

Name of Teaching Staff : Dr. Jessy P. J  
Designation : Assistant Professor  
Department : Science and Humanities  
Date of Joining the Institution : 20-12-2021  
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[AAJ](http://scholar.google.co.in/citations?user=olbZ8X8AA)  
Researchgate Link: <https://www.researchgate.net/profile/Jessy-Pj-2>  
<http://www.scopus.com/authid/detail.url?authorId=57191613233>  
ORCID <http://www.orcid.org/0000-0002-9092-0577>  
Publons Researcher ID: <http://www.researcherid.com/rid/GLR-6766-2022>  
Qualifications with Class / Grade :  
1. Ph.D. Physics (2020), University of Mumbai.  
2. M.Phil Physics (2008), CGPA- 8.17, A Grade, Mahatma Gandhi University, Kottayam, Kerala  
3. M.Sc Physics (2005), 84.0%, Distinction Sacred Heart College, Thevara, Mahatma Gandhi University, Kerala  
4. B.Sc Physics (2003), 91.7%, First class Bharata Mata College, Thrikkakara, Mahatma Gandhi University, Kerala  
5. B.Ed (2006), 76.3%, Distinction Mahatma Gandhi University, Kerala  
Total Experience in Years : 14 years  
Papers Published in Journal: :  
(1) **Jessy PJ**, Deshmukh RR, Patel R, Patel N, Exploring various nanomaterials in enhancing the performance of chiral nematic liquid crystal for blue phase display, Journal of molecular liquids 421 (2025) 126859. <https://doi.org/10.1016/j.molliq.2025.126859> (IF: 5.2)  
(2) **Jessy PJ**, Radha S, Patel N, Morphological, optical and dielectric behavior of chiral nematic liquid crystal mixture: Study on effect of



- different amount of chirality, *Journal of molecular liquids* 255 (2018) 215–223. (IF: 5.2)
- (3) **Jessy PJ**, Bambole V, Deshmukh RR, Patel N, Reduced power consumption in nickel zinc ferrite nanoparticles doped chiral nematic liquid crystal devices, *Journal of molecular liquids* 281 (2019) 480-489. (IF: 5.2)
- (4) **Jessy PJ**, Radha S, Patel N, Highly improved dielectric behavior of ferronematic nanocomposite for display application, *Liquid Crystals* 46 (2019) 772-786. (IF: 2.9)
- (5) **Jessy PJ**, Radha S, Patel N, Phase behavior of thermotropic chiral liquid crystal with wide blue phase, *AIP Conf Proc.*1942 (2018) 040013.
- (6) **Jessy PJ**, Shalini M, Patel N, Sarawade P, Radha S, Thermo optical study of nematic liquid crystal doped with ferrofluid, *AIP Conf. Proc.*1837 (2017) 040066.
- (7) **Jessy PJ**, Mani SA, Amare JR, Gharde RA, Thermo-elastic behaviour of liquid crystal elastomer, *AIP Conf. Proc.* 1665 (2015) 040027.
- (8) Mani SA, Hadkar SU, **Jessy PJ**, Lal S, Keller P, Khosla S, Sood N, Sarawade P, Study of the optical, thermal, and mechanical properties of nematic liquid crystal elastomers, *Journal of Information Display* 17 (2016) 169-176. (IF: 3.4)
- (9) Gharde RA, Mani SA, **Jessy PJ**, Amare JR, Keller P, Spectroscopic and thermo–mechanical studies of liquid crystal elastomer, *Key Engineering Materials* 659 (2015) 495-499. (IF: 0.451)
- (10) Venugopal C, Kurian MJ, Savithridevi E, **Jessy PJ**, Anilkumar CP, Renuka G, Low frequency electromagnetic waves in a multi ion plasma, *Indian J. Phys.* 84 (2010) 319-324. (IF:1.7)
- (11) Gharde R, **Jessy PJ**, Mesomorphic behavior of nanoparticles doped cholesteric liquid crystal. In: *Nanoelectronics and sensors*. Bloomsbury publication (2015) 115-118, ISBN:9789385436949.
- (12) Mani SA, **Jessy PJ**, Lal S, Tripathi SK, Khosla S, Gharde S, Sarawade P, Effect of CNT on liquid crystal elastomer. *IEEE Xplore* April 2016, DOI:10.1063/1.4917640, ISSN: 2325-9418.

- (13) Gharde R, Amare JR, Pradhan MS, Bhawe MG, Mani SA, Thakare SY, **Jessy PJ** “Thermal Behavior of polymer dispersed liquid crystals”, International Journal of Scientific & Engineering Research, vol.5, issue 12, Dec 2014, ISSN 2229-5518.

