



## Lecture Series on Thermodynamics and Statistical Physics

Dept of Physics organised a lecture series of two days under the DBT-Star College scheme on 31<sup>st</sup> Jan'2020 and 1<sup>st</sup> Feb 2020 from 10:30am - 5:30pm on the topics "Thermodynamics and Statistical Thermodynamics" by Prof. Arun Kulkarni and Prof. Toby Joseph, from K.K.Birla Institute of Science & Technology - Pilani, Goa Campus, Zuarinagar, Goa. This talk was attended by students of Physics and the faculty members of Dept of Physics, Chemistry and Mathematics.



*Talk by Dr. Toby Joseph and Prof. A. V. Kulkarni*

**Ms. Malati Desai, Coordinator**

## Physics Day

The department organized "Physics Day" on 6<sup>th</sup> February 2020. The events conducted Oral Presentation competition, Poster Presentation competition, Treasure hunt and Working model competition. The Chief guest of the event was Dr. Sudipta Kanungo and he gave a popular talk on "Relativity & Quantum Mechanics: Emerging Materials for the last decade". The talk was followed by the valedictory function and the day came to a conclusion with the prize distribution to all the winners by Dr. Sudipta Kanungo.



*Chief Guest Dr. Sudipta Kanungo along with Faculty and Students of the Physics Department.*

**Dr. Ashish Desai, Coordinator**

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### Indemnity:

Opinions and news appearing herein are those of the Editor and not necessarily those of the Principal or the Management.

## The Hype and Hopes Surrounding Nanostructures Explained Simply

Physics department organised a talk under the DBT - Star College scheme on 23<sup>rd</sup> December 2019 from 10:30 to 11:30 am on the topic "The Hype and Hopes Surrounding Nanostructures Explained Simply" by Prof. Vijay Singh, Centre for Excellence in Basic Sciences, Mumbai. This talk was attended by students of Physics and Chemistry and the faculty members of Dept of Physics. Prof. Vijay Singh outlined a simple scaling approach to understand some of the properties of semiconductor nanostructures.



*Prof. Vijay Singh during his talk on "The Hype and Hopes Surrounding nanostructures"*

He explained how exotic phenomena such as the fabrication of a single electron transistor and the long standing goal of integrating optics and electronics on the same chip are possible with semiconductor nanostructures. He pointed out how Quantum effects become significant at nano-scales.

**Ms. Malati Desai, Coordinator**

## Talks by Prof. Vijay Singh

### Teaching Methodology in Science

Prof. Vijay Singh also gave a talk on "Teaching Methodology in Science" from 12.00 to 1.00 pm which was attended by the teaching faculty from sciences and students of Department of Physics and Chemistry.



*Demonstration by Prof. Vijay Singh along with a student & teaching faculty*

In his talk he spoke on science education and its importance in implementing it in classroom.

**Ms. Malati Desai, Coordinator**

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### Student Achievements/Participation

- Six Third Year B.Sc. Students viz. Mr. Nikhil Mesquita, Ms. Shantadurga Desai, Ms. Rucha Desai, Ms. Ophra Gracius, Ms. Valencia Fernandes and Mr. Sidharth Nath T.S.; participated in IAPT- UGCP (Winter Camp in Physics) at BITS Pilani Goa Campus from 19<sup>th</sup> to 22<sup>nd</sup> December, 2019.



**Mr. Darshan Hosamani**

- National Graduate Physics Examination (NGPE-2020) is a national level competitive exam conducted by Indian Association of Physics Teachers. Our college is a recognized center for this exam. This year NGPE was held on Sunday, 19<sup>th</sup> January, 2020. Darshan Hosamani from F.Y.B.Sc. topped in our center.

- Ms. Srinidhi Pawar from Third Year B.Sc. attended a Radio Astronomy Winter School jointly organized by Inter University Center for Astronomy and Astrophysics (IUCAA) and National Center for Radio Astronomy (NCRA) at IUCAA, Pune from 16<sup>th</sup> to 24<sup>th</sup> December.

### Paper Presentation in National Conference

Dr. Ananya Das along with Mr. Clint N. Fernandes and Sidhanth S. Prabhu Desai from 2018 - 2019 Physics batch participated in 2 days National Conference on 'Recent Advances in synthesis, Characterization Techniques and applications of materials', held on 29<sup>th</sup> and 30<sup>th</sup> November 2019; organized by Department of Physics, K. J. Somaiya College of Science & Commerce Vidyavihar (E), Mumbai. Mr. Clint N. Fernandes made an oral presentation of their paper entitled 'Structural and Dielectric Properties of PCT Ceramics' ..



