

Profile Page



Name : Dr Praveen Malik

Designation : Associate Professor

Department : Physics

Qualification : Ph.D Physics (Liquid crystals) (Thapar Institute of Engineering and Technology, Patiala)
M.Phil Material science (University of Roorkee (IIT Roorkee))
M.Sc Physics (CCS University, Meerut)
B.Sc PCM (Gurukul Kangri University, Haridwar)

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Research Interests :

- Study of electro-optic properties ferroelectric and Nematic Liquid crystals liquid crystals materials.
- Study of Dielectric properties in Liquid crystals and its composites.
- Morphological and optical effects in polymer dispersed liquid crystals composites.
- Study of Polymer and Nano materials stabilized Blue Phase Liquid Crystals.
- Synthesis and characterization of Nanofluids

Other Profile Links :

Google Scholar Link :

Praveen Malik [Click Here](#)

Journal Publications :

Year	Journal	Publication
2023	Optical Materials	Sumit Yadav, Poonam Malik; Praveen Malik; CdTe Quantum dot-polymer stabilized blue phase liquid crystal nanocomposite with wide blue phase and improved electro-optical responses, 137, 113608
2023	Journal of molecular liquids, 373, 121578	Ashwani Kumar Singh, Praveen Malik; Metal oxide alumina nanowire-induced polymer-dispersed liquid crystal composites for low power consumption and smart windows

2023	Liquid Crystals	A Chaudhary, R K Shukla, P. Rani, A Choudhary, P Malik, R Mehra, K K Raina, Polymer Dispersed Liquid Crystals Devices: Role of Photopolymerization to Control Defect Orientation, Optical and Electro-optical Properties
2023	Journal of molecular liquids	G Chauhan, Praveen Malik, Akash deep; Morphological, dielectric, electro-optic and photoluminescence properties of titanium oxide nanoparticles enriched polymer stabilized cholesteric liquid crystal composites; 376; 121406
2022	Critical Reviews in Solid State and Materials Sciences	P Parchila; P. Malik, Supreet, A Kumar, R Castagna ;Gautam Singh; Recent advances and future perspectives on nanoparticles controlled alignment of liquid crystals for displays and other photonic devices; ; Volume 48, 2023 - Issue 1
2022	Liquid crystal	A Singh, P Malik ; Textural, electro-optical, dielectric and fluorescence studies of citrate buffer stabilized gold nanoparticles doped in polymer-dispersed liquid crystals composites
2022	Bulletin of Materials Science	P Kumar, Chinky, P Malik ; Interdependency among Electro-Optic Characteristics and Absorption Coefficient of Homeotropically Aligned Liquid Crystal considering Beer's Law Theory
2022	Liquid Crystals	Praveen Malik, G Chauhan, Pankaj Kumar, Akash deep, Effect of polymer concentration on the electro-optical, dielectric and photoluminescence properties of confined ferroelectric liquid crystals composites
2022	Liquid Crystals	Poonma, S Kumar, Khushboo, A Upmanyu, P Kumar, P Malik , Thermo-acoustical studies of zinc oxide nano particles dispersed nematic liquid crystals mixtures in the temperatures range 283.15 K318.15K
2022	ECS Transactions, 107 (1), 5481	R Gahrotra, V Sharma, AR Dogra, P Malik, P Kumar ; Temperature Dependent Morphological and Electro-Optical Characteristics of Dye Doped Cholesteric Liquid Crystal
2022	ECS Transactions; 107 (1), 163	C Jaggi, P Kumar, P Malik; Studies of Electro-Optic and Thermal Behaviour of Azo Dye Doped Vertically Aligned Liquid Crystal
2022	ECS Trans 107 (1), 7925	Sumit Yadav, Praveen Malik, Ashwani K singh; , Gagandeep Kaur, Garima Chauhan, Thermal and Electro-Optical Properties of Size Dependent Nickel Nanoparticle Doped Blue Phase Liquid Crystals
2022	Journal of Molecular Liquids	G Kaur, Khushboo, Praveen Malik , Mesomorphic, electro-optic and dielectric behavior of self-assembled nanocomposite materials: Nematic mixture doped with carbon coated cobalt nanoparticles
2022	Optical Materials	Ridhima Gahrotra, Ankit Rai Dogra, Vandna Sharma, Praveen Malik, Performance Augmentation of Bistable Cholesteric Liquid Crystal Light Shutter- Effect of Dichroic Dye on Morphological and Electro-Optical Characteristics
2021	Phase Transitions	Praveen Malik; Sumit Yadav; Arshdeep Singh; Aluminum nanowires and gold nanoparticles - driven stabilization of blue phase liquid crystals
2020	Journal of molecular liquids	Ashok Chaudhary, Praveen Malik, Ravi Shukla, Rohit Mehra, K K Raina, Role of SiO ₂ optically active mediators to tailor optical and electro-optical properties of ferroelectric liquid crystalline nanocomposite
2020	Liquid Crystals	Sumit Yadav, Praveen Malik; Thermal Stability and Electro-Optical Characteristics of Polymer Stabilized Blue Phase Liquid Crystalline Materials: A Role of Polymer Concentration
2020	Liquid crystals	Amit sharma, Pankaj kumar, Praveen Malik, Textural and electro-optical study of a room temperature nematic liquid crystal 4'-penty-4-biphenylcarbonitrile doped with metal oxide nanowires in planar and In-plane switching (IPS) cell configurations

