Details of Papers Published in the Academic Year 2021-2022

S. No.	Faculty Name	Title of Paper	DOI	Citation	Paper Published in Journal or Conference Publlication
1	Dr. M.S. Mehata	Exploration of grown cobalt-doped zinc oxide nanoparticles and photodegradation of industrial dye	10.1016/j.materresbull.2022.111795	5	Journal
2	Dr. M.S. Mehata	Synthesis of diamagentic ZnO nano-crystallites via sol-gel method and their photocatalytic activity	10.56042/ijems.v29i4.48695	0	Journal
3	Dr. M.S. Mehata	Green Synthesis of Silver Nanoparticles Using Abutilon theophrasti Leaves and their Photocatalytic Activity for Water Treatment	10.1007/978-981-16-7691-8_6	0	Journal
4	Dr. M.S. Mehata	Solvatochromism and estimation of ground and excited state dipole moments of 6-aminoquinoline	10.1016/j.saa.2021.120498	6	Journal

5	Dr. M.S. Mehata	Sunlight-driven MoS2 nanosheets mediated degradation of dye (crystal violet) for wastewater treatment	10.1016/j.molstruc.2021.131651	12	Journal
6	Dr. M.S. Mehata	A parallel investigation of un-doped and manganese ion-doped zinc selenide quantum dots at cryogenic temperature and application as an optical temperature sensor	10.1016/j.matchemphys.2021.125349	7	Journal
7	Dr. M.S. Mehata	Synthesis and characterization of thermally-evaporated CdS thin-films	10.1016/j.matpr.2022.06.111	1	Journal
8	Dr. M.S. Mehata	Surface plasmon resonance allied applications of silver nanoflowers synthesized from Breynia vitis-idaea leaf extract	10.1039/D1DT03592D	11	Journal
9	Dr. M.S. Mehata	Catalytic activity of silver nanoparticles synthesized using Crinum asiaticum	10.1016/j.matpr.2021.12.468	2	Journal

		(Sudarshan) leaf extract			
10	Dr. M.S. Mehata	Photoluminescence turn-off based dual analytes (Hg2+ and Pb2+) sensor in aqueous medium using 3-marcaptoproponic acid protected Mn2+ doped ZnSe quantum dots	10.1016/j.cplett.2021.139270	1	Journal
11	Dr. M.S. Mehata	Temperature-dependent photoluminescence and decay times of different phases of grown TiO2 nanoparticles: Carrier dynamics and trap states	10.1016/j.ceramint.2021.08.147	7	Journal
12	Dr. M.S. Mehata	Temperature-Dependent Electric Field-Induced Optical Transitions of 2D Molybdenum Disulfide (MoS2) Thin Films: Temperature-Dependent Electroabsorption and Absorption	10.1021/acs.jpcc.1c06706	2	Journal

13	Dr. Amrish K. Panwar	**Thermal-Electrochemical Modeling and Analysis of Different Cathode-Anode Pairs for Lithium-ion Battery**	10.4316/AECE.2021.03007	2	Journal
14	Dr. Amrish K. Panwar	Effect of Cr doping on Li2ZnTi3O8 as alternative anode material to enhance electrochemical properties of lithium-ion batteries	10.1007/s00339-022-05440-0	0	Journal
15	Dr. Amrish K. Panwar	Synthesis, characterization, and electrochemical investigation of citric-acid assisted nickel manganese oxide as anode material	10.1557/s43580-022-00293-4	0	Journal
16	Dr. Amrish K. Panwar	Ultrafast probing of indium doping on SnTe topological insulator	10.1016/j.physb.2021.413656	0	Journal
17	Dr. Amrish K. Panwar	Effect of carbon shell over NaCrO2 core by C2H2 decomposition to enhance electrochemical properties for	10.1016/j.apsusc.2021.151449	0	Journal

