Details of Papers Published in the Academic Year 2020-2021					
S. No.	**Faculty Name**	**Title of Paper**	**DOI**	**Citation**	**Paper Published in Journal or Conference Publlication**
1	Dr. M.S. Mehata	Rapid optical sensor for recognition of explosive 2,4,6-TNP traces in water through fluorescent ZnSe quantum dots	10.1016/j.saa.2021.119937	15	Journal
2	Dr. M.S. Mehata	Green route synthesis of silver nanoparticles using plants/ginger extracts with enhanced surface plasmon resonance and degradation of textile dye	10.1016/j.mseb.2021.115418	29	Journal
3	Dr. M.S. Mehata	Structural, Electronic and NLO Properties of 6-aminoquinoline: A DFT/TD-DFT Study	10.1007/s10895-021-02788-z	10	Journal
4	Dr. M.S. Mehata	An efficient excited-state proton transfer fluorescence quenching based probe (7-hydroxyquinoline) for sensing trivalent cations in aqueous environment		0	Journal
5	Dr. M.S. Mehata	Green synthesis of silver nanoparticles using Kalanchoe pinnata leaves (life plant) and their antibacterial and photocatalytic activities	10.1016/j.cplett.2021.138760	27	Journal
6	Dr. M.S. Mehata	Investigation of grown ZnS film on HgCdTe substrate for passivation of infrared photodetector	10.1016/j.tsf.2021.138751	9	Journal

7	Dr. M.S. Mehata	Synthesis of fluorescent graphene quantum dots from graphene oxide and their application in fabrication of GQDs@AgNPs nanohybrids and sensing of H2O2	10.1016/j.ceramint.2021.03.252	7	Journal
8	Dr. M.S. Mehata	Revisiting the photochemistry 2,5-dihydroxy benzoic acid (gentisic acid): Solvent and pH effect	10.1002/poc.4168	3	Journal
9	Dr. M.S. Mehata	An efficient excited-state proton transfer fluorescence quenching based probe (7-hydroxyquinoline) for sensing trivalent cations in aqueous environment	10.1016/j.molliq.2021.115379	8	Journal
10	Dr. M.S. Mehata	Reinvestigation of the photophysics of 3-aminobenzoic acid in neat and mixed binary solvents	10.1016/j.saa.2020.119100	2	Journal
11	Dr. M.S. Mehata	Synthesis of photoactivated highly fluorescent Mn2+-doped ZnSe quantum dots as effective lead sensor in drinking water	10.1016/j.materresbull.2020.111121	30	Journal
12	Dr. M.S. Mehata	Temperature-Dependent Electric Field-Induced Optical Transitions of 2D Molybdenum Disulfide (MoS_2) Thin Films: Temperature-Dependent Electroabsorption and Absorption		0	Journal
13	Dr. M.S. Mehata	Experimental and theoretical interpretations of spectral behavior of 6-methoxyflavone	10.1016/j.jphotochem.2020.112945	7	Journal
15	Dr. M.S. Mehata	Enhanced photoinduced catalytic activity of transition metal ions incorporated TiO2 nanoparticles for degradation of organic dye: Absorption and photoluminescence spectroscopy	10.1016/j.optmat.2020.110309	31	Journal

16	Dr. M.S. Mehata	Rapid sensing of lead metal ions in an aqueous medium by MoS2 quantum dots fluorescence turn-off	10.1016/j.materresbull.2020.110978	39	Journal
17	Dr. Amrish K. Panwar	Investigation of vacuum evaporated SnTe thin films for their structural, electrical and thermoelectric properties	10.56042/ijpap.v58i10.30960	1	Journal
18	Dr. Amrish K. Panwar	Fabrication of activated carbon electrodes derived from peanut shell for high-performance supercapacitors	10.1007/s13399-021-01701-9	2	Journal
19	Dr. Amrish K. Panwar	Evaluation of Figure of Merit of Thermoelectric Materials Using Machine Learning		0	Journal
20	Dr. Kamal Kishor	Micro-Plasma Assisted Synthesis of ZnO Nanosheets for the Efficient Removal of Cr6+ from the Aqueous Solution	https://doi.org/10.3390/cryst11010002	2	Journal
21	Dr. Kamal Kishor	Design and simulation of ultra-low loss triple tapered asymmetric directional coupler at 1330 nm	https://doi.org/10.1016/j.mejo.2020.104957	6	Journal
22	Dr. Kamal Kishor	Tapered optical fiber geometries and sensing applications based on Mach-Zehnder Interferometer: A review	https://doi.org/10.1016/j.yofte.2020.102302	18	Journal
23	Dr. Kamal Kishor	Efficient strip to slot waveguide mode converter using fast quasi-adiabatic approach	https://doi.org/10.1088/2631-8695/aba819	0	Journal
24	Dr. Kamal Kishor	Design and Simulation of Ultra low loss Spiral Delay line for Integrated Optical Coherence Tomography	https://doi.org/10.1007/s11082-021-03047-y	1	Journal

