

**2013**1. Mohit Sarma, Nitu Borogohain and **S. Konar**;  Index Guiding Photonic Crystal Fibers with Large Birefringence and Walk-off; **Journal of Lightwave Technology  31, 3339 (2013).**
2. **S.Konar**  and Anjan Biswas;  Properties of optical spatial solitons in photorefractive crystals with Special emphasis to two-photon photorefractive nonlinearity**;  Optical Materials  35,  2581-2603 (2013).**
3. S. Shwetanshumala **, S. Konar**  and  Anjan Biswas; Ultraslow solitons due to large quintic nonlinearity in coupled quantum well structures driven by two control laser beams;  **Appl. Phys. B 111,  53–64 (2013).**
4. U. N. Pal, Pooja Gulati, Ram Prakash, Mahesh Kumar, V. Srivastava and **S. Konar**; Analysis of power in argon filled pulsed dielectric barrier discharge (DBD); **Plasma Science and Technology 15, 635 (2013).**
5. S. Shwetanshumala, Noushin Asif, **S. Konar**, Anjan Biswas,   Bright Spatial Solitons in Biased Centro-symmetric Photorefractive Medium Under Drift as Well as Diffusion Effects;  **Optik  124,  229-233 (2013).**
6. Shailendra Singh Rajput, **Sunita Keshri**, Structural , vibrational and microwave dielectric properties of (1-x) Mg0. 95 Co0. 05 TiO3 - (x) Ca0.8 Sr0.2 TiO3 ,  **Journal of Alloys and Compounds (Elsevier Publication) 581 (2013) 223-229. http://dx.doi.org/10.1080/01411594.2013.797979**
7. Shailendra Singh Rajput, **Sunita Keshri** and Vibha Rani Gupta, Microwave dielectric properties of (1-x)Mg0.95Zn0.05TiO3–(x)Ca0.6La0.8/3TiO3 ceramic composites; **Journal of Alloys and compounds (Elsevier Publication) 552 (Jan.) 2013, 219-226.**
8. S.Parida, **S.K.Rout,** L.S.Cavalcante, A.Z.Simoes, P.K.Barhai, N.C.Batista, E.Longo, M.Siu Li, S.K.Sharma, Structural investigation and improvment of photoluminescence properties in Ba(ZrxTi1-x)O3 powders symthesized by solid state reaction method, **Materials Chemistry and Physics 142 (2013) 70-76.**
9. M.Ganguly, **S.K.Rout**, C.W.Ahn, I.W.Kim, Characterization of A-site deficient Neodymium doped Barium Titanate, **Phase Transitions 87 (2013) 157-174,**
10. S. Parida, Anurag Bisen, E.Shina, S.K. Rout, Dielectric Resonant Antenna Studies of Dysprosium Doped Barium Zirconate Ceramic Journal of Materials Engineering and Performance 22 (2013)2634–2640.
11. M. Ganguly, S.K. Rout, C.W. Ahn, I.W. Kim, Manoranjan Kar Structural, electrical and optical properties of Ba(Ti1−xYb4x/3)O3 ceramics, Ceramics International, 39 (2013) 9511 – 9524.
12. Nidhi Khobragade, Ela Sinha, S.K. Rout, Manoranjan Kar, Structural, optical and microwave dielectric properties of Sr1−xCaxWO4 ceramics prepared by the solid state reaction route, Ceramics International, 39 (8), ( 2013) 9627-9635.
13. M. Ganguly, S.K. Rout, T.P. Sinha, S.K. Sharma, H.Y. Park, C.W. Ahn, I.W. Kim, Characterization and Rietveld Refinement of A-site deficient Lanthanum doped Barium Titanate,Journal of Alloys and Compounds, (2013), 473-484.
14. B. Parija, T. Badapanda, S.K. Rout, L.S. Cavalcante, S. Panigrahi, E. Longo, N.C. Batista, T.P. Sinha,  Morphotropic phase boundary and electrical properties of 1−x[Bi0.5Na0.5]TiO3 –xBa[Zr0.25Ti0.75]O3 lead-free piezoelectric ceramics Ceramics International, 39(5), (2013) 4877-4886.
15. Ammu Priya, Ela Sinha, S K Rout, Structural, optical and microwave dielectric properties of Ba1-xSrxWO4 ceramics prepared by solid state reaction route, Solid State Science, 20 (2013) 40-45
16. S.Parida, S.K.Rout, N. Gupta. V. R. Gupta, Solubility limits and microwave dielectric properties of Ca(ZrxTi1-x)O3 solid solution Journal of Alloys and Compounds, 546 (2013) 216-223.
17. M.Ganguly, S.K. Rout, W.S. Woo, C.W. Ahn, I.W. Kim, Characterization of A-site deficient samarium doped barium titanate Physica B: Condensed Matter,411 (2013) 26–34.
18. S K Rout, Editorial article: The special issue on condensed matter physics from the CMDAYS-2012 conference Physics Express, 2013.
19. **S. K. Mukherjee** and D. Mergel,Thickness dependence of the growth of magnetron-sputtered TiO2 films studied by Raman and optical transmittance spectroscopy,  **Journal of Applied Physics 114, 013501-013501-9 (2013).**
20. Atomic force microscopy analysis of effect of rf/dc power ratio on the properties of co-sputtered TixAl1-xN thin films, Ashwini Kumar Singh, Neelam Kumari, **S. K. Mukherjee** and P.K. Barhai, IJRRAS 14(3), 603-611 (2013)
21. K. Krishna Moorthy, S.N. Beegum, N. Srivastava, S. K. Satheesh, Mian Chin, Nadege Blond, S. Suresh Babu, S. Singh, Performance Evaluation of Chemistry Transport Models over India, Atmospheric Environment, 71 (January, 2013) 210-225, ISSN: 1352-2310; dx.doi.org/10.1016/j.atmosenv.2013.01.05
22. **Sourabh Barua**, Rohan Poojary and K. P. Rajeev. "Observation of Coulomb blockade and Coulomb staircase in a lateral metal nanostructure", **AIP Conference Proceedings**1512**, 316, 2013. (doi: 10.1063/1.4791038)**
23. Pawan K. Tiwari and Yeon Soo Lee, Gene Delivery in Conjunction with Gold Nanoparticle and Tumor Treating Electric FieldJournal of Applied Physics 114 (2013) 054902.
24. Pawan K. Tiwari and Yeon Soo Lee, Non-thermal plasmas induced electrostatic stress on corneocyte desquamation. **Acta of Bioengineering  and Biomechanics 15 (2013) 65.**