		rechargeable Sodium-ion batteries			
18	Dr. Amrish K. Panwar	Multiscale Modeling and Experimental Characterization for Enhancement in Electrical, Mechanical, and Thermal Performances of Lithium-Ion Battery	10.3389/fenrg.2022.851377	0	Journal
19	Dr. Amrish K. Panwar	Synthesis and electrochemical performance of Acetylene gas decomposed Fe-Based Layered Oxide cathode material for Sodium-Ion Batteries	10.36909/jer.ICAPIE.15099	0	Journal
20	Dr. Kamal Kishor	Energy transfer dynamics in thermally stable Sm3+/Eu3+ co-doped AEAlBS glasses for near UV triggered photonic device applications	https://doi.org/10.1016/j.jnoncrysol.2021.121392	4	Journal
21	Dr. Kamal Kishor	Ultrasensitive dual-band terahertz	https://doi.org/10.1016/j.optcom.2022.128667	1	Journal

		metasurface sensor based on all InSb resonator			
22	Dr. Mukhtiyar Singh	A first-principle study of electronic, thermoelectric, and optical properties of sulfur doped c-HfO2	10.1088/1402-4896/ac7678	1	Journal
23	Dr. Mukhtiyar Singh	Ab-initio study of topological phase tuning in Half-Heusler YPdBi compound	10.1016/j.physb.2022.414056	0	Journal
24	Dr. Mukhtiyar Singh	Coherence-based inequality for the discrimination of three-qubit GHZ and W class	10.1007/s11128-022-03512-x	1	Journal
25	Dr. Mukhtiyar Singh	Defects assisted luminescence in m-HfO2 nanocrystals: An experimental and theoretical study	10.1016/j.ijleo.2021.168121	3	Journal
26	Dr. Mukhtiyar Singh	Electronic, thermoelectric, and optical studies of cubic Hf1-xTixO2: An attempt to enhance the key parameters	10.1016/j.jssc.2021.122829	3	Journal

27	Dr. Mukhtiyar Singh	Investigation of CH3NH3PbI3 and CH3NH3SnI3 based perovskite solar cells with CuInSe2 nanocrystals	10.1016/j.ijleo.2021.167839	5	Journal
28	Dr. Mukhtiyar Singh	Investigation of electronic, mechanical and thermoelectric properties of quaternary Heusler compounds ZrRhTiZ (Z = ln, Al)	10.1016/j.matpr.2022.04.483	0	Conference
29	Dr. Mukhtiyar Singh	Pressure-induced topological phase transition in XMR material YbAs: a first-principles study	10.1140/epjp/s13360-022-02841-1	0	Journal
30	Dr. Mukhtiyar Singh	Realizing high thermoelectric performance in p-type RbZn4P3 Zintl compound: a first-principles investigation	10.1007/s10853-022-06953-y	1	Journal
31	Dr. Mukhtiyar Singh	Structural, electronic and topological properties of NaCaBi and KBaBi compounds	10.1016/j.jpcs.2021.110416	2	Journal

31	Dr. Mukhtiyar Singh	Theoretical study of highly efficient CH3NH3SnI3 based perovskite solar cell with CuInS2 quantum dot	10.1088/1361-6641/ac4325	2	Journal
32	Dr. Renuka Bokolia	Improvement in photovoltaic response of bismuth ferrite by tuning its ferroelectric and bandgap properties	https://doi.org/10.1007/s10854-020-04925-z	1	Journal
33	Dr. Renuka Bokolia	Structural properties of Strontium Bismuth Niobate (SrBi2Nb2O9) ferroelectric ceramics	https://doi.org/10.1016/j.matpr.2021.05.522	3	Conference
34	Dr. Renuka Bokolia	Effect of Er3+ ion doping on structural, ferroelectric and up/down conversion luminescence in BaBi2Nb2O9 ceramic	https://doi.org/10.1016/j.matpr.2021.05.545	3	Conference
35	Dr. Renuka Bokolia	Enhanced upconversion luminescence and optical temperature sensing performance in Er3+ doped BaBi2Nb2O9 ferroelectric ceramic	https://doi.org/10.1016/j.ceramint.2021.09.314	9	Journal

