



Dr. Kaustabh Dan
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Personal Details

Date of Birth: 17.08.1987

Sex: Male

Nationality: Indian

Academic Details

Sl. No.	Degree	Specialization	Year of passing	Institution	Board/ University	% of Marks
1	Phd	Soft Condensed Matter, Nano Materials		Saha Institute of Nuclear Physics	Calcutta University	
2	M.Sc.	Electronics	2010	Jadavpur University	Jadavpur University	1 st Class
3	B.Sc.		2008	Jadavpur University	Jadavpur University	1 st Class
4	H.S. (10+2)		2005	Eastern Railway Boys Higher Secondary School	West Bengal Council of Higher Secondary Education	1 st Class
5	Madhyamik (10 th)		2003	Asansol Ramkrishna Mission Secondary School	West Bengal Board of Secondary Education	1 st Class

Phd Details

PhD Thesis Title: Study On the Phase Transition of Liquid Crystal and Mixtures

Guide's Name: **Dr. Alokmay Datta**, Senior Professor H, Department of Surface Physics and Material Science, Saha Institute of Nuclear Physics, 1/AF Bidhannagar, Salt Lake, Kolkata-700064

Institute: **Saha Institute of Nuclear Physics,**
Kolkata, West Bengal, India.

Date of Award: January 11, 2018

Teaching Experience

- As a Guest Lecturer in Dept. of Physics, Bankura University, West Bengal on & from August 2017 to August, 2018.
- As a Guest Lecturer in Dept. of Physics, Kaji Nazrul University, West Bengal on & from August 2017 to April, 2018.
- As an Assistant Professor in Department of Physics, MIDNAPORE CITY COLLEGE, Kuturiya, Bhadutala, Paschim Medinipur – 721129, West Bengal from July 16, 2018 till date.

Achievements

- Qualified CSIR-NET, Dec 2010
- Qualified GATE, 2011
- Qualified JEST 2009, 2010
- Institute Research Fellowship from Saha Institute of Nuclear Physics from Aug 2010- February 2016
- Post-Doctoral Research Associate in Doshisha University, Kyoto, Japan from March 2016- June 2017

Expertise

- Phase Transition in Liquid Crystals
- Phase Transition in Room Temperature Ionic Liquid
- Nano Material Preparation and Characterization
- DNA

Summary

I have the 5 years of experience towards teaching and research in the field of Soft Condensed Matter Physics. I have qualified CSIR-NET on December 2010 and Gate on 2011. I have obtained Institute Research Fellowship from Saha Institute of Nuclear Physics to carry out my research work from Aug 2010 to Feb 2016. During my Ph.D days, I have visited Elletra Synchrotrone, Italy twice from the support of ICTP and DST, India . I have almost 1.5 yrs postdoctoral experience from Doshisha University, Kyotanabe, Japan. I have worked as guest lecturer in Bankura University and Kaji Nazrul University. At present, I work as an Assistant Professor in Physics Department, Midnapore City College. My research interest is development of hybrid nano structures of tunable size and shape selectivity using soft templates such as liquid crystal and DNA and measurement of their optical and other related properties.

Teaching Interest

PG: Classical Mechanics, Quantum Mechanics, Mathematical Physics, Statistical Mechanics, Atomic and Molecular Spectra.

UG: Electrodynamics. Mathematical Physics, Circuit Theory, Modern Physics, Vector

Publications

1. Convex Arrhenius behaviour in a nematic-isotropic phase transition.
K. Dan, M. Roy and A. Datta Euro Physics Letter, 108, 36007 (2014).
2. Non-Equilibrium phase transition in liquid crystals.
K. Dan, M. Roy and A. Datta Journal of Chemical Physics, 143, 094501 (2015).
3. Entropic screening preserves non-equilibrium nature of nematic phase while enthalpic screening destroys it .
K. Dan, M. Roy and A. Datta, Journal of Chemical Physics, 144, 064901 (2016).
4. Screening out the non-Arrhenius behaviour of nematic-isotropic transition by room temperature ionic liquid.
K. Dan, A. Datta, Y. Yoshida, G. Saito, K. Yoshikawa and M. Roy Journal of Chemical Physics, 144, 084904 (2016).
5. Infrared Spectroscopy of Mixtures involving Liquid Crystals:\Screening" to Complex formation".
K. Dan and A. Datta, Advanced Science Letters, 22, 158 (2016)
6. Role of amphiphilic molecule on liquid crystal phases.
K. Dan, M. Roy and A. Datta, AIP Conf. Proc. 1512, 54 (2013).
7. Detection of a new 'nematic-like' phase in liquid crystal-amphiphile mixture by differential scanning calorimetry.
K. Dan, M. Roy and A. Datta, AIP Conf. Proc. 1591, 64 (2014).
8. In-Situ Synthesis of Au Nano Particles of Co-existing Morphologies in Liquid Crystalline Matrix.
K. Dan and A. Datta, AIP Conf. Proc. 1665, 050041 (2015).
9. One-step Facile Synthesis of Noble Metal Nanocrystals with tunable morphology in a Nematic Liquid Crystalline Medium.
K. Dan, B. Satpati and A. Datta, AIP Conf. Proc. 1731, 050011 (2016).
10. Utilizing a non-equilibrium phase transition for one-step synthesis of metal nano-crystals
A. Datta, **K.Dan**, B.Satpati and M.Roy, Materials today proceedings 5, 9972 (2018)