**2012**1. Rakhi Bhattacharya and S. Konar , Dual Core Photonic Crystal Fibers for Dispersion Compensation; Journal of  Nanophotonics  6, 063520-1 (2012).
2. Rakhi Bhattacharya and S. Konar, Extremely Large Birefringence and Shifting of Zero Dispersion Wavelength of Photonic Crystal Fibers; Optics and Laser Technology  44,  2210-2216 (2012).
3. Laila Girgis , Kaisar R. Khan , Daniela  Milovic , Sihon H. Crutcher , Swapan  Konar, Anjan Biswas; Adiabatic phase variation for optical Gaussons; Optics & Laser Technology 44,  1219 –1222 (2012).
4. Laila Girgis, Daniela Milovic, Swapan  Konar,  Ahmet Vildirim, Hossein Jafari, Anjan Biswas; Optical Gaussons in birefringent fibers and dwdm systems with inter-modal dispersion;  Romanian Reports in Physics   64, 663–671 (2012).
5. Anjan Biswas, Stephen Johnson, Megan Fessak,  Beatrice Siercke,  Essaid Zerrad and  Swapan Konar;  Dispersive Optical solitons by Semi-inverse Variational Principle;  Journal of Modern Optics  59,  213–217 (2012).
6. Sunita Keshri, Ashutosh and Debdulal Kabiraj, Tailoring of optical and gas sensitivity behaviours of WO3 films by low energy Ar+ ion implantation; Thin Solid Films (Elsevier Publication) –  526, (December) 2012, Pages 50-58.
7. Leena Joshi and Sunita Keshri, Extrinsic behavior in La0.67Ca0.33MnO3–BaTiO3 composites; Ceramics International ((Elsevier Publication) 38 (2012) 5889–5896.
8. Shailendra Singh Rajput, Sunita Keshri, Vibha Rani Gupta, Nisha Gupta, Viktor Bovtun, Jan Petzelt,  Design of microwave dielectric resonator antenna using MZTO–CSTO composite; Ceramics International (Elsevier Publication) 38 (2012) 2355–2362.
9. Ashutosh Kumar, J. B. M. Krishna, Dapankar Das and Sunita Keshri, Conductivity Modification of ZnO film by low energy Fe10+ ion Implantation; Applied Surface Science (Elsevier Publication) 258 (2012) 2237-2245
10. L. S. Cavalcante, J. C. Sczancoski, J. A. Varela, E. Longo, J. Andres, and S. K. Rout, Editorial Article “Photoluminescence Properties of Nanocrystals”, Journal of Nanomaterials, Volume 2012, Article ID 681594, 2 pages.
11. B. Parija, S.K. Rout, L.S. Cavalcante, A.Z. Simões, S. Panigrahi, E. Longo, N.C. Batista, Structure, microstructure and dielectric properties of 100−x(Bi0.5Na0.5)TiO3 −x[SrTiO3] composites ceramics Applied Physics A: Mat. Sc. Proces. 109 (2012)715-723.
12. Kumar Mohit, S. K. Rout, Vikram Kumar, S. Parida, G. P. Singh, S. K. Sharma, S. K. Pradhan, Ill Wom Kim, Structural, optical and dielectric studies of NixZn1-xFe2O4 prepared by auto combustion route,Physica B: Condensed Matter, 407(6) ( 2012) 935-942.
13. B Parija, T.Badapanda, S.K.Rout, S.Panigrahi, T.P.Sinha, Dielectric dispersion and impedance spectroscopy of lead free (Bi0.5Na0.5)TiO3 ferroelectric ceramics Physics Express, 2 (2012)21.
14. S. Parida, S. K. Rout, P. K. Barhai and J. Bera, Influence of Ball Milling Parameters on the Crystallite Size of Ba(Ti1-xZrx)O3Ferroelectrics, 429 (2012) 22–30
15. T.Badapanda, V Senthil, S.K.Rout, S.Panigrahi, T.P.Sinha, Frequency-Temperature dependence of Dy doped Ba(Zr0.25Ti0.75)O3 Ceramic: Impedance and modulus spectroscopy, Physics Express, 2 (2012)19.
16. T. Badapanda, V. Senthil, S.K. Rout, S. Panigrahi, T.P. Sinha, Dielectric relaxation on Ba1−xBi2x/3Zr0.25Ti0.75O3 ceramic Mat. Chem. Phys, 133 (2012) 863– 870.
17. B.Parija, T. Badapanda, V Senthil, S.K. Rout, S. Panigrahi, Diffuse phase transistion, Piezoelectric and Optical study of Bi0.5Na0.5TiO3 ceramic, Bull. Mat. Sci., 35 (2) (2012) 197-201.
18. S. Parida, S. K. Rout, V. Subramanian. P. K. Barhai N. Gupta. V. R. Gupta, Structural, microwave dielectric properties and dielectric resonator antenna studies of Sr(ZrxTi1−x)O3 ceramics,Journal of Alloys and Compounds, 528 (2012)126-134.
19. S. Parida, S.K. Rout, L.S. Cavalcante, E. Sinha, M. Siu Li, V. Subramanian, N. Gupta, V.R. Gupta, J.A. Varela, E. Longo, Structural refinement, optical and microwave dielectric properties of BaZrO3Ceramic International, 38(3)(2012) 2129-2138.
20. **S. K. Mukherjee** and P. K. Barhai, Reliability of anodic vacuum arc in depositing thermoelectric alloy thin films,  **Journal of Alloys and Compounds** 511, 14 (2012)
21. Dilip K. Singh, Q. H. Kihm, H. W. Kihm, and Dai-Sik Kim, “Optical Magnetic Field Analyzer” Quantum Electronics and Laser Science Conference, San Jose, California United States, May 6-11, 2012, ISBN: 978-1-55752-943-5 Chiral and Complex Plasmonics (QTh4F)  <http://dx.doi.org/10.1364/QELS.2012.QTh4F.7>
22. S. Vilain, H. W. Khim, Dilip K. Singh and D. S. Kim, “Mapping |Ex|2, |Ez|2 and |Hy|2 for one-dimensional surface plasmon polaritons” Quantum Electronics and Laser Science Conference, San Jose, California United States, May 6-11, 2012, ISBN: 978-1-55752-943-5, Plasmonic Imaging (QTh3F) <http://dx.doi.org/10.1364/QELS.2012.QTh3F.3>
23. Dilip K. Singh, Parameswar K. Iyer, P. K. Giri,Distinguishing defect induced intermediate frequency modes from combination modes in the Raman spectrum of single walled carbon nanotubes.J. Appl. Phys. 111, 064304 (2012).
24. Dilip K. Singh, Parameswar K. Iyer, and P. K. Giri,Role of molecular interactions and structural defects in the efficient fluorescence  quenching by carbon nanotubes.Carbon 50, 4495 (2012).
25. P. K. Giri, S. Bhattacharya, B. Chetia, Satchi Kumari, Dilip K. Singh, P. K. Iyer,High yield chemical synthesis of hexagonal ZnO nanoparticles and nanorods with excellent optical propertiesJ. Nanosci. Nanotechnol. 12, 201 (2012).
26. Prasanta J. Goutam, Dilip K. Singh, and Parameswar K. Iyer,Photoluminescence quenching of poly(3-hexylthiophene) by carbon nanotubes.J. Phy. Chem. C 115 (49), 24067 (2012).
27. Correlation between Blood Glucose and Hematocrit:  A New Estimation Methodology. Pawan K.  Tiwari, Hakhyun Nam, and Young Soo Sohn, BioChip Journal 6 (2012) 206.
28. Integration of Bio-Sensing with Information and Communication to Provide Improved Health-Care Services.     Suman Pandy, Pawan K. Tiwari, and Tae-Young Byun, Lecture Notes in Electrical Engineering 181 (2012) 509.

**2011**1. Anjan Biswas, Engin Topkara , Stephen Johnson, Essaid Zerrad and  Swapan Konar; Quasi-stationary optical Solitons in non-Kerr law Media with full nonlinearity;  Journal of Nonlinear Optical Physics and Materials  20,  309–325 (2011).
2. S Shwetanshumala, S. Konar,  N. Asif and Anjan Biswas;  Deflection of bright spatial soliton in a biased noncentrosymmetric two-photon photovoltaic photorefractive crystal due to first order diffusion and higher order drift;  Physica Scripta  84, 025402 (2011).
3. S. Konar,  Z. Jovanoski  and I. N. Towers;  Two-color bright solitons in a three-level atomic system in the cascade configuration;   Journal of Modern Optics  [58](http://www.tandfonline.com/loi/tmop20?open=58#vol_58), 1035-1040 (2011).
4. S. Konar,  Z  Jovanoski  and I. N. Towers;  Incoherent Spatial Optical Solitons in Photorefractive Media; Optics and Laser Technology  43, 1466 (2011).
5. S.  Shwetanshumala  and  S. Konar,  Modulation Instability of Plane Electromagnetic Beams in Centro-symmetric Crystals due to Two-Photon Photorefractive Effects;   Physica Scripta  83, 025401 (2011).
6. S. Konar, Optical Spatial Solitons  and Modulation  Instabilities in Photorefractive Media,   Physics Express   1, 139 (2011)
7. Sunita Keshri, Leena Joshi and Shailendra Singh Rajput, Studies on La0.67Ca0.33MnO3 – SrTiO3 composites using two-phase model; Journal of Alloys and compounds (Elsevier Publication) 509 (2011) 5796-5803.
8. N. Ibrahim, A. K. Yahya, S. S. Rajput, S. Keshri and M. K. Talari, Double Metal-Insulator Peaks and Effect of Sm3+ Substitution on Transport Properties of Hole-doped La0.85Ag0.15MnO3; Journal of Magnetism and Magnetic Materials (Elsevier Publication) 323 (2011) 2179-2185.
9. Leena Joshi and Sunita Keshri, Magneto-transport properties of Fe- doped LSMO Manganites; Measurement (Elsevier Publication) 44 (2011) 938-945.
10. Sunita Keshri, Ashutosh Kumar and Debdulal Kabiraj, Effect of Annealing on structural, optical and electrical behaviours of WO3 thin films prepared by physical vapour deposition method; J. Nano-Electron Phys. (Sumy State University), 3 (2011), 260-267.
11. M. Ganguly, S. Parida, E.Sinha, S. K. Rout, A. K. Himansu, A. Hussain, I. W. Kim, Structural, Dielectric and Electrical properties of BaFe0.5Nb0.5O3 ceramic prepared by solid state reaction technique,Mat. Chem. Phys, 131 (2011) 535-539.
12. T. Badapanda, S.K.Rout, S.Panigrahi, L.S.Cavalcante, Rietveld refinement, microstructure, conductivity and impedance properties of Ba [Zr0.25Ti0.75]O3 ceramic, Current Applied Physics, 11 (2011) 1282-1293.
13. N. Srivastava, S. K. Satheesh, C.B.S. Dutt and K.S. Jagannath, Anthropogenic aerosol fraction over Afro-Asian regions inferred using Kalpana-I and MISR data, Remote Sensing Letters, vol. 2, No. 1, 1-9, January 2011, DOI: 10.1080/01431161.2010.481296 ISSN: 2150-704X (Print), 2150-7058 (Online)
14. P. K. Barhai, Rishi Sharma and B. B Nayak, Deposition of wide band gap DLC films using R.F. PECVD at very low power. International Journal of Modern Physics B, 25 (2011) 3941–3949.
15. Rishi Sharma, Nicolas Woehrl, Milan Vrucinic, Monika Timpner, Volker Buck and P.K. Barhai, Effect of microwave power and C2 emission intensity on structural and surface properties of nanocrystalline diamond films. Thin Solid Films 519 (2011) 7632–7637.
16. P. K. Barhai, Rishi Sharma, Vijay Chatterjee, N. Woehrl and Volker Buck, Synthesis and electron field emission studies of nanocrystalline diamond films, World Journal of Engineering, Supplement, Vol 3 (2011) 93.
17. **S. K. Mukherjee**, P. K. Barhai and S. Srikanth, Comparative evaluation of corrosion behavior of type K thin film thermocouple and its bulk counterpart **,Corrosion Science** 53, 2881 (2011).
18. **S. K. Mukherjee,** L. Joshi and P. K. Barhai, A comparative study of nanocrystalline Cu film deposited using anodic vacuum arc and dc magnetron sputtering, **Surface and Coatings Technology** **205, 4582-4595 (2011).**
19. Prasanta J. Goutam, Dilip K. Singh, P. K. Giri, Parameswar K. Iyer,Enhancing the Photo Stability of Poly-(3-Hexylthiophene) by Preparing composites with Multiwalled Carbon Nanotubes.J. Phy. Chem. B 115, 919 (2011).
20. Dilip K. Singh, P. K. Giri and Parameswar K. IyerEvidence for Defect-Enhanced Photoluminescence Quenching of Fluorescein by Carbon Nanotubes.J. Phy. Chem. C 116 (14), 8196-8201 (2011).
21. Dilip K. Singh, Parameswar .K. Iyer, and P. K. Giri,Defect evolution and structural improvement in low energy ion irradiated carbon nanotubes: Microscopic and spectroscopic studies.Int. J. Nanosci. 10, 49 (2011).
22. Dilip K. Singh, Parameswar K. Iyer and P. K. Giri,Improved chemical synthesis of graphene using a safer solvo*thermal route.***Int. J. Nanosci. 10, 39 (2011).**

