

CURRICULUM VITAE

Dr. Shivani Chaudhary



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OBJECTIVE

- To turn my potential into skills.

ACADEMIC QUALIFICATIONS

- Ph.D. with thesis title (Electro-optical properties of Liquid Crystal molecules by Quantum Mechanical methods), in Applied Physics (2017-2022) under the supervision of Prof. Devesh Kumar, from Babasaheb Bhimrao Ambedkar University, Lucknow.
- M. Phil. with thesis title (Study of Electro-Optical Properties of Biphenyl Derivatives of Liquid Crystals), in Physics (2016-2017) under the supervision of Prof. Devesh Kumar, from Babasaheb Bhimrao Ambedkar University, Lucknow with 7.8 CGPA.
- M.Sc. in Applied Physics (2014-2016) from Babasaheb Bhimrao Ambedkar University, Lucknow with 7.5 CGPA.
- B.Sc. in Mathematics and Physics (Batch 2011-2014) from University of Lucknow, Lucknow with 53.6 %.
- Intermediate (2011) with science from U.P. Board with 66.6%.

- High School (2009) with science from U.P. Board with 71.33%.

RESEARCH INTEREST

- Liquid Crystals
- Molecular Modeling
- Electro-optics
- Computational Physics

PUBLICATIONS

1. Narinder Kumar, Shivani Chaudhary, Pawan Singh, Khem B. Thapa, Devesh Kumar, “Electro-optical odd-even effect of APAPA liquid crystal molecules studied under the influence of an extraneous electric field (THz): A theoretical approach, *Journal of Molecular Liquids*, 318, 114254, (2020). Impact factor (6.165)
2. Shivani Chaudhary, Narinder Kumar, Devesh Kumar “Comparative DFT study of parallel and antiparallel conformation of 5CB and 6CB liquid crystal dimers”, *Journal of Atomic, Molecular, Condensate and Nano Physics*, 7(1), 1, (2020).
3. Narinder Kumar, Pawan Singh, Pranav Upadhyay, Shivani Chaudhary, Khem B. Thapa, A.K. Dwivedi, Devesh Kumar, “Odd-even effect of 7O.m liquid crystal compound series studied under the effect of the electric field by density functional theory (DFT) methods”, *European Physical Journal- Plus*, 135, 388, (2020). Impact factor (4.13)
4. Shivani Chaudhary, Narinder Kumar, Pawan Singh, Khem B. Thapa, Devesh Kumar, “Electro-optical parameters with adverse order of 10CB liquid crystal molecule under the influence of an external high electric field: A theoretical approach”, *Jordan Journal of Physics*, 14(1), (2020). Impact factor (0.33)
5. Narinder Kumar, Bhavna Pal, Shivani Chaudhary, Devendra Singh, Devesh Kumar, “Reduced graphene oxide contains a minimum of six oxygen atoms for higher dipolar strength: A DFT study”, *French-Ukrainian Journal of Chemistry*, 8(1), 167, (2020).
6. Narinder Kumar, Pawan Singh, Shivani Chaudhary, Khem B. Thapa, Pranav Upadhyay, A.K. Dwivedi, Devesh Kumar, “Spectroscopy

- existing behind the electro-optical properties with an even-odd effect of nCB liquid crystal molecule: A theoretical approach”, *Acta Physica Polonica A*, 137, 1135, (2020). Impact factor (0.577)
7. Narinder Kumar, Shivani Chaudhary, Pranav Upadhyay , A.K. Dwivedi, Devesh Kumar, “Even-odd effect of the homologous series of nCHBT liquid crystal molecules under the influence of an electric field: A theoretical approach”, *Pramana- Journal of Physics*, 94106, (2020). Impact factor (2.219)
 8. A.K. Dwivedi, Nidhi Awasthi, Rolly Yadav, Shivani Chaudhary, Anamika Shukla, Narinder Kumar, “Spectroscopic analysis of Porphyrin (C₂₀H₁₂N₄) ring studied by DFT methodology”, *Journal of Information and Computational Science*, 9 (8), (2019). Impact factor (6.2)
 9. A.K. Dwivedi, Shivani Chaudhary, Bhavna Pal, Pawan Singh, Asheesh Kumar, Devendra Singh, Narinder Kumar, “Molecular spectroscopic study of MBC {4-{4-methoxy-benzylideneamino)-benzonitrile} liquid crystal molecule using DFT methodology”, *Adalya Journal*, 8(8), (2020). Impact factor (5.3)
 10. A.K. Dwivedi, Bhavna Pal, Shivani Chaudhary, Pawan Singh, Narinder Kumar, Devendra Singh, “Molecular spectroscopy of 5CB (cyano biphenyl) liquid crystal molecule studied by DFT methodology”, *Adalya Journal*, 8 (8), (2019). Impact factor (5.3)
 11. A.K. Dwivedi, Bhavna Pal, Shivani Chaudhary, Pawan Singh, Asheesh Kumar, Khem B. Thapa, Narinder Kumar, Devendra Singh, “Molecular Stretching of 4-methoxy-4'-n-alkyl-tolan liquid crystal molecule studied by DFT methodology”, *Journal of Information and computational science*, 9(8), (2019). Impact factor (6.2)
 12. A.K. Dwivedi, Shivani Chaudhary, Asheesh Kumar, Pawan Singh, Narinder Kumar*, “Molecular spectroscopy of APAPA (p-anisylidene p-aminophenylacetate) or MBA liquid crystal molecules studied by DFT methodology”, *Pramana Research Journal*, 9(6), (2019). Impact factor (6.2)
 13. A.K. Dwivedi, Anamika Shukla, Shivani Chaudhary, Narinder Kumar, Asheesh Kumar*, “Non-covalent interaction of carbon dioxide and methane gas with heteroatom doped graphene models”, *Journal of Information and computational science*, 9(8), (2019). Impact factor (6.2).