36	Dr. Renuka Bokolia	Structural and photoluminescence properties of Er^{3+} doped $SrBi_2Nb_2O_9$ ceramics	https://doi.org/10.1016/j.matpr.2021.05.520	1	Conference
37	Prof. Vinod Singh	Hydrogen induced structural modifications in size selected Pd-Carbon core-shell NPs: Effect of carbon shell thickness, size and pressure	https://doi.org/10.1016/j.ijhydene.2022.01.245		Journal
38	Prof. Vinod Singh	Carbon Nanotubes in Emerging Photovoltaics: Progress and Limitations	https://doi.org/10.1109/JPHOTOV.2021.3113317	1	Journal
39	Prof. Vinod Singh	Effect of different precursors on morphology of CVD synthesized MoSe2	https://doi.org/10.1016/j.matpr.2022.01.127	2	Jornal
40	Prof. Vinod Singh	Surface Plasmon resonance implemented silver thin film PCF sensor with multiple – Hole microstructure for wide ranged refractive index detection	https://doi.org/10.1016/j.matpr.2022.04.598	4	Journal

41	Prof. Vinod Singh	Conductivity and Structure Correlation in Gd2Zr2O7 Pyrochlore for Oxide Fuel Cell Technology	DOI: 10.1007/978-981-16-7691-8_21		Conference
42	Prof. Vinod Singh	Structural Properties of TiS2/MWCNTs Hybrid Nanostructures	DOI: 10.1007/978-981-16-7691-8_14		Conference
43	Prof. Vinod Singh	Nanodiamonds—Synthesis Techniques, Properties and Applications in Photovoltaics	DOI: 10.1007/978-981-16-7691-8_13		Conference
44	Prof. Vinod Singh	Synthesis of Deformation Resistant Palladium (Pd) Nanoparticle Layer	DOI: 10.1007/978-981-16-7691-8_7		Conference
45	Dr Bharti Singh	Investigating the role of chalcogen atom in the piezoelectric performance of PVDF/TMDCs based flexible nanogenerator	http://dx.doi.org/10.1016/j.energy.2021.122125	1	Journal
46	Dr. Bharti Singh	Interfacial interaction of plasmonic nanoparticles (Ag,	http://dx.doi.org/10.1016/j.mseb.2021.115403	10	journal

		Au) decorated floweret TiO2 nanorod hybrids for enhanced visible light driven photocatalytic activity			
47	Dr. Bharti Singh	Improved resistive switching of RGO and SnO2 based resistive memory device for non-volatile memory application	http://dx.doi.org/10.1016/j.jallcom.2022.166196	1	Journal
48	Dr. Bharti Singh	Recent trends in 2D materials and their polymer composites for effectively harnessing mechanical energy	http://dx.doi.org/10.1016/j.isci.2022.103748	10	Journal
49	Dr. Bharti Singh	Effect of variation of MoS2 concentration on the piezoelectric performance of PVDF-MoS2 based flexible nanogenerator	http://dx.doi.org/10.1016/j.matpr.2021.06.084	1	Conference
50	Prof. Rishu Chaujar	Analog and RF Performance Evaluation of Junctionless Accumulation Mode	https://doi.org/10.1007/s12633-020-00910-7	31	Journal

		(JAM) Gate Stack Gate All Around (GS-GAA) FinFET			
51	Prof. Rishu Chaujar	TCAD Temperature Analysis of Gate Stack Gate All Around (GS-GAA) FinFET for Improved RF and Wireless Performance	https://doi.org/10.1007/s12633-021-01040-4	20	Journal
52	Prof. Rishu Chaujar	Performance enhancement in a novel amalgamation of arsenide/antimonide tunneling interface with charge plasma junctionless-TFET	https://doi.org/10.1016/j.aeue.2021.153669	10	Journal
53	Prof. Rishu Chaujar	Design and Investigation of Recessed-T-Gate Double Channel HEMT with InGaN Back Barrier for Enhanced Performance	https://doi.org/10.1007/s13369-021-06157-7	8	Journal
54	Prof. Rishu Chaujar	Gate Oxide Variability Analysis of a Novel 3 nm Truncated Fin–FinFET for High	https://doi.org/10.1007/s12633-020-00734-5	11	Journal