**2010**1. S. Shwetanshumala   and  S. Konar; Bright Optical Spatial Solitons in Photorefractive Waveguides;   Physica Scripta   82, 045404 (2010).
2. S. Konar,  Shashank Shekhar and   S. Shwetanshumala;   External Electric Field Induced Modulation Instability of an Electromagnetic Beam in Two-Photon Photorefractive Materials;  Optics & Laser Technology  42, 1276–1281 (2010).
3. S. Konar, Shashank Shekhar and Woo-Pyo Hong ; Incoherently Coupled Two Component Screening Photovoltaic Solitons in Two-Photon Photorefractive Materials Under the Action of External Field; Optics & Laser Technology  42, 1294–1300 (2010).
4. S. K. Ghorai, Somnath Siddhishwari  and S. Konar ;  Phase Retrieval in optical fiber modal interference for structural health monitoring; Optics  Communications  283, 1278-1284 (2010).
5. S. Konar  and  Noushin  Asif,  External Field Controlled Photovoltaic Symbiotic Spatial Soliton Pairs in Two-Photon Photorefractive Crystals;   Physica Scripta 81,  015401 (2010).
6. Leena Joshi, Shailendra Singh Rajput and Sunita Keshri,Structural and magneto transport properties of LCMOSTO composites; Phase Transitions (Taylor & Francis Publication) 83 (2010) 482-490.
7. Leena Joshi and Sunita Keshri, Enhanced CMR properties of La0.67Ca0.33MnO3 sintered at different temperatures, Phase Transitions (Taylor & Francis Publication) 83 (2010) 263-275.
8. S. Keshri, L. Joshi, S. K. Mukherjee and V. F. Kraidenov, LabVIEW measurement and analysis of enhanced CMR properties of sintered at different temperatures; Journal of Electromagnetic Analysis and Applications (Scientific Research Publishing, Inc. USA) 2 (2010) 372-375.
9. Deep Shikha, Usha Jha, **S. K. Sinha**, P. K. Barhai, K. G. M. Nair, D. C. Kothari, “A comparative study of corrosion resistance in Ringer solution of nitrogen implanted alumina at different energies for orthopedic implants”, Int. J. Appl. Ceram. Technol., 7 [2] 156–163 (2010).
10. A. Hussain, C.W. Ahn, H.J. Lee, I.W. Kim, J.S. Lee, S.J. Jeong, S.K. Rout,  Anisotropic Electrical Properties of Bi0.5(Na0.75K0.25)0.5TiO3 Ceramics Fabricated by Reactive Templated Grain Growth (RTGG)Current Applied Physics, 10(1),(2010) 305-310
11. S. K. Rout, E.Sinha, A. Hussian, and I. W. Kim, Frequency-Temperature response of CaBi4Ti4O15 ceramic prepared by soft chemical route: Impedance and Modulus spectroscopy characterization Current Applied Physics, 10(3),(2010), 917-922.
12. S. K. Rout, E. Sinha, A. Hussian, P. K. Barhai and I. W. Kim, Anisotropic dielectric and electrical properties of hot-forged SrBi4Ti4O15International Journal of Applied Ceramic Technology, 7[S1] (2010) E114-E123.
13. T. Badapanda, S.K. Rout, L.S. Cavalcante, J.C. Sczancoski, S. Panigrahi, T. P. Sinha, E. Longo, Structural and dielectric relaxor properties of yttrium-doped Ba(Zr0.25Ti0.75)O3 ceramics Materials Chemistry and Physics, 121 (2010) 147–153.
14. J.C. Sczancoski, L.S. Cavalcante, T. Badapanda, S.K. Rout, S. Panigrahi, V.R. Mastelaro, J.A. Varela, M. Siu Li, E. Longo, Structure and optical properties of [Ba1–xY2x/3](Zr0.25Ti0.75)O3 powders Solid State Sciences, 12(7)(2010, 1160-1167.
15. S.K. Mukherjee, M.K. Sinha, B. Pathak, S.K. Rout, P.K. Barhai, A.K. Balamurugan, A.K. Tyagi, F.L. Ng , Investigations on the structure, composition and performance of nanocrystalline thin film thermocouples deposited using anodic vacuum arc Thin Solid Films, 518(20)( 2010) 5839-5854.
16. R. Sharma, N. Woehri, P. K. Barhai and V. Buck, Nucleation density enhancement for nanocrystalline diamond films. Journal of Optoelectronics and Advanced Materials 12 (2010) 1915 -1920.
17. Rishi Sharma, Alok Kr. Pandey, Neelima Sharma, D. Sasmal and P. K. Barhai, Diamond like carbon films as a protective surface on PMMA for biomedical applications. Surface and Coating Technology 205 (2010) 2495-2502.
18. , **S. K. Mukherjee**, M. K. Sinha, B. Pathak, S. K. Rout, P. K. Barhai, A. K. Balamurugan, A. K. Tyagi and F. L. Ng,Investigations on the structure, composition and performance of nanocrystalline thin film thermocouples deposited using anodic vacuum arc **Thin Solid** Films 518, 5839 (2010).
19. Sunita Keshri, Leena Joshi, **Sanat Kumar Mukherjee** and V. S. Kraidenov, Measurement and analysis of temperature dependent resistance of La0.67Ca/Sr0.33MnO3 CMR samples using LabVIEW**J. Electromegnetic Analysis and Application**2, 372 (2010).
20. Dilip K.Singh, Parameswar .K. Iyer, and P. K. Giri,Diameter dependent oxidative stability of multiwalled carbon nanotubes: Role of defects and effect of vacuum annealing.J.  Appl. Phys. 108, 084313 (2010).(Also appeared in Virtual Jr. of Nanoscale Science & Technology, November 1, 2010)
21. Dilip K. Singh, Parameswar .K. Iyer, and P. K. Giri,Diameter dependence of interwall separation and strain in multiwalled carbon nanotubes probed by X-ray diffraction and Raman scattering studiesDiamond and Related Materials 19, 1281 (2010).