25	Dr. Kamal Kishor	Design of hourglass nanoantenna for magnetic field enhancement	https://doi.org/10.1016/j.optcom.2020.126511	0	Journal
26	Dr. Mukhtiyar Singh	A first principles based study of the effect of uniform and tetragonal strains on half-metallicity in FeCrAs Heusler alloy	10.1016/j.matpr.2021.05.572	1	Conference
27	Dr. Mukhtiyar Singh	A Study of thermoelectric properties of Hf-doped RhTiP Half-Heusler alloy	10.1016/j.matpr.2021.05.570	0	Conference
28	Dr. Mukhtiyar Singh	A theoretical comparison between CH3NH3PbI3 and CH3NH3SnI3 based solar cells	10.1063/5.0017201	1	Conference
29	Dr. Mukhtiyar Singh	Enhancement of thermoelectric performance of ZrO2 via Titanium doping	10.1016/j.matpr.2021.06.211	1	Conference
30	Dr. Mukhtiyar Singh	Numerical simulation of n-TiO2/p-CIGS solar cell	10.1063/5.0017203	1	Conference
31	Dr. Mukhtiyar Singh	Structural, difuse refectance and luminescence study of t-Mg2B2O5 nanostructures	10.1007/s00339-021-04761-w	3	Journal
32	Dr. Mukhtiyar Singh	Structural, electronic and elastic properties of topological pyrite-type OsSe2 semimetal	10.1016/j.matpr.2021.02.727	0	Conference
33	Dr. Renuka Bokolia	Effects of sintering temperature on structural, electrical and ferroelectric properties of La2Ti2O7 ceramics	https://doi.org/10.1016/j.ceramint.2020.07.154	10	Journal
34	Dr. Renuka Bokolia	Phase evolution and microstructure of BaBi2Nb2O9 ferroelectric ceramics	https://doi.org/10.1016/j.matpr.2020.09.380	8	Conference

35	Dr. Bharti Singh	Effect of nanotube diameter on the photocatalytic activity of bimetallic AgAu nanoparticles grafted 1D-TiO2 nanotubes	https://link.springer.com/article/10.1007/s10854-020-04914-2		Journal
36	Dr. Bharti Singh	Mixed-Phase TiO 2 Nanotube–Nanorod Hybrid Arrays for Memory-Based Resistive Switching Devices	http://dx.doi.org/10.1021/acsanm.0c01648	6	Journal
37	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		
38	Dr. Bharti Singh	Investigation of the enhancement in the β-phase of PVDF as a function of MoSe2 concentration and its effect on the piezoelectric performance of the nanogenerator	http://dx.doi.org/10.1016/j.matpr.2021.06.034	3	conference
39	Prof. Vinod Singh	Nanomaterials-Based Biosensors for COVID-19 Detection—A Review	https://doi.org/10.1109/JSEN.2020.3036748	19	Journal
40	Prof. Vinod Singh	Structural analysis of the chemical vapour deposition grown molybdenum disulphide nanofilms for multifaceted applications	https://doi.org/10.17485/IJST/v13i29.1215	3	Journal
41	Prof. Rishu Chaujar	Performance evaluation of linearity and intermodulation distortion of nanoscale GaN-SOI FinFET for RFIC design	https://doi.org/10.1016/j.aeue.2019.153052	30	Journal
42	Prof. Rishu Chaujar	Rapid detection of biomolecules in a dielectric modulated GaN MOSHEMT	https://doi.org/10.1007/s10854-020-04216-7	22	Journal