		Circuitry Performance			
55	Prof. Rishu Chaujar	Band gap and gate metal engineering of novel heteromaterial InAs/GaAs-based JLTFET for improved wireless applications	https://doi.org/10.1007/s10854-020-05064-1	7	Journal
56	Prof. Rishu Chaujar	Investigation of electrical/analog performance and reliability of gate metal and source pocket engineered DG-TFET	https://doi.org/10.1007/s00542-020-04845-2	4	Journal
57	Prof. Rishu Chaujar	Reliability of Sub-20 nm Black Phosphorus Trench (BP-T) MOSFET in High-Temperature Harsh Environment	https://doi.org/10.1007/s12633-020-00531-0	2	Journal
58	Prof. Rishu Chaujar	Analysis of a Novel Nanoscale Vacuum Channel TF-FinFET	https://doi.org/10.1007/s12633-021-01103-6	0	Journal
59	Prof. Rishu Chaujar	Assessment of distinct subcortical and cortical contributions to affect and approach/withdrawal	https://doi.org/10.1037/bne0000481	1	Journal

		behavior by means of resting-state functional connectivity approach.			
60	Prof. Rishu Chaujar	A Numerical Study of Analog Parameter of Negative Capacitance Field Effect Transistor with Spacer	10.1109/ICSC53193.2021.9673324	4	Conference
61	Prof. Rishu Chaujar	TCAD Analysis and Simulation of Double Metal Negative Capacitance FET (DM NCFET)	10.1109/DevIC50843.2021.9455922	6	Conference
62	Prof. Rishu Chaujar	Technology Computer Aided Design of a Novel Fully Gate Covered Channel Junctionless SOI FinFET for high performance analog application	10.1109/DevIC50843.2021.9455801	2	Conference
63	Prof. Rishu Chaujar	Lower Fin Modulation Analysis for a Novel 5nm Top Bottom Gated Junctionless FinFET for improved performance	10.1109/DevIC50843.2021.9455834	2	Conference

64	Prof. Rishu Chaujar	The Performance Analysis of 70nm T-gate InAlN/AlN MOS-HEMT using Graded Buffer	10.1109/DevIC50843.2021.9455887	2	Conference
65	Prof. Rishu Chaujar	Recessed Channel Carbon Nanotube Truncated Fin Finfet for High Performance ULSI Applications	10.1109/DevIC50843.2021.9455799	1	Conference
66	Prof. Rishu Chaujar	Investigation of TF-FinFET Based Biosensor for Early Diagnosis of Protein Carrying Diseases	10.1109/DevIC50843.2021.9455938	1	Conference
67	Prof. Rishu Chaujar	Static Performance Assessment of Junctionless Accumulation Mode Gate Stack Gate All Around (JAM-GS-GAA) FinFET Under Severe Temperature	10.1109/ICSC53193.2021.9673255	0	Conference
68	Prof. Rishu Chaujar	Effect of Gate Oxide Material Variability on The Analog Performance of T-Gate GaN-MOS-HEMT with Graded Buffer	10.1109/ICSC53193.2021.9673466	0	Conference

69	Prof. Rishu Chaujar	Electrostatic Analysis of Ferroelectric and High Dielectric Layer Assisted MOSFET	10.1109/ICSC53193.2021.9673258	0	Conference
70	Prof. Rishu Chaujar	Analog Analysis of Novel Ferroelectric-Dual Material Oxide Stack-Double Gate FET	10.1109/ICCES51350.2021.9489168	0	Conference
71	Prof. Rishu Chaujar	A Comparative Investigation on Characteristics of Conventional MOSFET and Ferroelectric Thin Film Modified FET	10.1109/DevIC50843.2021.9455861	0	Conference
72	Prof. Rishu Chaujar	Simulation of perovskite solar cell employing ZnO as electron transport layer (ETL) for improved efficiency	https://doi.org/10.1016/j.matpr.2020.07.267	13	Conference
73	Prof. Rishu Chaujar	Investigation of a novel 5nm top bottom gated junctionless FinFET for improved switching and analog performance	10.1088/1742-6596/1921/1/012100	3	Conference