**2009**1. S. Konar, S .K. Ghorai and Rakhi Bhattacharya; Highly Birefringent Microstructured Fiber with Zero Dispersion  Wavelength at  0.64  Fiber and Integrated Optics  28, 138 (2009).
2. Swati Srivastava and  S. Konar; Two Component Coupled Photovoltaic Soliton Pair in Two-Photon Photorefractive Materials Under Open Circuit Conditions; Optics and Laser Technology  41, 419 (2009).
3. Sunita Keshri (Shaw), Leena Joshi and Sanjeeb Kumar Rout, Influence of BTO phase on structural, magnetic and electrical properties of LCMO; Journal of Alloys and compounds (Elsevier Publication), 485 (2009), 501-506.
4. L. Joshi, V. Dayal, N. Rama and S. Keshri; Existence of Griffiths phase in La0.67Ca0.33Mn0.93Fe0.07O3, Journal of Alloys and compounds (Elsevier Publication) 497 (2009) 879-882.
5. L. Joshi, S. Keshri, and S. K. Rout; Electronic transport in LCMO/BTO composites, Phase Transitions (Taylor & Francis Publication) 82 (2009) 123-130.
6. S. Keshri & L. Joshi, ZnO and Zn0.99Co0.01O Crystallites Grown using Chemical Method, International Journal of Materials Science, 4 (2009), 507–510.
7. A. K. Lal, **S. K. Sinha**, P.K.Barhai, K.G.M.Nair, S. Kalavathy, and D. C. Kothari, Effect of 60 keV nitrogen ion implantation on oxidation resistance of IMI 834 titanium alloy”, Surf. Coat. & Tech. 203 (2009) 2605–2607.
8. Deep Shikha, Usha Jha, **S. K. Sinha**, P. K. Barhai, K. G. M. Nair S. Das, A. K. Tyagi, S.Kalavathy and D. C. Kothari, “Microstructure and Biocompatibility investigation of alumina after 30 keV and 60 keV nitrogen ion implantation, Surf. Coat. & Tech. 203 (2009) 2541–2545.
9. Deep Shikha, Usha Jha, **S. K. Sinha**, P. K. Barhai, K. G. M. Nair, S. Das, A. K. Tyagi and D. C. Kothari, “Effect of nitrogen ion implantation in alumina for orthopedic implant”, IIC bulletin Vol 19 No 3, (2009) p-57-65 (Indian Institute of Ceramics).
10. A. K. Lal, **S. K. Sinha**, P. K .Barhai, K. G. M. Nair, A. Bhattacharya, and D. C. Kothari, "Improvement in oxidation resistance at elevated temperature after different energies nitrogen ion implantation in IMI 834 titanium alloy", Aerospace Engineering Division Journal of the Institution of Engineers (India) Vol 90, (May 2009) 17-20.
11. T. Badapanda, S. K. Rout, S. Panigrahi, T. P. Sinha, and S. I. Woo, Effect of Y substitution on dielectric properties of BTZ relaxor ceramics Journal of Korean Physical Society, 55(2009 )749-753
12. Nisha Gupta, S. K. Rout, K. Sivaji, Characteristics of Cylindrical Dielectric Resonator Antenna Microwave Review, 15 (2) (2009) 29-32.
13. S. K. Mukherjee, M. K. Sinha, B. Pathak, S. K. Rout, and P. K. Barhai , Anodic vacuum arc developed nano crystalline Cu-Ni and Fe-Ni thin thermocouples, Journal of Applied Physics, 106 (2009) 113717.
14. T. Badapanda, S.K.Rout, L.S. Cavalcante, J.C. Sczancoski, S. Panigrahi, E.Longo and M. Siu Li, Optical and dielectric relaxor behavior of Ba(Zr0.25Ti0.75)O3 ceramic explained by means of distorted clusters,Journal of Physics D: Applied Physics, 42 (2009) 175414-9p
15. S.K. Rout, L.S. Cavalcante, J.C. Sczancoski, T. Badapanda, S. Panigrahi, M. Siu Li,  E. Longo, Photoluminescence property of Ba(Zr0.25Ti0.75)O3 powders prepared by solid state reaction and polymeric precursor method, Physica B: Condensed Matter, 404 (2009) 3341-3347
16. Gilho Kim, Jungsik Bang, Yunseok Kim, S.K. Rout, Seong IhlWoo, Structural, electrical and optical properties of boron doped ZnO thin films using LSMCD method at room temperature Applied Physics A: Mat. Sc. Proces. 97 (2009) 821-828.
17. S.K.Rout, E.Sinha, A. Hussian, and I.W.Kim, Electrical anisotropy in the hot-forged CaBi4Ti4O15 ceramics Solid State Science, 11 (2009) 1144-1149.
18. S.K.Rout,E.Sinha, A.Hussian,J.S.Lee,C. W. Ahn, I.W.Kim and S.I.Woo, Phase transition in ABi4Ti4O15 (A=Ca, Sr, Ba) Aurivillius oxides prepared through a soft chemical route Journal of Applied Physics, 105(2), (2009) 024105-6p
19. S.K.Rout, A.Hussian, J.S.Lee, I.W.Kim and S.I.Woo, Impedance spectroscopy and morphology of SrBi4Ti4O15 ceramics prepared by a soft chemical method, Journal of Alloys and Compounds, 477(1-2) (2009) 705-711.
20. E.Sinha and S.K.Rout, Influence of fibre-surface treatment on structural, thermal and mechanical properties of jute fibre and its composite Bulletin of Materials Science, 32(1)(2009) 65-76.
21. T.Badapanda, S.K.Rout, S.Panigrahi, T.P.Sinha, and S.I.Woo Effect of Dy substitution on dielectric properties of BTZ relaxor ceramics,, Ferroelectrics, 385 (2009) 177-186
22. T.Badapanda, S.K.Rout, S.Panigrahi, T.P.Sinha, Phase formation and Dielectric study of Bi doped BaTi0.75Zr0.25O3 ceramic Current Applied Physics,9(4) (2009) 727-731.
23. S.K.Rout, S.Panigrahi, P.K. Barhai and I.W.Kim, Synthesis of (Ba0.5Sr0.5) (Ti1-xZrx)O3 ceramics: Effect of Zr content on room temperature electrical properties,Journal of Electroceramic, 23 (1) (2009) 37–42.
24. E. Sinha, S.Panigrahi, Impact of plasma treatment on jute fibre structure, wettability and flexural strength of its composite, Journal of composite materials 43 (17) 1791-1802 (2009)
25. E. Sinha, S.K Rout, Influence of fibre surface treatment on structural, thermal and mechanical properties of jute fibre and composite , Bull. Mater. Sci 32(1) 1-12 (2009)
26. E.Sinha,  Effect of cold plasma treatment on macromolecular structure, thermal and mechanical behavior of jute fibre, Journal of Industrial Textile 38(4) 317-339 (2009)
27. Anna M. Nobili, G.L.Comandi, Suresh Doravari, D. Bramdi, R. Kumar , et. al. “Galileo Galilei” (GG) a small satellite to test the equivalence principle of Galileo, Newton and Einstein, Exp Astron 23 (2009) 689.
28. **S. K. Mukherjee**, M. K. Sinha, B. Pathak, S. K. Rout, and P. K. Barhai,Anodic Vacuum Arc deposited nanocrystalline Cu-Ni and Fe-Ni thin film thermocouples **Journal of Applied Physics** 106, 113717 (2009).
29. P. K. Barhai, Rishi Sharma, Anoop Kr. Yadav, Ashwini Kr. Singh, Himani Gaur and Volker Buck, Surface modification of PMMA with DLC using RF-PECVD. ECS Transactions, 25 (2009) 829-836.
30. Dilip K. Singh, P. K. Iyer, and P. K. Giri,Optical Signature of Structural Defects in Single Walled and Multiwalled CNTs.J. Nanosci. Nanotechnol. 9, 5396 (2009)
31. Satchi Kumari, Dilip K. Singh, and P. K. Giri,Strain Anisotropy in Freestanding Germanium Nanoparticles Synthesized by Ball Milling.J. Nanosci. Nanotechnol. 9, 5231 (2009).
32. Dilip K. Singh, Parameswar .K. Iyer, and P.K.Giri,Quantitative analysis of diameter dependent properties of multi-walled carbon nantoubes.AIP Conference Proceedings 1147, 450 (2009).
33. P. K. Reddy, P. J. Goutam, Diilp K. Singh, A. K. Ghoshal,; P. K. Iyer,Poly(3-hexylthiphene) to fullerenes. Kinetic modeling and analysis of thermal degradation  pathway.Polymer degradation and stability 94, 1839 (2009).
34. Madhu Priya and Shankar P. Das, Elastic Behavior in a Supercooled Liquid: A Nonlinear Hydrodynamic Model, Nonlinear Dynamics, Narosa Publishing House, 2009.
35. Modeling of nanoparticle-mediated electric field enhancement inside biological cells exposed to AC electric fields. Pawan K. Tiwari, Sung Kil Kang, Gon Jun Kim, Jun Choi, and J. K. Lee, Japanese Journal of Applied Physics 48 (2009) 087001.
36. Control of ion energy distribution in low pressure and triple-frequency capacitive discharges. S. H. Lee, Pawan **K. Tiwari** and J. K. Lee, **Plasma Sources Science and Technology 18 (2009) 025024.**