43	Prof. Rishu Chaujar	Numerical analysis of Mg2Si/Si heterojunction DG-TFET for low power/high performance applications: Impact of non-idealities	https://doi.org/10.1016/j.spmi.2020.106397	22	Journal
44	Prof. Rishu Chaujar	Conducting Polymer Based Gas Sensor Using PNIN- Gate All Around - Tunnel FET	https://doi.org/10.1007/s12633-020-00394-5	9	Journal
45	Prof. Rishu Chaujar	Microstates-based resting frontal alpha asymmetry approach for understanding affect and approach/withdrawal behavior	https://doi.org/10.1038/s41598-020-61119-7	6	Journal
46	Prof. Rishu Chaujar	Numerical simulation and parametric assessment of GaN buffered trench gate MOSFET for low power applications	https://doi.org/10.1049/iet-cds.2020.0041	8	Journal
47	Prof. Rishu Chaujar	Effects of Neural Mechanisms of Pretask Resting EEG Alpha Information on Situational Awareness: A Functional Connectivity Approach	https://doi.org/10.1177/0018720819869129	8	Journal
48	Prof. Rishu Chaujar	Design Considerations and Capacitance Dependent Parametric Assessment of Gate Metal Engineered SiNW MOSFET for ULSI Switching Applications	https://doi.org/10.1007/s12633-019-00246-x	6	Journal
49	Prof. Rishu Chaujar	Analysis of structural parameters on sensitivity of black phosphorus junctionless recessed channel MOSFET for biosensing application	https://doi.org/10.1007/s00542-019-04545-6	11	Journal

50	Prof. Rishu Chaujar	Prediction and forecast for COVID-19 Outbreak in India based on Enhanced Epidemiological Models	10.1109/ICIRCA48905.2020.9183126	13	Conference
51	Prof. Rishu Chaujar	The Effect of Gate Stack and High-κ Spacer on Device Performance of a Junctionless GAA FinFET	10.1109/VLSIDCS47293.2020.9179855	10	Conference
52	Prof. Rishu Chaujar	Impact of Graded Back-Barrier on Linearity of Recessed Gate InAlN/GaN HEMT	10.1109/VLSIDCS47293.2020.9179897	8	Conference
53	Prof. Rishu Chaujar	Temperature investigation of a Novel 3nm TF-Bulk FinFET for Improved Performance	10.1109/NANO47656.2020.9183594	8	Conference
54	Prof. Rishu Chaujar	Sub-10 nm High-k Dielectric SOI-FinFET for HighPerformance Low Power Applications	10.1109/ICSC48311.2020.9182748	7	Conference
55	Prof. Rishu Chaujar	TCAD Analysis and Modelling of Gate-Stack Gate All Around Junctionless Silicon NWFET Based Bio-Sensor for Biomedical Application	10.1109/VLSIDCS47293.2020.9179866	5	Conference
56	Prof. Rishu Chaujar	Performance Analysis of a Novel Hetero-material InAs/GaAs Junctionless TFET	10.1109/VLSIDCS47293.2020.9179852	3	Conference
57	Prof. Rishu Chaujar	Thermal Reliability of GaN-BTG-MOSFET for High-Performance Applications in Integrated Circuits	10.1109/ELNANO50318.2020.9088791	2	Conference
58	Prof. Rishu Chaujar	Impact of Metal Strip on Nanoscale Double Gate Overlap Tunnel FET	10.1109/ICIRCA48905.2020.9183099	1	Conference