2020	Liquid crystals	Gagan deep kaur, Pankaj kumar, Ashwani kumar, Divya Jayoti, Praveen Malik, Dielectric and electro optic studies of a ferroelectric liquid crystal dispersed with different sizes of silica nanoparticles
2020	Journal of Applied Polymer Science	Vandana Sharma, Chinky, Pankaj Kumar; Praveen Malik, K. K. Raina, Preparation and Electro-optic Study of Reverse Mode Polymer Dispersed Liquid Crystal - Performance Augmentation with the Doping of Nanoparticles and Dichroic Dye, 137, 22, 48745
2019	Bulletin of Material Science	Amit Sharma, Praveen malik, R. Dhar, Pankaj Kumar; Improvement in electro-optic and dielectric characteristics of ZnO nanoparticles dispersed in a nematic liquid crystal mixture, 42 (215)
2019	Current Applied Physics	A. Chaudhary, R.K. Shukla, P. Malik, R. Mehra, K.K. Raina, ZnO/FLC nanocomposites with low driving voltage and non-volatile memory for information storage applications, 1196, 866-873
2019	Journal of Radio analytical and Nuclear Chemistry	Rohit mehra, anamika chauhan, Praveen Malik, Assessment of radiological impacts of natural radionuclides and radon exhalation rate measured in the soil samples of Himalayan foothills of Uttarakhand, India, 10 (2019)
2019	Liquid Crystals	Sumit Yadav, Praveen Malik, Khushboo, Divya Chaudhary; Electro-optical, dielectric and optical properties of graphene oxide dispersed nematic liquid crystal, Vol-1188, 51-56
2019	Journal of Molecular Structure	Pankaj kumar, Chinki , K K Raina, Praveen Malik, Pankaj kumar; Nano particles induced vertical alignment of liquid crystal for display devices with augmented morphological and electro-optical characteristics, Vol 1196, 866-873.
2019	Integrated ferroelectrics	Amit Sharma, Praveen Malik, Pankaj Kumar; Electro-optical and dielectric responses of ZnO nanoparticles doped nematic liquid crystal in In-plane switching (IPS) mode, 202:1, 52-66
2019	Journal of Molecular Structure	Praveen Malik, Sumit Yadav, Khushboo; Textural, phase transition and electro-optic studies of polymer-stabilized blue phase liquid crystals, 1188 (51-56)
2018	Journal of Radiation and Nuclear Application	KM Anamika, R Mehra, Praveen Malik, A Comparative Study of Uranium Concentration Using Two Different Analytical Techniques and Assessment of Physicochemical Parameters in Groundwater, 3, 149-156
2018	Journal of Molecular Liquids	Divya Jyoti, Praveen Malik, S Krishana Prasad, Effect of ZnO nanoparticles on the morphology, dielectric, electro-optic and photo luminescence properties of a confined ferroelectric liquid crystal material, 250, 381-387.
2018	Liquid Crystals	Khushboo, P Sharma, P Malik, KK Raina, Size dependent studies in ferromagnetic nanoparticles dispersed ferroelectric liquid crystal mixtures, 45(6), 896-906
2017	Journal of Molecular Liquids	Divya Jayoti, Praveen Malik, Arshdeep Singh, Analysis of morphological behaviour and electro - optical properties of silica nanoparticles doped polymer dispersed liquid crystal composites, 225, 456-461.
2017	Molecular Crystals Liquid Crystals	P Kumar, V Sharma, C Jaggi, D Jayoti, KK Raina, P Malik, Impact of Dye on Switching Responses of Polymer Dispersed Ferroelectric Liquid Crystal, 647, 1-10.
2017	Molecular crystals liquid crystals	Khushboo, Praveen Malik, D Jayoti, P Sharma, KK Raina, ,Textural and optical studies of magneto-mesogen material for display applications, 647, 1-6.
2017	liquid crystals	Khushboo, P. Sharma, P Malik, K K Raina, Textural, thermal, optical and electrical properties of Iron nanoparticles dispersed 4?-(Hexyloxy)-4-biphenylcarbonitrile liquid crystal mixture, 44, 1717-1726