**2008**1. Noushin Asif, Swetanshumala and S. Konar; Photovoltaic Spatial Soliton Pairs in Two-Photon Photorefractive Materials;  Physics   Letts.   A  372, 735-740 (2008).
2. Woopyo Hong, S. Shwetanshumala and  S.Konar; Modulational Instability of Optical Beams in Photovoltaic and Photorefractive Media due to Two-Photon Photorefractive Effect under Open  Circuit Condition;  Optics  Communications  281, 5864-5869 (2008).
3. Soumendu Jana and  Swapan Konar; Far-Field Spectral Behavior and Spectral Switching of Super-Gaussian Pulses; Optics  Communications  281 4829–4834 (2008).
4. Rakhi Bhattacharya and S. Konar;  Design of Microstructure Fibers with Flat Negative Dispersion over Large Wavelength Bands;  J. Optoelectronics and Advanced Materials  10, 3159 (2008).
5. Rakhi Bhattacharya and S. Konar; Design of a Photonic Crystal Fiber With Zero Dispersion Wavelength Near ;  Fiber and Integrated Optics 27, 89-98 (2008).
6. M. Mishra  and S. Konar; High Bit Rate Dense Dispersion Managed Optical Communication Systems With Distributed Amplification; Progress In Electromagnetics Research (PIER) 78, 301–320 (2008).
7. Anjan Biswas, Essaid Zerrad and Swapan Konar;  Soliton perturbation theory for the generalized fifth-order KdV equation; Communications in Nonlinear Science and Numerical Simulation  13, 1281-1286 (2008).
8. Soumendu Jana, S. Konar and Manoj Mishra; Soliton Switching in Fiber-Coupler with Periodically Modulated Dispersion, Coupling Constant Dispersion and Cubic Quintic Nonlinearity; Z. Naturforsch  A 63a, 145-151(2008).
9. Anjan Biswas and Swapan Konar,  Soliton Perturbation Theory for the Generalized Benjamin-Bona-Mahony Equation;  Communications in Nonlinear Sciences and Numerical Simulations 13, 703-706 (2008).
10. Shwetanshumala, S. Konar, A. Biswas;  Spatial optical solitons in inhomogeneous elliptic core saturating  nonlinear fiber; Optik  119,  403–408 (2008).
11. Anjan Biswas, Swapan Konar and Essaid Zerrad; Collision of  Dual Power Law Solitons in Non-Linear Optical Fibers; Adv. Studies Theor. Phys.  2, 165-180 (2008).
12. S. Keshri  and V. Dayal, Structural and electrical transport properties of nanosized La0.67Ca0.33MnO3 sample synthesized by a simple low-cost novel route, Pramana (Springer-Verlag Publication) 70, 697-704 (2008).
13. S. Keshri, V. Dayal, L. Joshi, Influence of Fe doping on electrical properties of LCMO: Phase Transitions (Taylor & Francis Publication), Vol. 81, 17–28, 2008.
14. Deep Shikha, Usha Jha, **S. K. Sinha**, P. K. Barhai, S. Kalavathy, K. G. M. Nair, S. Dash, A. K. Tyagi, D. C. Kothari, “Improvement in corrosion resistance of biomaterial alumina after 60 keV nitrogen ion implantation”,International Journal of Applied Ceramics and Technology (Blackwell), 5 [1] 44–48 (2008).
15. T.Badapanda,S.K. Rout, S. Panigrahi, E. Sinha and T.P. Sinha,  Ferroelectric phase transition of Ba1-xSrx Ti0.6 Zr0.4 O3 ceramics”, Phasetransition, [81](http://www.informaworld.com/smpp/title~content%3Dt713647403~db%3Dall~tab%3Dissueslist~branches%3D81#v81)(10) (2008) 897-906
16. T.Badapanda, S.K. Rout, S. Panigrahi, and T.P. Sinha, “Relaxor behaviour of (Ba0.5Sr0.5)(Ti0⋅6Zr0⋅4)O3 ceramics”, Bulletin of Materials Science, 31(6), (2008), 1–5.
17. E.Sinha\*, S.K.Rout, and P.K.Barhai, “Study of the structural and thermal properties of plasma treated jute fibre”, Applied Physics A: Mat. Sc. Proces, 92(2008) 283-290
18. E. Sinha, and S.K. Rout, “Effect of neutron irradiation on structural, thermal and mechanical properties of jute fibre”, J. Appl. Poly. Sc., 110 (2008) 413–423
19. E. Sinha and S.K. Rout,  “Influence of fibre-surface treatment on structural, thermal and mechanical properties of jute”, J. Mat. Sc., 43(8) (2008) 2590-2601
20. S.K. Rout, P.K.Barhai andE. Sinha, “Diffuse phase transition of BaTi0.6Zr0.4O3 relaxor ferroelectric ceramics”, Phasetransition, [81](http://www.informaworld.com/smpp/title~content%3Dt713647403~db%3Dall~tab%3Dissueslist~branches%3D81#v81)(1) (2008) 129-137.
21. S.K.Rout, T.Badapanda, E.Sinha, S.Panigrahi, P.K.Barhai and T.P.Sinha, “Dielectric and phase transition of BaTi0.6Zr0.4O3 ceramics prepared through a soft chemical route”, Applied Physics A: Mat. Sc. Proces. 91(1) (2008) 101-106
22. Rishi Sharma, P. K. Barhai and Neelam Kumari, Corrosion resistant behavior of DLC films. Thin Solid Films, 516 (2008) 5397-5403.
23. Dilip K. Singh, P. K. Iyer, and P. K. Giri,Functionalization of Carbon nanotubes and study of its optical and structural properties.Nano Trends, A Journal of Nanotechnology and Its Applications 4, 55 (2008)
24. Raman threshold intensity of an electromagnetic wave in cluster plasmas. Pawan K. Tiwari, Chinook Mok and C. M. Ryu, Journal of Korean Physical Society 53 (2008) 3726.
25. A parametric study of collisional and pulse attenuation on Raman threshold intensity in cluster plasmas. Pawan K. T**iwari**, Chinook Mok, C. M. and J. K. Lee, **Physics of Plasmas 15 (2008) 084505**.

**2007**1. S. Konar, Soumendu Jana  and Woo-Pyo Hong;  Two-Component Spatial Holographic Solitons Supported by Cross Phase Modulation,  Physica  Scripta  76,  470–474 (2007).
2. S. Konar and Rakhi Bhattacharya;  Design of Photonic Crystal Fibers for Dispersion Compensation over S, C and L Bands; Optoelectronics And Advanced Materials – Rapid Communications  1,  442 (2007).
3. M. Mishra  and S. Konar;  Interaction of Solitons In A Dispersion Managed Optical Communication System With Asymmetric Dispersion Map;Journal of Electromagnetic Waves and Applications 21, 2049-2058 ( 2007).
4. Anjan Biswas, Huaizhong Ren & Swapan Konar;  Stochastic perturbation of non-Kerr law optical solitons;   Optik  118,  471-480 (2007).
5. A. Biswas, S. Konar;  Soliton perturbation theory for the fifth order KdV-Type Equations with power law Nonlinearity;   Applied Mathematics Letters 20, 1122–1125 (2007).
6. S. Konar,   S. Jana  and   Shwetanshumala;  Incoherently coupled screening photovoltaic spatial solitons in a biased photovoltaic photo refractive crystals; Optics Communications  273, 324 -333 (2007).
7. Biswas, Essaid  Zerrad and S. Konar,  Stochastic Perturbation of Dual  Power Law Optical Solitons; Optical Engineering  46, 055005 (2007).
8. S. Konar, M.Mishra and Soumendu Jana, Nonlinear Evolution of cosh-Gaussian Laser Beams and Generations of Flat Top Spatial Solitons in Cubic Quintic Nonlinear  Media;  Physics  Letts.  A  362, 505-510 (2007).
9. Soumendu Jana and S. Konar, A New Family of Thirring Type Optical Spatial Solitons via Electromagnetic Induced Transparency;   Physics  Letts.  A  362, 435-438 (2007).
10. Anjan  Biswas, Huaizhong  Ren & Swapan Konar,    Stochastic Perturbation of Power Law Optical solitons;    Int.  J. Theoretical Phys. 46,  1112-1123 (2007).
11. Anjan Biswas and Swapan Konar,  Collisions of Optical Solitons in Non Kerr Law Media;  Organic Electronics   8, 206-226 (2007).
12. Anjan   Biswas and  S. Konar,  Soliton Perturbation Theory for the Compound KdV Equation;  Int.  J. Theoretical Phys.  46, 237-243 (2007).
13. A. Biswas and  S. Konar,   Intra Channel Collision of Dual Power Law Optical Solitons;   Int.  J. Theoretical  Phys.  46, 161-173 (2007).
14. A.Biswas and Swapan Konar; Quasi Particle Theory of Optical Soliton Interaction; Communications in Nonlinear Sciences and Numerical Simulations  12,  1202-1228 (2007).
15. A. Biswas,  S. Konar and Essaid Zerrad ; Soliton perturbation theory for the general   modified Degasperis-Process Camassa–Holm Equation;  International Journal of Modern Mathematics  2, 35-40  (2007).
16. V. Dayal  and S. Keshri, Structural and Magnetic properties of La0.67Ca0.33Mn(1-x)FexO3 (x=0-0.07): Solid State Communication (Elsevier Publication) 142, 63-66, 2007.
17. V. Dayal, S. Keshri, A. Saha and H. Kishan, Effect of -irradiation on novel properties of polycrystalline Bi1.2Pb0.33Sr1.54Ca2.06Cu3Oy superconductor: Radiation Effects and Defects (Taylor & Francis Publication), 162, 359, 2007.
18. S. Keshri and V. Dayal, Low Field AC-Susceptibility Study on-Irradiated Bi1.2Pb0.33Sr1.54Ca2.06Cu3Oy Superconductor: Phase Transitions (Taylor & Francis Publication), 80, 243-251, 2007.
19. S. Keshri, V. F. Kraidenov, V. Dayal and L. Joshi, Electrical Properties of  under Pressure, International J. Material Science 2, 191–199, 2007.
20. Deep Shikha, Usha Jha, **S. K. Sinha**, P. K. Barhai, G. Sarkhel, K. G. M. Nair, S. Dash, A. K. Tyagi and D. C. Kothari, “Microstructural investigation of alumina implanted with 30 keV nitrogen ions”**,**Nucl. Instr. & Meth. B (Elsevier)  264 (2007) 254-258.
21. S.K. Rout, T.Badapanda,E.Sinha and S. Panigrahi, Dielectric study on sol gel derived BZT film deposited by spin coating technique Indian Journal of Physics, 81(1) (2007) 149-153,
22. S.K. Rout and S. Panigrahi,  BaTi0.6Ti0.4O3 Solid Solutions: Phase formation kinetics and reaction mechanism through solid oxide reaction Indian Journal of Physics, 81(1) (2007) 143-147.
23. S.K. Rout, T. Badapanda and S.Panigrahi, Dielectric study of spin coated nano-thick BaZrxTi1-xO3 film Indian Journal Pure and Applied Physics, 45, (2007) 749-753.
24. S.K. Rout, E. Sinha and S. Panigrahi, Dielectric properties and diffuse phase transition in Ba1-xMgxTi0.6Zr0.4O3 solid solutions,Mat. Chem. Phys, 101, (2007) 428–43
25. J.Beraand S.K.Rout, Synthesis of [(Ba1-xSrx) (Ti0.5Zr0.5)] O3 ceramics and effect of Zr content on room temperature dielectric properties,Journal of Electroceramics, 18 (2007) 33-37
26. R.K.Paul, “Novel Approach to Abel Inversion,” Rev. Sci. Instrum, 78, 093701(2007), published online 4th Sep  200
27. Madhu Priya and Shankar P. Das, Fragility and elastic behavior of a supercooled liquid, Phys. Rev. E. 76, 061501 (2007), arXiv:0801.1377.
28. Dilip K. Singh, P. K. Iyer, and P. K. Giri,Study of fluorescence quenching effect of Carbon Nanotubes.Proc. 52nd DAE Solid State Physics Symposium 52, 347 (2007).
29. Prabhakar P. Palni, Satchi Kumari, Neeraj Garg Baruah, Dilip K. Singh, P. K. Giri,Effect of annealing on high quality Zinc Oxide Nanowires synthesized by catalytic vapor-deposition.Nano Trends 3 (2007) 1–6.
30. P. K. Giri, P. K. Patel, C. J. Panchal, S. Bhattacharyya, Satchi Kumari, Dilip K. Singh, V. A. Kheraj, N. M. Shah.Studies on Zinc Oxide Nanorods Grown Electron Beam Evaporation Technique.Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry 37, 437 (2007).
31. P. K. Giri and Dilip K. Singh,Possible role of defects in the Visible Photoluminescence from Single Walled and   Multiwalled Carbon Nanotubes.Mater. Res. Soc. Symp. Proc. Vol. 1018, EE07-03 (2007).
32. P. K. Giri, S. Bhattacharyya, Dilip K. Singh, R. Kesavamoorthy, B. K. Panigrahi, and K.G. M. Nair,Correlation between microstructure and optical properties of ZnO nanoparticles synthesized by ball milling.J. Appl. Phys. 102, 093515 (2007).
33. Laser induced Coulomb explosion and stimulated Raman scattering in cluster plasmas. Pawan K. Tiwari, Chinook Mok and C. M. Ryu, **Physics of Plasmas 14 (2007) 103101.**