59	Prof. Rishu Chaujar	A Novel GAA Hollow Cavity FinFET based biosensor for Cancer protein marker sensing	10.1109/MOCAST49295.2020.9200281	0	Conference
60	Prof. Rishu Chaujar	Gate Engineered GAA Silicon-Nanowire MOSFET for High Switching Performance	10.1109/VLSIDCS47293.2020.9179932	0	Conference
61	Prof. Rishu Chaujar	A Novel Trench FinFET as biosensor for early detection of dengue fever	10.1109/CAS50358.2020.9267989	0	Conference
62	Prof. Rishu Chaujar	Increased efficiency of 23% for CIGS solar cell by using ITO as front contact	https://doi.org/10.1016/j.matpr.2020.02.688	21	Conference
63	Prof. Rishu Chaujar	Dielectric modulated transparent gate thin film transistor for biosensing applications	https://doi.org/10.1016/j.matpr.2020.01.453	11	Conference
64	Dr. Ajeet Kumar	Computational Design & Analysis of GeSe2-As2Se3-PbSe Based Rib Waveguide for Mid-Infrared Supercontinuum Generation	https://doi.org/10.1016/j.ijleo.2020.165032	6	journal
65	Dr. Ajeet Kumar	Simulation studies for mode profile analysis in single mode high power asymmetric large optical cavity laser structures	https://doi.org/10.1109/ICEE50728.2020.9777081	0	conference
66	Prof. Suresh C. Sharma	Weibel Instability Oscillation in a Dusty Plasma with counter-streaming electrons	https://doi:10.1017/S0263034619000776	4	Journal
67	Prof.Suresh C. Sharma	The effect of dust grains on the Weibel instability in presence of large amplitude electrostatic waves	https://doi.org/10.1063/1.5133756	3	Journal

68	Prof. Suresh C. Sharma	Theoretical Analysis for Transmission of Gaussian and Sine Time Irradiance of Electromagnetic Beam in Collisional Dusty Plasmas	https://doi.org/10.1002/ctpp.201900175	1	Journal
69	Prof. Suresh C. Sharma	Plasma Bubble Evolution in Laser Wakefield Acceleration in Petawatt Regime	https://doi.org/10.1088/1612-202X/ab8fa9	2	Journal
70	Prof. Suresh C. Sharma	Parametric study of plasma characteristics and carbon nanofibers growth in PECVD system: Numerical modeling	https://doi.org/10.1007/s11090-020-10090-2	0	Journal
71	Prof. Suresh C. Sharma	Electron plasma wave excitation by a q-Gaussian laser beam and subsequent electron acceleration	https://doi.org/10.1063/5.0007998	17	Journal
72	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	https://doi.org/10.1063/5.0041282	6	Journal
73	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
74	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

75	Prof. Suresh C. Sharma	Nanotube,Effects of Different Laser Shape Pulses on Laser Wakefield Acceleration	https://doi: 10.1109/ICCES54183.2022.9835736	0	Conference
76	Prof. Suresh C. Sharma	Effect of Plasma on the Nucleation and Growth of Vertical Carbon Nanotube Array on 2-Dimensional Graphene	https://doi:10.3233/ATDE220724	0	Conference
77	Prof. Suresh C. Sharma	Effect of Process Parameters on CNTFET	doi.org/10.1007/978-981-16-9523-0_44.	0	Conference
78	Dr. Yogita Kalra	Numerical exploration of coherent supercontinuum generation in multicomponent GeSe2-As2Se3-PbSe chalcogenide based photonic crystal fiber	https://doi.org/10.1016/j.yofte.2019.102100	12	Journal
77	Dr. Yogita Kalra	Improvement in short-circuited coaxial flange for evaluating microwave superconducting properties at low temperature	http://nopr.niscpr.res.in/handle/123456789/53479		Journal
77	Dr. Yogita Kalra	Petal shaped nanoantenna for solar energy harvesting	10.1088/2040-8986/ab6ae5	4	Journal
77	Dr. Yogita Kalra	Ultra-coherent supercontinuum generation in isopropanol-silica based photonic crystal fiber at 1300nm and 1600nm wavelengths	https://doi.org/10.1117/12.2544242	1	Conference
79	Dr. Yogita Kalra	Design of nanoantenna for magnetic field enhancement	https://doi.org/10.1117/12.2569082		Conference
80	Dr. Yogita Kalra	Supercontinuum generation in a hollow-core methanol-silica based photonic crystal fiber: computational model and analysis	https://doi.org/10.1117/12.2568970		Conference