74	Prof. Rishu Chaujar	Simulation and Performance Analysis of novel InN-GaN-BTG-MOSFET	10.1109/DevIC50843.2021.9455763	0	Conference
75	Prof. Suresh C. Sharma	Kinetic theory of effect of dust charge fluctuations on the parametric decay of lower hybrid wave instability by relativistic runaway electrons in tokamak	10.1063/5.0041282	5	Journal
76	Prof. Suresh C. Sharma	Investigations on the effect of process parameters on the growth of vertically oriented graphene sheet in plasma enhanced chemical vapor deposition system	https://doi.org/10.1002/ctpp.202100069	0	Journal
77	Prof. Suresh C. Sharma	Amorphous to crystalline transformation of indium sulphide powders on thermal treatment: studies by x-ray photoelectron spectroscopy and Raman spectroscopy	https://doi.org/10.1016/j.elspec.2021.147119	1	Journal

78	Prof. Suresh C. Sharma	Plasma-based Nanoarchitectonics for Vertically Aligned Dual -Metal Carbon Nanotube Field Effect Transistor (VA-DMCNFET) Device: Effect of Plasma Parameters on Transistor Properties	10.1007/s00339-021-05096-2	5	Journal
79	Prof. Suresh C. Sharma	Effect of Plasma Control Parameters on the growth of nitrogen-doped nanocone-vertical graphene hybrid: Theoretical Investigations	10.1007/s11090-022-10229-3	0	Journal
80	Prof. Suresh C. Sharma	Investigations on plasma pre-treatment of catalyst film and catalyzed growth of carbon nanotubes	https://doi.org/10.1109/TPS.2022.3155172	1	Journal
81	Prof. Suresh C. Sharma	Performance Evaluation & Linearity Distortion Analysis for Plasma-Assisted Dual-Material Carbon Nanotube Field Effect Transistor	http://dx.doi.org/10.1007/s12633-022-01930-1	1	Journal

		with a SiO2-HfO2 Stacked Gate-Oxide Structure (DM-SGCNFET)			
82	Prof. Suresh C. Sharma	In the existence of a transverse dc electric field, the kinetic theory of current-driven EIC waves excitation in a magnetized dusty plasma	https://doi.org/10.1002/ctpp.202200073	0	Journal
83	Prof. Suresh C. Sharma	Impact of plasma process parameters on the growth of vertically aligned carbon nanotube array and its optimization as field emitters	http://dx.doi.org/10.1140/epjp/s13360-022-03005-x	0	Journal
84	Prof. Suresh C. Sharma	Neutral Beam Driven Ion Cyclotron Instability of lower hybrid wave in a tokamak plasma	https://doi.org/10.1063/5.0102140		Journal
85	Prof. Suresh C. Sharma	Beam-driven Whistler mode Nonlinear saturation and Turbulence in the Magnetopause	https://doi.org/10.1063/5.0102140	0	Journal

86	Prof. Suresh C. Sharma	Exploration of Novel Hafnium Oxide (HfO2) based Plasma-Assisted Gate All Around Carbon Nanotube FET (GAA-CNTFET) for high sensing applications	https://doi.org/10.1063/5.0098108	1	Journal
87	Prof. Suresh C. Sharma	Impact of PECVD Characteristics on metrics of a Plasma Assisted vertically aligned Carbon Nanotube FET (VA-CNTFET) device	https://doi.org/10.1109/5NANO53044.2022.9828950	0	Conference
88	Prof. Suresh C. Sharma	Numerical Analysis on H 2 Plasma Assisted growth of Graphitic Leaves on Carbon Nanotube	https://doi.org/10.1109/5NANO53044.2022.9828987	0	Conference
89	Prof. Suresh C. Sharma	Polarization Reversal of Oblique Electromagnetic Wave in Collisional Beam-Hydrogen Plasma,	https://doi.org/10.2528/PIERC22092526	0	Journal
90	Dr. Yogita Kalra	Design of photonic crystal OR gate with multi-input	https://doi.org/10.1016/j.matpr.2021.04.252		Journal

		processing capability on a single structure			
91	Dr. Yogita Kalra	Design of hourglass nanoantenna for magnetic field enhancement	https://doi.org/10.1016/j.optcom.2020.126511		Journal
92	Dr. Yogita Kalra	Plasmon assisted tunnelling through silver nanodisk dimer-optical properties and quantum effects	https://doi.org/10.1007/s11082-021-02866-3		Journal
93	Dr Yogita Kalra	Electromagnetically induced transparency-based metal dielectric metamaterial and its terahertz sensing application	https://doi.org/10.1364/AO.442948		Journal
94	Prof. R.K. Sinha	Additive manufacturing for metallic spinal implants: A systematic review	https://doi.org/10.1016/j.stlm.2021.100021	11	Journal
95	Prof. R.K. Sinha	Mid-infrared supercontinuum generation in soft-glass specialty optical fibers: A review	https://doi.org/10.1016/j.pquantelec.2021.100342	14	Journal

