

Curriculum Vitae

Date: 29-03-2022

Name : DR. NABABRATA GHOSHAL

Educational Qualification : M. Sc. in Physics, Ph. D.

Date of Birth : 25th February, 1972

Present Designation : Associate Professor

Affiliation : Ramsaday College

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Years of Experience (Research): **20 Years**

Years of Experience (Teaching): **19 Years at the Under Graduate Level**
4 Years at the Post Graduate Level

RESEARCH PROJECTS:

UGC Sponsored Minor Research Project

Title- "*Computer simulation study on the effects of magnetic fields on dispersion models of biaxial liquid crystals*".

Date of commencement of the project - **25.02.2015**
Date of final submission of report of the project - **01.02.2017**
Sanctioned Research Grant - **Rs. 332000**

RESEARCH PUBLICATIONS:

Published Papers in Journals/Conference Proceedings

1. "*Monte Carlo simulation of joint density of states in one-dimensional Lebwohl-Lasher model using Wang_Landau algorithm*"- Published in: **Physics Letters A**, Vol. 372, p-3369, 2008, Peer reviewed, ISSN: 0375-9601

2. " *Importance of transverse dipoles in the stability of biaxial nematic phase: A Monte Carlo Study*" - Published in: **Liquid Crystals**, Vol –39, p-1381, 2012, Peer reviewed, ISSN 0267-8292 print /ISSN 1366-5855 online
3. " *Effect of an external magnetic field on the nematic-isotropic phase transition in mesogenic systems of uniaxial and biaxial molecules: A Monte Carlo study*" - Published in: **Physical Review E**, Vol. 89, p-042505, 2014, Peer reviewed, ISSN: 1550-2376 (online), 1539-3755 (print)
4. " *A computer simulation study on the Landau bicritical point of a biaxial liquid crystal system*" - Published in: **International Conference on Recent Trends in Sc&Tech (ICRTS 2013)**, Page-323, ISBN: 978-93-80308-44-9
5. " *Monte Carlo investigation of critical properties of the Landau point of a biaxial liquid-crystal system*" - Published in: **Physical Review E**, Vol. 93, p-052701, 2016, Peer reviewed, ISSN: 1550-2376 (online), 1539-3755 (print)
6. " *Pressure-induced phase transitions in liquid crystals: A molecular field approach*" - Published in: **Physical Review E**, Vol. 98, p-022701, 2018, Peer reviewed, ISSN: 1550-2376 (online), 1539-3755 (print)
7. " *Monte Carlo study with reweighting of uniaxial nematic liquid crystals composed of biaxial molecules*" - Published in: **Physical Review E**, Vol. 99, p-022703, 2019, Peer reviewed, ISSN: 1550-2376 (online), 1539-3755 (print)
8. " *A molecular field approach to pressure-induced phase transitions in liquid crystals: Smectic–nematic transition*" - Published in: **Physics of Fluids**, Vol. 33, p-057116, 2021, Peer reviewed, ISSN: 1089-7666 (online) 1070-6631 (print)
9. " *A Revisit to the Double-prism Experiment of J. C. Bose*" – Published in: **Resonance – Journal of Science Education**, Vol. 27, pp-353-367, March, 2022, Peer reviewed, ISSN: 0973-712X (online) 0971-8044 (print)

PUBLISHED BOOK

Title- "**Monte Carlo Simulation of Uniaxial and Biaxial Nematics**"

Year of Publication- **2015**; Pub.- **LAP LAMBERT Academic Publishing**, Deutschland, Germany, ISBN: 978-3-659-39069-2

CHAPTER CONTRIBUTED IN BOOKS

A Chapter in the Book entitled "**Applications of Monte Carlo Methods in Science and Engineering**" Edited by S. Mark and S. Mordechai; **Pub.- InTech**, Croatia, 2011, ISBN: 978-953-307-691-1