81	Prof. R.K. Sinha	Study of Sonication Assisted Synthesis of Molybdenum Disulfide (MoS2) Nanosheets	https://doi.org/10.1016/j.matpr.2020.01.313	10	Journal
82	Prof. R.K. Sinha	TiO 2 nanofibres decorated with green-synthesized P Au/Ag@ CQDs for the efficient photocatalytic degradation of organic dyes and pharmaceutical drugs	10.1039/c9ra10804a	30	journal
83	Prof. R.K. Sinha	Boosting photoelectrochemical performance of GaN nanowall network photoanode with bacteriorhodopsin	https://doi.org/10.1016/j.ijhydene.2019.10.184	7	Journal
84	Prof. R.K. Sinha	Improvement in short-circuited coaxial flange for evaluating microwave superconducting properties at low temperature	http://nopr.niscpr.res.in/handle/123456789/534799		Journal
85	Prof. R.K. Sinha	Fano-resonance based tunable all-dielectric metasurfaces	https://doi.org/10.1117/12.2544250	1	Conference
86	Prof. R.K. Sinha	Temperature-assisted broadly tunable supercontinuum generation in chalcogenide-glass-based capillary optical fiber	https://doi.org/10.1364/JOSAB.387491	1	Journal
87	Prof. R.K. Sinha	High-Q All-Dielectric Metasurface: Super and Suppressed Optical Absorption	https://doi.org/10.1021/acsphotonics.0c00003	89	Journal
88	Prof. R.K. Sinha	Extremely high figure of merit in all-dielectric split asymmetric arc metasurface for refractive index sensing	https://doi.org/10.1016/j.optcom.2020.125327	23	Journal

89	Prof. R.K. Sinha	High-performance dual cavity-interferometric volatile gas sensor utilizing Graphene/PMMA nanocomposite	https://doi.org/10.1016/j.snb.2020.127921	15	Journal
90	Prof. R.K. Sinha	Metal-organic frameworks-derived titanium dioxide–carbon nanocomposite for supercapacitor applications	https://doi.org/10.1002/er.5328	35	Journal
91	Prof. R.K. Sinha	Flat photonics for broadband light-trapping	https://doi.org/10.1063/5.0033312	4	Journal
92	Dr. M. Jayasimhadri	Optimization of structural and luminescent properties with intense red emitting thermally stable Sm3+ doped CaBiVO5 phosphors for w-LED applications	https://doi.org/10.1016/j.optmat.2020.110119	14	Journal
93	Dr. M. Jayasimhadri	Synthesis of orange emitting Sm3+ doped sodium calcium silicate phosphor by sol-gel method for photonic device applications	https://doi.org/10.1016/j.ceramint.2020.04.224	28	Journal
94	Dr. M. Jayasimhadri	Conversion of blue emitting thermally stable Ca3Bi (PO4) 3 host as a color tunable phosphor via energy transfer for luminescent devices	https://doi.org/10.1016/j.jlumin.2020.117570	14	Journal
95	Dr. M. Jayasimhadri	Structural and spectroscopic properties of Sm3+-doped NaBaB9O15 phosphor for optoelectronic device applications	https://doi.org/10.1007/s10854-020-04934-y	7	Journal

96	Dr. M. Jayasimhadri	Multicolor emission and energy transfer dynamics in thermally stable Dy3+/Eu3+ co-doped ZPBT glasses for epoxy free w-LEDs application	https://doi.org/10.1016/j.jnoncrysol.2020.120516	16	Journal
97	Dr. M. Jayasimhadri	Significant improvements in dielectric, impedance, multiferroic and magnetoelectric properties of (1− x)Co0.5Ni0.5Fe2O4− x BaTiO3 bulk composites (x= 0, 0.10 and 0.20)	https://doi.org/10.1007/s10854-021-06227-4		Journal
98	Dr. Pawan Kumar Tyagi	The prospective application of a graphene/MoS 2 heterostructure in Si-HIT solar cells for higher efficiency	10.1039/D0NA00309C	10	Journal
99	Dr.Pawan Kumar Tyagi	Optimization of Reducing Agents for Selective Bandgap Manipulation in Visible Region of Graphene Oxide and Its Work Function Estimation	10.1520/MPC20190177	1	Journal