96	Prof. R.K. Sinha	All-Dielectric Metasurface for Sensing Microcystin-LR	https://doi.org/10.3390/electronics10111363	9	Journal
97	Prof. R.K. Sinha	Zero-Index Metamaterials	https://doi.org/10.1007/978-981-16-0189-7_2	2	Chapter
98	Prof. R.K. Sinha	High-efficient photoacoustic generation with an ultrathin metallic multilayer broadband absorber	https://doi.org/10.1364/OE.420138	6	Journal
99	Prof. R.K. Sinha	Ultra-high figure-of-merit dielectric metasurface	https://doi.org/10.1117/12.2579219		Conference
100	Prof. R.K. Sinha	Flexible polypyrrole activated micro-porous paper-based photoanode for photoelectrochemical water splitting	https://doi.org/10.1016/j.ijhydene.2020.12.044		Journal
101	Prof. R.K. Sinha	All dielectric metasurface based tunable optical modulator: Design and analysis	https://doi.org/10.1016/j.photonics.2020.100881	2	Journal
102	Prof. R.K. Sinha	Advances in polymer-based composites for solar energy conversion to chemical fuels	https://doi.org/10.1016/B978-0-12-818484-4.00004-5	1	Chapter

103	Prof. R.K. Sinha	Tunable Optical Parametric Amplification in Chalcogenide Slot Waveguide	https://doi.org/10.1007/978-981-15-9259-1_46		Conference
104	Prof. R.K. Sinha	All Dielectric Metasurface for Electro-optic Modulator	https://doi.org/10.1007/978-981-15-9259-1_110		Conference
105	Dr. Pawan Kumar Tyagi	Optimized performance of nickel in crystal-layered arrangement of NiFe2O4/rGO hybrid for high-performance oxygen evolution reaction	https://doi.org/10.1016/j.ijhydene.2020.10.144	31	Journal
106	Dr. M. Jayasimhadri	Synthesis and optimization of photoluminescence properties in potential reddish orange emitting niobate phosphor for photonic device applications	https://doi.org/10.1002/bio.4085		Journal
107	Dr. M. Jayasimhadri	Photoluminescence and thermal sensing properties of Er3+ doped silicate based phosphors for multifunctional	https://doi.org/10.1016/j.ceramint.2021.06.194	8	Journal

		optoelectronic device applications			
108	Dr. M. Jayasimhadri	Development of deep red–emitting CaBiVO5:Pr3+ phosphor for multifunctional optoelectronic applications	https://doi.org/10.1111/jace.17951	4	Journal
109	Dr. M. Jayasimhadri	Spectroscopic and color tunable studies in Dy3+/Eu3+ co-doped calcium-bismuth-vanadate phosphor for lighting applications	https://doi.org/10.1016/j.solidstatesciences.2021.106776	4	Journal
110	Dr. M. Jayasimhadri	Thermally stable Mn2+-activated zinc silicate nanophosphor for speedy recognition of high-contrast latent fingermarks	https://doi.org/10.1111/ijac.13926		Journal
111	Dr. M. Jayasimhadri	Deep reddish-orange emitting Sr3Gd (PO4) 3: Sm3+ phosphors via modified citrate-gel combustion method	https://doi.org/10.1016/j.molstruc.2022.132428	5	Journal

112	Dr. M. Jayasimhadri	Luminescent and colorimetric properties of the sol–gel derived mono-phase Dy3+ doped silicate-based phosphor for w-LED applications	https://doi.org/10.1007/s10971-021-05704-w	1	Journal
113	Dr. M. Jayasimhadri	Structural and color tunable properties in Sm3+/Eu3+-doped Ca3Bi (PO4) 3 phosphor for solar cell and w-LED applications	https://doi.org/10.1007/s10854-022-07708-w	2	Journal