Patent Published : Nickel Zinc ferrite nanoparticles doped chiral nematic liquid crystal for blue phase based displays with low power consumption.  
Indian Patent filed on: 20/12/2018, Application Number: 201821048239  
**Jessy P. J** and Dr. Nainesh Patel, Publication date (U/S 11A): 26/06/2020

Papers Presented in Conferences : **(International: 9, National:10)**

- (1) **Oral presentation** at International Conference on Advanced Material Science and Engineering ICAMSE 2026 held during 27<sup>th</sup> – 28<sup>th</sup> March, 2026 jointly organized by Santaji Mahavidyalaya, Nagpur & Association of Chemistry Teachers, Mumbai.
- (2) **Oral presentation** at International Conference IC-ETCMP 2025 held during 27<sup>th</sup> – 28<sup>th</sup> February, 2025 jointly organized by Guru Ghasidas Vishwavidyalaya, Bilaspur, India, The State University of New York, Albani, USA & IISER, Mohali, India.
- (3) **Oral presentation** at SERB sponsored Indo-South Korea-Thailand 4th International Conference iNEEBA 2024 organized by Vinayaka Mission's Kirupananda Variyar Arts and Science College, India.
- (4) **Oral presentation** at International Conference on Advanced Materials for Physical, Chemical and Biological Applications held during 3<sup>rd</sup> – 4<sup>th</sup> March, 2023 at Karmaveer Bhaurao Patil College, Vashi, Navi Mumbai.
- (5) **Invited short Lecture** at International Conference on Nanomaterials (ICN 2019), held during 12<sup>th</sup> – 14<sup>th</sup> April, 2019 at Mahatma Gandhi University, Kottayam, Kerala.
- (6) **Oral and Poster presentation** at 62nd DAE Solid State Physics Symposium, held during 26<sup>th</sup> – 30<sup>th</sup> December, 2017, at Bhabha Atomic Research Centre, Mumbai.

- (7) **Poster presentation** at 24<sup>th</sup> National Conference on Liquid Crystals (NCLC-2017), held during 11<sup>th</sup> -13<sup>th</sup> October, 2017, at IISER Mohali.
- (8) **Poster presentation** at National Workshop on 'Recent Trends in Surface Physics and Phenomenon, held during 21<sup>st</sup> – 22<sup>nd</sup> March, 2017, at Department of Physics, University of Mumbai.
- (9) **Poster presentation** at 23<sup>rd</sup> National Conference on Liquid Crystals (NCLC 2016), held during 7<sup>th</sup> -9<sup>th</sup> December, 2016, at Indian Institute of Technology, Dhanbad.
- (10) **Oral presentation** at National Workshop on “Advanced Functional Materials: Synthesis to Applications”, held during 21<sup>st</sup> - 22<sup>nd</sup> March, 2016, Department of Physics, University of Mumbai, India.
- (11) **Poster presentation** at Fourth International Conference on Frontiers in Nanoscience and Technology, COCHIN-NANO-2016, held during 20<sup>th</sup> -23<sup>rd</sup> February 2016, at Cochin University of Science and Technology, Kerala.
- (12) **Oral presentation** at International Conference on Nanomaterials and Nanotechnology (NANO-2015), held during 7<sup>th</sup> -10<sup>th</sup> December, 2015 at K. S. Rangasamy College of Technology, Tiruchengode, India.
- (13) **Poster presentation** at International Conference on Energy Harvesting Storage and Conversion, IC-EEE 2015, held during 5<sup>th</sup> -7<sup>th</sup> February 2015, at Cochin University of Science and Technology, Kerala.
- (14) **Poster presentation** at National Seminar on 'Nanomaterials: The Indian Perspective', held on 22<sup>nd</sup> January 2015, at Maharshi Dayanand College, Mumbai.
- (15) **Poster presentation** at 102<sup>nd</sup> Indian Science Congress, held during 3<sup>rd</sup> -7<sup>th</sup> January at University of Mumbai.
- (16) **Oral presentation** at International Conference on Advances in Science and Technology (ICAST 2014), held during 11<sup>th</sup> - 12<sup>th</sup> November, 2014, at Saraswati College of Engineering, Navi Mumbai.
- (17) **Poster presentation** at 59<sup>th</sup> DAE Solid State Physics Symposium, held during 16<sup>th</sup> – 20<sup>th</sup> December, 2014 at Vellore institute of Technology, Vellore.

(18) **Poster presentation** at 1st Mumbai Area Physics Meet, held on 25<sup>th</sup> August 2014, at Department of Physics, University of Mumbai.

(19) **Oral presentation** at National seminar on Space Science-Chandrayaan, held on 4<sup>th</sup>-5<sup>th</sup> September, 2008 at N.S.S Hindu College, Changanacherry, Kerala on 4-5 September.

Area of Specialization : Liquid Crystal Physics

Professional Memberships : Life member of Indian Liquid Crystal Society

Subjects Taught : **UG Level:** Applied Physics, Engineering Physics

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**PG Level:** Molecular Spectroscopy, Mathematical Physics, Quantum Mechanics

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Projects Guided : **UG Level:** Minor physics projects (UG Level)

**PG Level:**

Recommended Students for Higher Education

**Name of the Student**

**University/Industry**

Institute/Department

Responsibility handled:

NAAC Core committee member (Criteria 4), Admission committee member, FY Induction Team member, Class Teacher