2017	Integrated Ferroelectrics	Khushboo, Nikhar Bhargava, Khyati Anand, Praveen Malik, Puneet Sharma, Divya Jayoti and K K Raina, Dielectric and polarization switching studies in nickel nanoparticles dispersed ferroelectric liquid crystal mixtures, 183, 1-7.
2016	Liquid Crystals	Pankaj Kumar, Vandna Sharma, Chinky Jaggi, Praveen Malik, Kuldeep Kumar Raina, Orientational control of liquid crystal molecules via carbon nanotubes and dichroic dye in polymer dispersed liquid crystal, 43, (2016).
2016	Liquid Crystals	A. Singh, P. Malik, D. Jayoti, Observation of blue phase in chiral nematic liquid crystal and its stabilization by silica nanoparticles, 30, 1650011, 2016.
2016	Liquid Crystals	A. Singh, D Jayoti, Khushboo, and P. Malik, Electro-optics of polymer stabilized blue phase liquid crystal in In-plane-switching mode, DOI-10.1080/02678292.2016.1196507, 2016.
2016	Journal of Molecular Liquids	Khushboo, Aarti, P. Malik, H Manchanda, Thermodynamic and acoustical study of zinc oxide-nematic liquid crystals mixtures, 214, 145-148, 2016
2016	Liquid Crystals	Khushboo, P. Sharma, P. Malik and K K Raina, Electro-optic, dielectric and optical studies of NiFe ₂ O ₄ - ferroelectric liquid crystal: a soft magnetoelectric material, DOI: 10.1080/02678292.2016.1193909, 2016
2016	Liquid Crystals	D. Jayoti, A Singh, Khushboo and P. Malik, Effect of polymer concentration on morphology, dielectric and optical properties in a polymer dispersed ferroelectric liquid crystal, 43 (5), 623-631, 2016
2016	AIP Conference Proceedings	Khushboo, Puneet Sharma, D. Jayoti, P. Malik, K K Raina, Dielectric studies of iron nanoparticles-ferroelectric liquid crystal mixture, 1728 020670, Doi: 10.1063/1.4946721, 2016
2016	AIP Conference proceedings	D. Jayoti, P. Malik, A. Singh, Dielectric studies in gold nanoparticles doped ferroelectric liquid crystals, 1728 020647, Doi:10.1063/1.4946698, 2016
2015	Macromolecular Symposia	A. Singh, P Malik, Phase transition and electro-optic studies in polymer stabilized blue phase liquid crystal, 137 (1), 141-147, 2015
2015	Macromolecular Symposia	D. Jayoti and P. Malik, Polymer concentration dependent morphological and electro-optic properties of polymer dispersed ferroelectric liquid crystal composites, 357(1), 148-153, 2015
2015	Phase Transitions	Khushboo, P. Sharma, P. Malik and K K Raina, Dielectric and electro-optical studies of a nickel-ferrite nanoparticle- doped ferroelectric liquid crystal mixture, 89(2), 144-154, 2015
2014	Integrated Ferroelectrics	Khushboo, D. Jayoti, P. Malik and K. K. Raina, Properties of ferroelectric liquid crystal/multiwall carbon nanotube doped composite, 158, 123-130, 2014
2014	Journal of Advances in Physics	Khushboo, P. Malik and A Chaudhary, Field induced studies in carbon nanotube doped nematic liquid crystal mixture, 4(3), 565-570, 2014
2013	Phase Transitions	Praveen Malik, Ashok Chaudhary, Rohit Mehra & K.K. Raina, Observation of memory behaviour in cadmium sulphide nanorods doped ferroelectric liquid crystal mixture, 86 (12), 1256-1266, 2013
2013	Journal of Molecular Liquids	A. Chaudhary, P. Malik, KK Raina, R Mehra, Influence of ZnO nanoparticles concentration on electro-optic and dielectric properties of ferroelectric liquid crystal mixture, 188, 230-236, 2013
2012	Journal of Molecular Liquids	Praveen Malik, Ashok Chaudhary, Rohit Mehra & K.K. Raina, Electro-optic, thermo-optic and dielectric responses of multiwalled carbon nanotube doped ferroelectric liquid crystal thin films, 165, 7-11, 2012