**2006**1. S. Konar and Manoj  Mishra,  Induced Focusing in Higher Order Nonlinear Media and Conversion of Circular Laser Beams into Elliptic Gaussian Laser Beams; Int. J. Microwave & Opt. Technol.  1,  892-898 (2006).
2. Soumendu Jana and  S. Konar, Tunable Spectral Switching in the Far Field With a Chirped cosh-Gaussian Pulse; Optics  Communications  267, 24 -31 (2006).
3. Shwetanshumala,   S. Konar  and  A. Biswas,   Optical Light Bullets in Semiconductor Doped Inhomogeneous Nonlinear Media;  Physica Scripta   74, 279 (2006).
4. Shwetanshumala, Soumendu Jana, and S.Konar,  Propagation of a mixture of modes of a laser beam in a medium with saturable nonlinearity;  J.  Electromagnetic Waves and Applications   20, 2193 (2006).
5. A. Biswas,  Swetansumala and  S. Konar, Dynamically Stable Dispersion Managed Solitons in Parabolic law Nonlinearity;  Journal of Electromagnetic Waves and Applications   20, 1249-1258 (2006).
6. Swetansumala,  A. Biswas  and  S. Konar; Dynamically Stable Super Gaussian Solitons in Semiconductor Doped Glass Fibers;  Journal of Electromagnetic Waves and Applications  20,  901-912 (2006).
7. A. Biswas,  Swapan Konar and Essaid Zerrad; Soliton Soliton Interaction With Parabolic Law Nonlinearity;  Journal of Electromagnetic Waves and Applications  20, 926-939 (2006).
8. A. Biswas, Swapan Konar and Essaid Zerrad;   Intrachannel Collision of non Kerr law Optical Solitons; Dynamics of Continuous, Discrete & Impulsive Systems; A  13, 337-365 (2006).
9. A. Biswas and Swapan Konar;  Soliton Soliton Interaction With Hamiltonian Perturbation;  Dynamics of Continuous, Discrete and Impulsive Systems; Series   A 13, 117-146 (2006).
10. S. Konar, Manoj Mishra and S. Jana,  The Effect of  Quintic Nonlinearity on the Propagation  Characteristics of Dispersion Managed Optical Solitons;  Chaos Soliton and Fractals   29, 823-828 ( 2006).
11. A. Biswas, Essaid  Zerrad and S.  Konar, Statistical Dynamics of Optical Solitons in a non-Kerr law Media;   Int. J. of Contem. Mat. Sciences   1,777- 800 (2006).
12. S. Keshri, V. Dayal and A. Poddar, Effect of -irradiation on thermoelectric power of Bi1.2Pb0.33Sr1.54Ca2.06Cu3Oy, I. J. of Cryogenics, 31, 108-111, 2006.
13. S.K.Rout, E.Sinha, S.Panigrahi, J.Bera and T.P.Sinha, Phase formation and dielectric phase transition in Ba1-xCaxTi0.6Zr0.4O3 solid solutions Journal Physics and Chemistry of solids, 67 (2006) 2257-2262
14. **S.K. Rout**and S.Panigrahi, On the phase formation mechanism of BaTiO3-SrTiO3 solid solution through solid state reaction, Indian Journal of Pure and Applied Physics, 44 (2006) 606-61
15. **M. K. Sinha, S. K. Mukherjee, B. Pathak, R. K. Paul, and P. K. Barhai**,Effect of deposition process parameters on resistivity of metal and alloy films deposited using anodic vacuum arc technique,**Thin Solid Films 515, 1753 (2006).**
16. Third-Harmonic Generation in Clustered Plasmas. Pawan K. Tiwari and V. K. Tripathi, Physica Scripta 74 (2006) 682.
17. **Pawan K. Tiwari** and V. K. Tripathi Laser beat-wave excitation of plasma waves in a clustered gas., Physica S**cripta 73 (2006) 393**

**2005**1. S. Konar and Manoj Mishra,  Effect of Higher Order Nonlinearities on Induced Focusing and On the Conversion of Circular Gaussian laser beams into Elliptic Gaussian Laser Beam;  J. Optics A: Pure & Applied Optics  7, 576 (2005).
2. S. Konar, Soumendu Jana and Manoj Mishra; Induced Focusing and All Optical Switching in Cubic Quintic Nonlinear Media;  Optics  Communications  255, 114-129 (2005).
3. Manoj Mishra and  Swapan Konar; Induced Focusing and Conversion of a Gaussian Beam into an Elliptic Gaussian Beam;  Pramana  65, 425-436 (2005).
4. S. Konar,  Manoj Mishra and S.Jana,  Dispersion managed Optical Solitons With Higher Order Nonlinearity; Fiber and Integrated Optics  24, 537-548  (2005).
5. S. Konar and A. Biswas,  Soliton-Soliton Interactions With Power Law Nonlinearity;  Progress in Electromagnetic Research   54, 95 (2005).
6. A.Biswas, S Konar ; Theory Of Dispersion-Managed Optical Solitons; Progress In Electromagnetics Research (PIER) 50, 83–134 (2005).
7. S. Konar and S. Jana;  Nonlinear Propagation of a Mixture of TEM00 and TEM01  Modes of a Laser Beam in a Cubic Quintic Medium;  Physica Scripta  71, 198-203 (2005).
8. S. Konar and A.Biswas, Intra channel collision of Kerr law optical solitons;  Prog. in Electromagnetic Research  53, 55-67 (2005).
9. S. Konar and A. Biswas,  Soliton-Soliton Interaction with Kerr Law Nonlinearity;  J. Electromagnetic Waves & Applications  19, 1443-1453 (2005).
10. S. Keshri, V. Dayal, S. Ravi and P. K. Nayak, AC susceptibility study in the single phase Bi-2223 system: Czechoslovak J. of Phys. (Springer-Verlag publication) 55, 73-84, 2005.
11. S.K. Rout and J.Bera, Grain and Grain Boundary Study of Acceptor Doped SrTiO3 Dielectrics using Impedance Spectroscopy, Ferroelectrics, 323, (2005) 79-84
12. J.Bera and S.K. Rout, On the formation mechanism of BaTiO3-BaZrO3 solid solution through solid-oxide reaction,Materials Letter, 59(1)(2005) 135-138
13. J.Bera and S.K. Rout, SrTiO3- SrZrO3 Solid solution: Phase formation kinetics and mechanism through solid oxide reaction Materials Research Bulletin, 40 (2005) 1187-93
14. S.K. Rout, S.Panigrahi and J.Bera, Study on acceptor concentration of Ni-doped SrTiO3 ceramics using impedance spectroscopy Bulletin of Material Science, 28 (2005) 101-105.
15. R.K.Paul, J.T.Andrews, K.Bose and P.K.Barhai, “Reconstruction errors in Abel Inversion,”  Plasma Devices and Operations, 13 (2005) 281-289.
16. Laser induced tunnel ionization and electron density evolution in Air. Pawan K. Tiwari, G. J. H. Brussaard, M. J. V. D. Wiel and V. K. Tripathi, **Journal of Physical Society of Japan 74 (2005) 2255.**