CONFERENCES & SEMINARS

1. Attended **“International Symposium on Emerging Smart Materials for Advancement of Science and Technology”**, organized by department of Applied Science and Humanities, Faculty of Sciences, Invertis University, Bareilly, held on June 11-12, 2021.
2. Attended **“26th National Conference on Liquid Crystals (NCLC-2020)”**, organized by Amity University, Noida, held on December 21-23, 2020.
3. Attended **“International e-conference on Recent Advances in Physics and Materials Science (IC-RAPMPS-2020)”**, organized by Kurseong College, Darjeeling, West Bengal, held on July 9-10, 2020.
4. Attended **“Online training workshop on Computational Density Functional Theory”**, organized by Thanthai Periyar EVR Government Polytechnic College, Vellore, held on July 4-5, 2020.
5. Attending **“National webinar on Smart Materials for Future Applications”**, Organized by Department of Physics, Faculty of Engineering & Computing Science, Teerthanker Mahaveer University, Moradabad, held on June 16-17, 2020.
6. Attended **“Webinar on Virtual Lab”**, organized by F.E.T., M.J.P. Rohilkhand University, Bareilly, held on June 6, 2020.
7. Attended **“International webinar (e-conference) on Recent Developments in Material Science”**, organized by St. Andrew’s College, Gorakhpur, held on June 02-03, 2020.
8. Attended **“National webinar on Two Dimensional Materials for Diverse Applications”**, organized by Cambridge Institute of Technology, Bengaluru, held on May 23, 2020.
9. Poster presentation in **“International Conference on Frontier Areas of Chemistry (ICFAC-2020)”**, organized by M.G.C.U. Motihari, Bihar, held on February 28-29, 2020.
10. Oral presentation in **“International Conference on Ultrasonic and Material Science for advanced technology (ICUMSAT-2019)”**,

organized by V.B.S.P.U. Jaunpur, held on November 16-18, 2019.

11. Attended “**Student Conference on Optics and Photonics (SCOP-2019)**”, organized by P.R.L. Ahmadabad, held on September 23-25, 2019.
12. Workshop subjected on “**Application of Gaussian and Gauss view software**”, organized by Lucknow University, Lucknow, held on July 18-19, 2019.
13. Poster presentation in “**National Conference on Innovation in applied science and engineering (NCIASE-2019)**”, organized by N.I.T. Jalandhar, held on April 27-28, 2019.
14. Oral presentation in National “**Conference on Advances in material science (NCAMS-2019)**”, organized by Marwar Business School, Gorakhpur, held on February 21-22, 2019.
15. Poster presentation in “**1st North Indian Science Congress (NISC-2018)**”, organized by Babasaheb Bhimrao Ambedkar University, Lucknow, held on January 10-11, 2018.

SKILLS

- Proficient knowledge of Gaussian 09 software.
- Basic knowledge of programming language: C++, MATLAB.
- Computer skills, proficient in Microsoft excel, Microsoft Office.

ACHIEVEMENTS & EXTRA-CURRICULAR ACTIVITIES

- Gold medalist in M. Phil. Physics (2017).
- Actively participated in the events organized by the school and college.
- Awarded **Certificate of Merit** by the Board of High School and Intermediate Education.

Net exempted from UGC under regulations, 2009.

NAME OF THE REFEREES

- Dr. Devesh Kumar (Professor)
- Dr. Devendra Singh (Assistant Professor)
- Dr. Khem B. Thapa (Assistant Professor)

Avocation:

- Keen in searching and attending educational seminars, fairs and workshops.
- Reading books.

Key Skills

- Good Communication skills.
- Ambitious, Enthusiastic, Creative, Punctual and Dedicated to Work.
- Working nature.

Hobbies

- Photography
- Interact with people

PERSONAL DETAILS

- **Name** : Dr. Shivani Chaudhary
- **Date of Birth:** 10/03/1995
- **Mother's Name:** Mrs. Somvati
- **Father's Name:** Mr. Ashok Kumar Chaudhary
- **Marital Status:** Single
- **Nationality** : Indian
- **Religion** : Hindu
- **Language** : English, Hindi, Urdu

DECLARATION

I hereby, declare that all the above information is true to the best of my knowledge.

Date : 05/03/2022

Place : Lucknow



(Shivani Chaudhary)