2012	Advances in condensed matter physics	Praveen Malik, Ashok Chaudhary, Rohit Mehra & K.K. Raina, Electro-optic and dielectric studies in cadmium sulphide nanorods/ferroelectric liquid crystal mixtures, 853160 2012
2012	Phase Transitions	Ashok Chaudhary, Praveen Malik, Rohit Mehra & K.K. Raina, Electro-optic and dielectric studies of silica nanoparticle doped ferroelectric liquid crystal in SmC* phase, 85, 244-254, 2012
2012	Journal of International Academy of Physical Sciences	P. Malik and K.K.Raina, Improvement in physical properties of dispersed liquid crystal thin films for storage display devices, 15, SP2, 2012
2011	Molecular crystal liquid crystal	Jitendra K. Kushwaha, Praveen Malik, K. K. Raina and V. P. Arora, Dielectric spectroscopy of wide temperature range nematic liquid crystal mixtures, 541, 236, 2011
2011	Molecular crystal liquid crystal	Praveen Malik, Ashok Chaudhary, Rohit Mehra & K.K. Raina, Dielectric studies and memory effect in nanoparticle doped ferroelectric liquid crystal films, 541, 243-251, 2011
2010	Physics B Condensed Matter	Praveen Malik , K.K.Raina, Dichroic dye dependent studies in guest-host polymer dispersed liquid crystal films, 405, 161-166, 2010
2010	Thin Solid Films	Praveen Malik, K. K. Raina and A.K. Gathania, Effects of polymer viscosity on the polymerization switching and electro-optical properties of unaligned liquid crystal/UV curable polymer composites, 519, 1047-1051, 2010
2010	Thin Solid Films	Praveen Malik, A.Chaudhary, K. K. Raina, A. Bubnov and Rajbir Singh, Electro-optic switching and dielectric spectroscopy studies of ferroelectric liquid crystals with high and low spontaneous polarization, 519, 1052-1055, 2010
2009	Asian Journal of chemistry	Praveen Malik, Ashok Chaudhary and K. K. Raina, Dielectric studies in multiwall carbon nano tube doped ferroelectric liquid crystal thin films, 21, S095-098, 2009
2008	Molecular Crystal Liquid Crystal	Praveen Malik, A. M. Bubnov and K. K. Raina, Electro-optic and thermo-optic properties of phase separated polymer dispersed liquid crystal films, 494, 242-251, 2008
2006	Conference Proceeding IIT Kanpur, INDIA	Pankaj Kumar and K.K. Raina, Guest-host polymer dispersed liquid crystal display device: role of dichroic dye, 8-12 Oct, 2006
2006	Phase Transitions	Praveen Malik, K. K. Raina, Alexej Bubnov and C. Prakash, Dielectric spectroscopy of a high polarization ferroelectric liquid crystal, 79, 889-898, 2006
2006	Bulletin of Materials Science	Pankaj Kumar, Praveen Malik, K.K. Raina, Morphological control and polarization switching in polymer dispersed liquid crystal materials and devices, 23, 599-603, 2006
2005	Conference Proceeding, IRDE Dehradun	Pankaj Kumar, and K. K. Raina, Morphological and electro-optical responses of polymer dispersed liquid crystal thin films: influence of dichroic dye, 12-15 Dec 2005
2004	Conference Proceeding, CUST, Kochi	Pankaj Kumar and K. K. Raina, Charge induced droplet orientation and optical properties of polymer dispersed liquid crystal thin films, 9-11 December 2004
2004	Optical Materials	Praveen Malik, K.K. Raina, Droplet orientation and optical properties of polymer dispersed liquid crystal composite films, 27, 613-617, 2004
2003	Current Applied Physics	Praveen Malik, Jasjit K. Ahuja and K.K. Raina, Effect of polymer viscosity on morphological and electro optic properties aligned polymer dispersed ferroelectric liquid crystal composite films, 3, 325-329, 2003
11/ 2019	Liquid Crystals	Sumit Yadav, Praveen Malik, Divya Jayoti, Electro-optical, dielectric and optical properties of graphene oxide dispersed nematic liquid crystal composites