**2004**1. Anjan Biswas and Swapan Konar,  The nonlinear Schrödinger’s Equation and Soliton- Soliton Interaction; Int. J. of Pure and Applied Mathematics  20, 159-207(2005).
2. S. Konar and A. Biswas;  Intra channel collision of Parabolic  law optical solitons,  Optical & Quantum Electronics  36, 1291 (2004).
3. S. Konar and Anjan Biswas;  Chirped Optical Pulse Propagation in Saturating Nonlinear Media;  Optical & Quantum Electronics  36,  905-918 (2004).
4. S. Konar and Manoj Mishra; Double Humped Grey and Black Solitons in Kerr Nonlinear Media;  Optical  & Quantum  Electronics  36,  699 (2004).
5. Soumendu Jana and S.  Konar; Induced Focusing of Two Laser Beams in Cubic Quintic Nonlinear Media;  Physica Scripta  70,  354 (2004).
6. Manoj Mishra  and  S.  Konar;  All Optical Light Deflection and Displacement Using Nonlinear Slab Waveguide;  Fiber  and Integrated Optics  23, 275 (2004).
7. S. Konar and S. Jana; Linear and Nonlinear Propagation of sinh-Gaussian pulses in dispersive media possessing Kerr Nonlinearity;  Optics Communication  236, 7-20 (2004).
8. S. Jana  and S. Konar;  Stable and Quasistable Spatiotemporal Solitons in Cubic Quintic Nonlinear Media; J. Nonlinear Optical Physics & Materials  13, 25-36 (2004).
9. S. Keshri,  Resistivity Anisotropy of High TC Samples using Extended Hubbard Model: I. J. of Cryogenics, 29, 17-20, 2004.
10. **S. K. Sinha** and P. K. Barhai, “Study of defects in GaN/sapphire using Rutherford backscattering spectroscopy and channeling”, Indian Journal of  Phys 78(8), 739-742, 2004
11. **S. K. Sinha** and P. K. Barhai, “Interface defects in GaN/sapphire studied using Rutherford backscattering spectroscopy and channeling”, Pramana vol. 62, no. 6, pp1293-1298, June 2004.
12. S.K. Rout and J.Bera, “Dielectric Properties of Acceptor Doped SrTiO3 Ceramics”, Indian Journal of Physics, 78(8), 819-822 (2004).
13. S.K. Rout, A.K.Hassan and A.K.Ray, Study of Spin coated Organic thin films under Spectrophotometer”, S.Panigrahi, S.Waugh, , Ind J Physics, 78(8) (2004) 823-826.
14. S.K. Rout, S.Panigrahi and J.Bera Characterization of Ni-doped SrTiO3 Ceramics Using Impedance Spectroscopy, Indian Journal of Pure and Applied Physics, 42, (2004) 741-744
15. S. K. Saha and **R. Kumar**, Effect of poloidal velocity shear on the edge fluctuations in the SINP tokamak,**Plasma Physics and Controlled Fusion 46 (2004) 1065.**
16. **Pawan K. Tiwari** and V. K. Tripathi, Stimulated Raman scattering of a laser in a plasma with clusters. P**hysics of Plasmas 11 (2004) 1674**

**2003**1. **S. Konar, P.K.Barhai and S. Medhekar**;  Displacement and  Deflection of Optical Beams by Nonlinear Planar Waveguide**;   J. Nonlinear Optical Physics & Materials  12, 101-112 (2003).**
2. V. Dayal, **S. Keshri**, S. Ravi and P. K. Nayak, Transport and thermal properties of Bi1.2Pb0.33Sr1.54Ca2.06Cu3Oy  superconductor: **I. J. of Cryogenics, 28, No.4, 122-126, 2003**
3. Panigrahi, **S.K. Rout**, A.K.Hassan and A.K.Ray,Optical Parameter of Spun On Film Of Calix[4] Resorcinarene Molecules By Attenuated Reflection Technique”, **S Ind J Physics (A), 77A (2) (2003) 163-165**
4. **R. Kumar** and S. K. Saha, Temperature fluctuations and turbulent transport at the edge of the SINP tokamak, **Nuclear Fusion, 43 (2003) 622**
5. Stimulated Raman scattering of a laser in a beam plasma channel. **Pawan K. Tiwari** and V. K. Tripathi, Physica Scripta 67 (2003) 84.2002
6. Lakhan Singh,  S.N.Rai**,  S. Konar**  and  A.K.Sharma;  Information Exchange between Gaussian Laser Beams in n-InSb;  **Physica Scripta  65, 522 (2002).**
7. K. V. Amrute, U. R. Matre, **S. K. Sinha,** D. C. Kothari, R. Nagrajan & D. Kanjilal, “Modification of magnetic anisotropy in metallic glasses using high energy ion beam irradiation”, **Pramana V58 (2002) 1093-1100.**
8. A. Reale, A. Di Carlo, P. Lugli, G. Traetta, M. Lomascolo, A. Passaseo, R. Cingolani, A. Bon.glio, M. Berti, E. Napolitani, M. Natali, **S.K. Sinha**, A.V. Drigo, A. Vinattieri, M. Colocci, “Static and dynamic screening of the polarization fields in nitride nanostructures: a theoretical and experimental study”, **Physica B 314 (2002) 35–38**
9. M. Vigen **S. K. Sinha**, D. C. Kotahri, A. S. Khanna, A. K. Tyagi  and D. Kanjilal, “Effect of ion implantation on corrosion resistance and high temperature oxidation resistance of Ti deposited 316 stainless steel”, **Surf. Coat & Tech.158-159 (2002) 609-614.**
10. **S. K. Sinha,** D. C. Kothari, A. K. Balmurgan, A. K. Tyagi, D. Kanjilal, “Electronic-loss induced ion beam mixing in various materials studied using SIMS technique”,  **Surf. Coat & Tech.158-159 (2002) 214-218**.
11. A model of laser-aided heating and evaporation of particles. **Pawan K. Tiwari** and V. K. Tripathi, Journal of **Applied Physics 92 (2002) 5680**

**2001**1. Lakhan singh**,  S. Konar** and A.K.Sharma;  Resonant Cross Modulation of  two laser beams in a semiconductor slab;  **Journal of Physics D: Applied Physics  34, 2237 (2001).**
2. G. Traetta, A. Di Carlo, A. Reale, P. Lugli, M. Lomascolo, A. Passaseo, R. Cingolani, A. Bonfiglio, M.  Berti, E. Napolitani, M. Natali, **S.K. Sinha,** A.V. Drigo, “Charge storage and screening of the internal field in GaN/AlGaN quantum wells”, **Journal of Crystal Growth 230, 492-496 (2001).**
3. A. Di Carlo, A. Reale , P. Lugli G.Traetta, M.Lomascolo, A.Passaseo, R. Cingolani, A. Bonfiglio, M. Berti, E. Napolitani, M. Natali, **S. K. Sinha** A.V. Drigo A. Vinattieri and M. Colocci, “Mesoscopic capacitor effect in GaN/AlGaN quantum wells: effects on the electronic states”, **Physical  Review. B 63 235305-1 235305-5 (2001)**
4. S. K. Saha, **R. Kumar** and A. K. Hui, Measurement of plasma diamagnetism in the SINP tokamak by a flux loop system inside the vacuum vessel, **Rev. Sci. Instrum., 72 (2001) 4289.**

**2000**1. **S.  Konar**;   Decay of Periodically Amplified Solitons and Suppression of this Decay by Fifth Order Nonlinearity, **Nonlinear Optics  24, 277-288  (2000).**
2. **S. Konar**  and Rashmi Jain;  Chirped Soliton in Semiconductor Doped Glass Fibers;  **Nonlinear Optics  24, 289 (2000).**
3. A. Pomarico, M. Lamascolo, A.Passaseo, R. Cingolani, M. Berti, E. Napolitani, M. Natali, **S. K. Sinha**, A. V. Drigo, “Broad area optical characterization of well-width homogeneity in GaN/AlGaN multiple quantum wells grown on sapphire wafers”, **Appl Phys. Lett Vol 77 (25) (2000) 4127-4129.**
4. M. Lomascolo, G. Tretta, A. Passaseo, M. Longo, D. Cannoletta, R. Cingolani, A. Bonifiglio, F. Della Sals, A. Di Carlo, P. Lugli, M. Natali**, S. K. Sinha,** M. Berti, A. V. Drigo, H. Botchkarev and H. Morkoc, “Optical and Transport Properties of GaN/Al0.15Ga0.85N Quantum Wells”, **phys. stat. sol. (a) 178, 73-78 (2000).**
5. P.Prete, N. Lovergine, L.Tapfer, M. Berti**, S.K. Sinha** and A.M. Mancini, “Low Pressure MOVPE Growth and Structural Properties of ZnMgSe Epilayers on (100) GaAs”, **Jour. Of Crystal Growth , 221, 410-415 (2000)**
6. **S. K. Sinha,** D. C. Kothari, T. Som, V. N. Kulkarni, K. G. M. Nair, M. Natali, “Effects of Ne+ and Ar+ ion bombardment on Fe/SiO2 bi-layers studied using RBS”, **Nucl. Instr  & Meth. B 170 (2000) 120-124**.
7. **R. Kumar** and S. K. Saha, Pramana, Measurements of temperature fluctuations and anomalous transport in the SINP tokamak, **Journal of Physics, 55 (2000) 713.**

**1999**1. **S. Konar**, J. Kumar and P. K. Sen; Suppression of soliton instability by higher order nonlinearity in Long-haul optical communication systems;  **J. Nonlinear Optical Physics & Materials  8, 497-502 (1999).**
2. **S. Konar**;  Super Gaussian optical beams in higher order nonlinear media;  **Nonlinear Optics   23, 9(1999)**.
3. **S. Konar,** P. K. Sen   and J. Kumar;  Propagation of elliptic Gaussian laser beams in a cubic quintic nonlinear medium;  **Nonlinear Optics  19,  291-306 (1999).**
4. **S. Keshri and P. K. Barhai**, Analysis of thermoelectric power of some insulating high-Tc superconductors using extended Hubbard model:  **Czech. J. Phys. (Springer-Verlag Publication) 49, 539, 1999.**
5. A. Bosacchi, S. Franchi, P. Allegri, V. Ananzani, A. Baraldi, R. Magnanini, M. Berti, D. De Salvador and **S. K. Sinha**, “Composition control on GaSbAs alloys”, **Journal of  Crystal  Growth 201/202 (1999) 858-860.**
6. **S. K. Sinha,** D. C. Kothari, K. M. Vigen, T. Som, V. N. Kulkarni, S. panchapakesan, K. G. M. Nair, “Ion beam mixing of Fe with alumina”, RBS studies, **Nucl. Instr  & Meth. B 159 (1999) 227-232.**
7. S. K. Saha and **R. Kuma**r, Circuit model analysis of eddy currents in the SINP tokamak, **Ind. J. of Pure and Applied Physics, 37 (1999) 495.**