*Dr. Ananya Das, Mr. Clint Fernandes and Mr. Sidhanth Prabhudesai during the group photograph of participants of the conference*

Mr. Yatin P. Desai along with four Third Year BSc students; Ms. Shantadurga Desai, Ms. Disha Sinai Sangaonkar, Ms. Nagma Mirabhai and Shreya Karkade; participated and presented a paper entitled "Structural and Magnetic Studies of Doped Nickel Ferrite" in a National Conference on "Frontiers in Medicinal Chemistry and Nanotechnology" organised by D. M.'s College and Research Centre, Assagao, Goa on 14<sup>th</sup> and 15<sup>th</sup> February 2020.



*Students during poster presentation*

### Workshop on "Teaching methodology and Laboratory Demonstrations in Physics"

Physics department organized a Workshop on "Teaching methodology and Laboratory Demonstrations in Physics" on 7<sup>th</sup> March 2020. Resource persons for the workshop were Dr. Praveen Pathak, Scientific Officer, Homi Bhabha Centre of Science Education, TIFR, Mumbai and Mr. Shirish Pathare, Scientific Officer, Homi Bhabha Centre of Science Education, TIFR, Mumbai.



*Mr. Shirish Pathare delivering his talk during the workshop.*

**Ms. Malati Desai, Coordinator**

### Faculty Achievements and Participation

- Dr. Ananya Das attended a One Day Workshop on "Scope and Limitation of Goa University TYBSc Physics (CBCS) syllabus and Model Question Paper" held at Dhempe College, Miramar on 14<sup>th</sup> September 2019.
- Ashish M. Desai, Nikhil Mesquita, and Valencia Fernandes, (2020) Published a paper, "A new modified Morse potential function for diatomic molecules", Physica Scripta, **95**, 085401, ISSN No. 0031-8949.
- Dr. Ashish M. Desai participated in the five days workshop on "Computational Material Science (COMATS-2019)" organized by Centre of Excellence in Advanced Materials (CAM) and Inter-University Centre of Nanomaterials and Devices (IUCND), Cochin University of Science and Technology held from 29<sup>th</sup> Oct. 2019 to 2<sup>nd</sup> November 2019.
- Mr. Yatin P. Desai attended a Two-day workshop on "Material Science between University of Porto, University of Coimbra and Goa University" held on 18<sup>th</sup> and 19<sup>th</sup> November 2019 at Goa University.
- Mr. Yatin P. Desai attended and presented a paper on "Structural and Magnetic Studies of Nanocrystalline Ni-Zn Ferrites Synthesized by Sol-Gel Method" during 64<sup>th</sup> DAE Solid State Physics Symposium held at IIT, Jodhpur-Rajasthan from 18<sup>th</sup> to 22<sup>nd</sup> December 2019.
- Mr. Yatin P. Desai has been granted a research project entitled "Study of Zinc Oxide Composite Doped with Transition Metal Ions (Mn, Ni, Co, Fe)" by Department of Science and Technology, Government of Goa.
- Mr. Yatin P. Desai was a resource person for the session on "Experiments Through Films" during 5<sup>th</sup> Science Film Festival of India on 16<sup>th</sup> January 2020 at Campal – Panaji, Goa.
- Four faculty members Dr. Ananya Das, Mr. Yatin P. Desai, Dr. Ashish Desai and Ms. Pearl Oliveira along with ten T.Y.B.Sc. students attended Goa Physics Meet 2020 at IIT Goa, Farmagudi on 25<sup>th</sup> January 2020. Four posters were presented by students during the meet.
- Four faculty members Dr. Ananya Das, Mr. Yatin P. Desai, Dr. Ashish Desai and Ms. Pearl Oliveira along with T.Y.B.Sc. students Participated in State level IAPT at PES college, Farmagudi on 22<sup>nd</sup> February 2020. Four posters were presented by students in this event. During the valedictory function, Third year B.Sc. student, Mr. Sidharth Nath T. S. was felicitated for his meritorious performance.
- Dr. Ananya Das and Mr. Yatin P. Desai Participated in the National Symposium on "Recent Trends in Condensed Matter Physics and Materials Science" held on March 12<sup>th</sup> and 13<sup>th</sup>, 2020 at Goa University.