Conference Publications :

Year	Conference	Publication
2022	AIP Conference Proceedings 2357 (1), 050026	G Kaur, P Malik, P Kumar; Dielectric and UV-Vis studies in silica nanoparticles dispersed liquid crystalline composites
2022	AIP Conference Proceedings;2357 (1), 050019	AR Dogra, P Kumar, V Sharma, P Malik, P Khanra, M Kapoor; Deposition of nanoparticles layer on ITO substrate and its application for alignment control of liquid crystal
2022	AIP Conference Proceedings 2357 (1), 050027	R Gahrotra, V Sharma, P Malik, P Kumar ; Microscopic studies of chiral nematic liquid crystal doped with dichroic dye
2020	International conf on condensed matter and Physics (ICC-2019)	Amit Sharma, Praveen Malik and Pankaj Kumar, Textural and electro-optical characteristics of nanoparticles doped nematic liquid crystal composite in IPS mode
2020	International conf on condensed matter and Physics (ICC-2019)	Sumit Yadav, Praveen Malik, Ashwani Kumar Singh and Gagandeep Kaur, Effect of graphene oxide on thermal, electro-optical and dielectric behavior of nematic liquid crystals
2020	International conf on condensed matter and Physics (ICC-2019)	Ridhima Gahrotra, Vandna Sharma, Praveen Malik and Pankaj Kumar, Textural and electro-optical study of cholesteric liquid crystal for light shutter
2020	International conf on condensed matter and Physics (ICC-2019)	Chinky, Ankit Rai Dogra, Vandna Sharma, Ridhima Gahrotra, Praveen Malik and Pankaj Kumar, Effect of dye on electro-optic behavior of vertically aligned liquid crystal display cell,
2019	ICABS; AIP conf proceeding	P Malik, S Yadav, Synthesis and Observation of Blue Phases In Chiral Dopant Nematic Liquid Crystal Mixtures, 2142, 130003
2019	ICABS; AIP conf proceeding	Chinky, P Kumar, V Sharma, R Gahrotra, P Malik, KK Raina, Effect of Dichroic Dye on Absorption Coefficient and Electro-Optic Performance of Nano Particles Induced Homeotropic Aligned Liquid Crystal, 2142, 130005
2019	ICABS; AIP conf proceeding	V Sharma, P Kumar, Chinky, R Gahrotra, KK Raina, P Malik; Effect of Nano Particles on Electro Optic Properties of Polymer Dispersed Liquid Crystal in Normal Mode; 2142, 130002
2019	ICABS; AIP conf proceeding	Amit Kumar, Praveen Malik, Pankaj Kumar, Studies on Temperature Dependence of Dielectric Anisotropy and Elastic Constant of Nematic Liquid Crystal-Effect of Nano-particles Doping; 2142, 030006
2018	AIP Conference Proceedings	V Sharma, P Kumar, Chinky, P Malik, KK Raina, Morphological and electro-optic studies of polymer dispersed liquid crystal in reverse mode, 1953 (1), 100033
2018	AIP Conference Proceedings	P Kumar, Chinky, V Sharma, JK Kushwaha, P Malik, KK Raina, Dielectric spectroscopy of ferroelectric liquid crystal mixture, 1953 (1), 040025