**1998**1. **R.K.Paul,** D.Banik, A.N.S.Iyenger, “Electron Temperature Estimation in the Saha Institute of Nuclear Physics Tokamak from the soft x-ray Imaging System,” **Rev.Sci.Instrum, 69 (1998) 1378-1382**.
2. **R.K.Paul**, A.N.S.Iyenger, A.K.Hui, “Anomalous Current Penetration in the SINP Tokamak,” **Nuclear Fusion, 38  (1998) 1381-1383**
3. S. K. Saha, A. Bal and **R. Kumar**, Real time measurement of plasma position in the SINP tokamak, **Rev. Sci. Instrum., 69 (1998) 4130.**

**1997**1. **S. Keshri and P. K. Barhai**, Thermoelectric power of high-Tc superconductors using extended Hubbard   model: **Pramana (Springer-Verlag Publication), 49, 293-300, 1997.**
2. **S. Keshri and P. K.  Barhai**, Studies of thermodynamic fluctuations of thermoelectric power of Bi2Sr2Ca0.8Y0.2Cu2O8+y   superconductor: **Czech. J. Phys. (Springer-Verlag Publication) 47, 249-254,1997.**
3. P.Ranjan, A.K.Hui, S.Chowdhury, **R.K.Paul,** S.Basu, P.S.Bhattacharya, A.Bal, R.Roy, S.K.Mazumder and N.K.Mukhopadhyay, “ Audiofrequency Discharge Cleaning System for the SINP Tokamak using Single Turn Primary,” **Rev.Sci.Instrum, 65(1) (1997) 135-139.**
4. C.V.S.Rao, Y.Shankara Joisa, C.J.Hansalia, Amit k. Hui, **Ratan Paul**, Prabhat Ranjan, “ Vacuum Photodiode Detectorsfor Broadband vacuum Ultraviolet Detection in the Saha Institute of Nuclear Physics Tokamak,” **Rev.Sci.Instrum, 68(2) 1997 1142-1148.**

**1996**1. **S.Medhekar,** M.S.Sodha**and S. Konar**;  Optical power filter: A new kind of passive nonlinear optical devices;  **Optics Letters   21, 305-308(1996).**
2. **S. Keshri and P. K. Barhai**, Thermoelectric power of high-Tc oxides with phenomenologically modified Hubbard model: **Asian Journal of Physics, 5, 423-430, 1996.**
3. P.Ranjan, A.K.Hui, **R.K.Paul** and P.mukherjee, “Modification of Gas Puffing System in SINP Tokamak,” **Indian**  **Journal of Pure and Applied Physics, 34 (1996) 140-148.**

**1995**1. **Sarang Medhekar, S.  Konar** & Rajkamal;  Successive uptapering and  stationary self-trapped propagation of a laser beam in a  saturating  nonlinear medium**;  Laser & Particle Beams  13, 559 (1995).**
2. **S. Medhekar,  S. Konar**   and Rajkamal;  Self tapering and uptapering of a self guided laser beam in an absorbing / gain medium with nonlinearity; **Pramana   44,  249-256 (1995).**
3. **S. Medhekar,  S. Konar** and   M. S. Sodha;  Self tapering of elliptic Gaussian beams in   elliptic core nonlinear fiber;  **Optics Letters 20, 2192 (1995).**
4. **S. Medhekar, S. Konar**   and Rajkamal;  Profile of radial inhomogeneity for stationary self trapped propagation of a laser beam in a lossy nonlinear medium***;   IL Nouvo Cimento*** D **17, 351 (1995).**

**1994**1. M. S. Sodha, **S. Konar**, M. P. Verma and V. Rai; Generation of ultrasonic waves  in water by an elliptical Gaussian laser beam;  **Pramana  42,141-148 (1994).**
2. **S. Konar** and V Rai;  Parametric decay instability of an upper hybrid wave in a two temperature plasma;  **J. Plasma Phys.  51, 193-197 (1994).**
3. A. K. Sharma   and **S. Konar**;  Anisotropic self defocusing of a Trivelpiece-Gould mode in a plasma;   **J. Plasma Phys. 52, 189-193 (1994).**
4. **S. Konar** and A. Sengupta;  Self focusing of elliptic Gaussian laser beams: saturable nonlinearity;  **Pramana  42,  223-230 (1994).**
5. M. S. Sodha,  **S. Medhekar,   S. Konar**, A. Saxena  and Rajkamal;   Absorption/ amplification induced self tapering and uptapering of a laser beam in a saturable nonlinear medium; large nonlinearity;  **Optics Letters 19, 1110  (1994).**
6. M. S. Sodha,  **S. Konar**, M. P.Verma  and   K P.Maheshwari,  Theoretical analysis of generation of acoustic waves in water by axially asymmetric laser beams;   **Indian J. Phys. 68B, 37-42 (1994).**
7. **S. Konar**  and  A.Sengupta;  Self focusing of elliptic Gaussian laser beams in saturable nonlinear media;   **Ind. J. of Pure  & Appl. Phys. 32, 75-81 (1994).**
8. M.S. Sodha, **S. Konar**  and  K. P. Maheshwari ; Steady state self focusing of a Gaussian electromagnetic beam incident normally on linear medium plasma plane interface;  **Ind. Jour. of Pure Appl.  Phys.  32, 660-6665 (1994).**
9. **S. Konar** and   A. Sengupta;   Propagation of an elliptic Gaussian laser beam in a medium with saturable nonlinearity;   ***J. Opt. Soc. Am B*** **11,** **1644 (1994).**

**1993**1. M.S. Sodha, V. Rai,  M. P. Verma,   **S. Konar** and   K. P. Maheshwari;  Underwater optical generation of sound:oblique incidence;  **Pramana   41, 1-8, (1993).**
2. S. Konar, V.K. Jain  and V.K. Tripathi; Parametric excitation of Alfven wave by a lower hybrid wave;  Physics Scripta  47,  86-89 (1993).
3. Vikas Rai,  **Swapan Konar and**  B. V. Baby;  Painleve property analysis as a tool to ascertain the control parameters of a model food chain;   **Physics Letters A 183, 76-81 (1993).**
4. **S. Konar** and  K..P.Maheshwari;  Reflection & refraction of a plane electromagnetic wave   from a linear /nonlinear nonabsorbing media plane interface; **Indian J. Optics, July-Sept. 1993.**
5. J. B. Mandal, **S. Keshri,** and B. Ghosh,Resistivity anisotropy in the Y-substituted Bi-2212 system: **Physica C (Elsevier Publication) 216, 195-198, 1993.**
6. **S. Keshri,** J. B. Mandal, P. Mandal, A. Poddar, A. N. Das and B. Ghosh, Thermoelectric power of Tl2Ba2Ca1-xYxCu2O8+y(0x0.6) samples: **Phys. Rev. B** (**The American Physical Society**) **47**, **9048-9054, 1993.**

**1992**1. M.S. Sodha, **S. Konar**  and  K.P. Maheshwari;  Steady state self focusing of rippled laser beams in plasmas : arbitrary nonlinearity;   **J. Plasma Physics  48, 107-118 (1992).**
2. P. Mandal, A. Poddar, P. Choudhury, J. B. Mandal, **S. Keshri**, A. N. Das and B. Ghosh, Transport, optical properties and superconductivity in Bi- and Tl- systems: **I. J. Pure & Appl. Phys., 30, 531-561, 1992.**
3. J. B. Mandal, **S. Keshri**, P. Mandal, A. Poddar, A. N. Das and B. Ghosh, Thermoelectric power of Bi2Sr2Ca1-xYxCu2O8+y  (x=0-1.0) system: **Phys. Rev. B (The American Physical Society) 46, 11840-11846, 1992.**
4. A.N.Sekhar, Iyenger, S.K.Mazumder, J.Basu, **R.K.Paul**, R.Pal and S.Chowdhury, “Ultra Low q Discharge Experiments in the SINP Tokamak,” **Pramana, 39 (1992) 177-180**.

**1990**1. **S. Konar** and  V.K. Jain;  Temperature anisotropy driven whistler instability in a density crest;  **Physica** **Scripta  42, 235(1990) .**

**1989**1. **S. Konar**  and  V.K. Jain; Resonant & nonresonant decay instability of a Langmuir wave in a plasma cylinder; **J. Appl. Phys. 66, 501-506(1989).**
2. **S. Konar**, V.K. Jain  and V.K. Tripathi;  Modulational instability of a lower hybrid wave in a plasma slab;  **J. Appl. Phys.  65,  3796 (1989).**
3. **S. Konar**, V.K. Jain  and V.K. Tripathi;  Decay instability of an upper hybrid wave in a plasma cylinder**;   J. Appl. Phys.  65, 4612-16 (1989).**

**1986**1. M.De,  **S. Konar**  and Dipankar Ray;  Pseudo particle solutions to the Yang-Mills equation;  J**. Phys. A:  Math. Gen.  19, 3693-96 (1986).**
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