2018	AIP Conference Proceedings	D Jayoti, P Malik , Dielectric study of gold nanoparticle doped polymer dispersed liquid crystal, 1953 (1), 100085
2018	AIP Conference Proceedings	A Sharma, P Kumar, P Malik, Effect of zinc oxide nanoparticles on dielectric behavior of nematic liquid crystal, 1953 (1), 10003
2016	AIP Conference Proceedings	Khushboo, Puneet Sharma, D. Jayoti, P. Malik, K K Raina, Dielectric studies of iron nanoparticles-ferroelectric liquid crystal mixture, 1728 020670, Doi: 10.1063/1.4946721, 2016
2016	AIP Conference Proceedings	Amit sharma, Divya Jayoti, Praveen Malik, Dielectric studies in gold nanoparticles doped ferroelectric liquid crystals, 1728 (020647), 020647-1-4

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Principal Investigator	R&D, Major Project	Electro-optic and dielectric studies in nanomaterial's dispersed ferroelectric liquid crystals	SERB, Department of Science and Technology, New Delhi	2012	30-11-2015	27.0 lacs	Completed	NA
Supervisor	R&D Minor Project	Dielectric and electro-optic studies in magnetic nanoparticles -ferroelectric liquid crystal mixtures	TEQIP-II, NIT Jalandhar	17-10- 2016		0.50 lakh	completed	
Supervisor	R&D	Study of dielectric response in ZnO doped polymer dispersed ferroelectric liquid crystal mixtures	TEQIP-II, NIT Jalandhar	17-10-2016	June 2017	0.50 Lakh	completed	
Principal Investigator	R&D Major Project	Preparation and electro-optic studies of polymer stabilised Blue Phase Liquid Crystals for display applications	SERB, DST	10-4-2017	9-4-2020	43.35 lakh	Completed	NA

Principal Investigator	R&D, Major Project	Preparation and Investigations of Nanomaterials- polymer dispersed liquid crystal composites	CSIR, New Delhi	July, 2018	July, 21	Rs. 14,87,667 /- + 6,64,000	completed	-----
Principal Investigator	TEQIP III sponsored (Innovative R&D and Socially Relevant)	Stabilization of Blue Phase liquid crystals for display applications	TEQIP-II, NIT Jalandhar	8-7-2019	31-3-2021	4.0 lacs	completed	
Principal Investigator	R&D, Major Project (CRG, DST)	PREPARATION AND STUDIES OF ENERGY EFFICIENTGENERATION DISPLAY DEVICES	SERB, DST	1-4-2023		36.0 lacs approx	Approved	

Events Organized :

Category	Type	Title	Venue	From	To	Designation
STC	National	Recent trends in advanced materials and computing techniques	NIT Jalandhar	11-3-2013	15-3-2013	Coordinator
STC	National	Emerging Trends in Physics and Information Technology	NIT Jalandhar	10-6-2013	14-6-2013	Coordinator
Seminar	National	National Seminar on Physics and Society	NREC, College, Khurja, Uttar Pradesh	2-4-2006		Joint Secretary
STC	National	Advances of Statistics in Engineering and Sciences	NIT Jalandhar	19-9-2016	25-9-2016	Co-Coordinator
Conference	National	1st National Conference on Innovation in Applied Science and Engineering (NCIASE 2019)	NIT Jalandhar	27-04-2019	28-04-2019	Convener/secretary
STC under TEQIP-III	National	Recent Trends in Advanced Materials and Devices	NIT Jalandhar	21-09-2020	25-09-2020	Coordinator
STC (self sponsored)	National	Emerging trends in advanced materials and modeling of devices	NIT Jalandhar	28/3/2022	01/4/2022	coordinator/convener

Conference	International	International conference on Innovation in applied science and engineering (Self Sponsored)	NIT Jalandhar	18/5/2022	19/5/2022	coordinator/convener
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Professional Affiliations :

Designation	Organization
Life Member	International liquid crystal society (ILCS)
Life Member	Indian liquid crystal society
Life Member	Material Research Society of India
Life Member	Punjab Academy of Sciences

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Kuldeep Kumar Sharma	liquid crystals	Ongoing (part time)	Sep, 2021	-
Garima Chauhan	Preparation and Characterization of Polymer Stabilized Liquid Crystal Composites	full time	July 2019	Dr Akashdeep
Ashwani Kumar Singh	Analysis of Physical Properties of Nanomaterials Polymer Dispersed Liquid Crystal Composites	Full time	July 2019	
Gaganpreet Kaur	Dielectric investigations in Ferroelectric and its composites	Full time	July 2019	
Manpreet Kaur	Liquid crystals	Ongoing (full time)	Jan 2022	-
Divya Jayoti	Studies in nanomaterials doped polymer dispersed liquid crystal composites	Awarded	Dec. 2018	
Sumit yadav	Stabilization and electro-optic properties of blue phase liquid crystals	Full time (completed)	Completed (viva voce 27 Dec 2022)	
Arshdeep Singh	Effects of Dopants on The Stabilization and Opto-Electronic Behaviour of Blue Phase Liquid Crystal Materials	Awarded	2017	-----
Amit Sharma	Studies of structural, electro-optic and dielectric properties of nematic liquid crystal in In-plane switching mode	Awarded (4 June 2021)	2016	Pankaj Kumar
Anamika Chauhan	study of natural RadionuclidesUttarakhand	Awarded	2014	Rohit Mehra
Ashok Chaudhary	Dielectric and Electro-optic studies of nanomaterials doped ferroelectric liquid crystal materials	Awarded	2013	Prof K K Raina and Dr Rohit Mehra
Harsh Sharma	Liquid crystals	Ongoing (Full Time)	06 Feb 2023	NA

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Yash	dye synthesized solar cell	completed	2022	

Bhawana Taylor	dielectric properties of Antiferroelectrics liquid crystals	completed	2022	
	Electro-optic, dielectric properties of NPd doped NLC	completed	2022	
Preetika	MAGNETIC NANOMATERIALS DISPERSED LIQUID CRYSTALS: A REVIEW	Completed	2021	-
Anita	Stabilization of Blue Phase Liquid Crystal by Polymers and Nanoparticles	Completed	2021	-
Amita Kumari	Dye synthesized solar cell: A Review	Completed	2021	-
Prinkaya Chowdhary	Thermo-physical properties of aluminium oxide nanofluids : A Review	Competed	2020	
Arti Khandelwal	Studies in Copper Oxide nanofluids: A Review	Competed	2020	

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
Nanoparticle doped vertically aligned liquid crystal display; Pankaj Kumar, Chinky, Vandna Sharma and Praveen Malik, INDIAN PATENT	TEMP/E1/17730/2020-DEL, 202011016944	20th April 2020.	NIT Jalandhar, Chitkara University Rajpura, Punjab	Patent Filed
Method for nanoparticle film deposition facilitating vertical alignment of liquid crystals	TEMP/E1/29049/2021/DEL	2021	NIT Jalandhar, Chitkara University Rajpura, Punjab	Filed

Admin. Responsibilities :

Position Held	Organization	From	To
Warden	NIT Jalandhar	2009	29-4-2017
Cocoodinator, Rajbhasha Cell	NIT Jalandhar	29-4-2017	22-01-2019
Associate Dean Student Welfare II	NIT Jalandhar	4-2-2021	15-2-2023
Member of Library Committee from Physics Department	NIT Jalandhar	01-7-2021	continue
Member of RAC of ABHISHEK (Roll No. 22513101) Physics	NITJ	2 feb 2023	
Member of RAC of Gourav Maithani (Roll No. 21804002)	ECE, NITJ	22 Sep, 2022	
Chairman of Pradhan mantri kaushal vikas yogna (PMKVY 4.0)	NIT Jalandhar	14/3/2023	

Award and Honours :

Title	Activity	Given by	Year
Silver medal award 2018	Recognition for research contribution in Liquid crystal	Indian liquid crystal society, Bangaluru during NCLC (8-10 Dec, 2022) meeting at Christ university	2022
Best Teacher Award	Teaching	NIT Jalandhar	2020
Member of Editorial Board of Journal of Non Mettalic Material Science		Journal NMMS	2019

Young Achiever Award	58th DAE-Solid State Physics Symposium	Department of Atomic Energy (DAE)	2013
INSA-Visiting fellowship	For research work at IITR	INSA	2012
Senior Research Fellowship	research work	CSIR- Delhi	2004