



DCT's  
Dhempe College of Arts and Science  
Miramar, Goa

### Report seminar on Innovations in Optical Instrumentation

Organized by: Department of Chemistry, Dhempe College of Arts & Science, Miramar, Goa

Under: DBT-Star College Scheme

Title: *Innovations in Optical Instrumentation*

Date & Time: 15<sup>th</sup> March 2025, 11:00 AM-12:30 PM.

Venue: SV Hall, Dhempe College of Arts & Science

The Department of Chemistry at Dhempe College of Arts & Science, under the DBT-Star College Scheme, organized a seminar on "*Innovations in Optical Instrumentation*." The event aimed to provide insights into advanced optical techniques and their applications in scientific research, particularly in atmospheric and space studies. The keynote speaker for the seminar was Mr. Prasanna Mahavarkar, Associate Professor (Scientist) from the Indian Institute of Geomagnetism, Department of Science and Technology, Govt. of India, Navi Mumbai. Prof. (Dr.) P. S. Ramu Murthy, Principal welcomed the speaker and delivered welcome address. Dr. Bhanudas Naik, Introduced the speaker.

Mr. Mahavarkar's lecture on "*Optical Technique to Measure Airglow Emission of the Thermosphere*" covered the following key topics: Phenomena in the Sky – An overview of natural atmospheric events, including airglow emissions.

1. Atmospheric Layers – A discussion on the different layers of the atmosphere and their significance.
2. Various Orbits – Understanding satellite orbits and their applications in space research.
3. Basic Optical Components – Explanation of lenses, mirrors, and other optical elements used in instrumentation.
4. Assembly of Optical Components – Realizing a working instrument and the fabrication of the Fabry-Perot Interferometer developed by IIG and IIA.
5. Career in Space Research – Opportunities in the field of space physics and optical instrumentation.

The seminar witnessed enthusiastic participation from students and faculty members, who actively engaged in discussions regarding optical instrumentation, space research, and career opportunities.

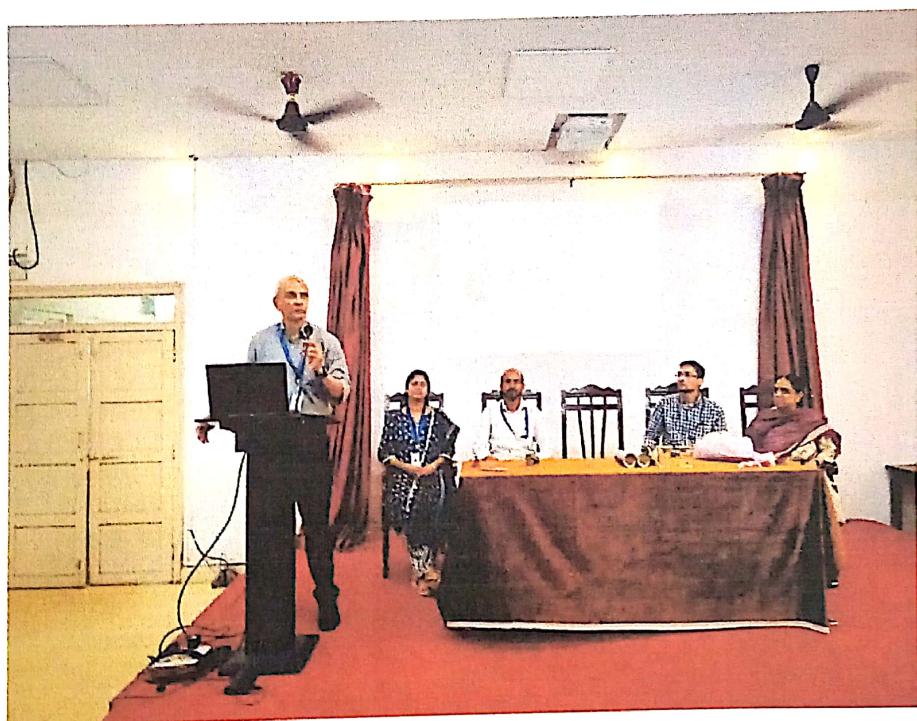
The seminar was successfully coordinated under the guidance of:

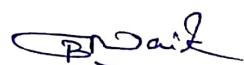
- Ms. Manisha Mhalsekar, In-Charge, Department of Chemistry
- Dr. Bhanudas Naik, Coordinator
- Prof. (Dr.) P. S. Ramu Murthy, Principal

Their efforts and support contributed significantly to the smooth execution of the event.

The seminar was an enriching experience, providing attendees with valuable knowledge on optical instrumentation and its role in atmospheric and space sciences. The event concluded with a vote of thanks, by Dr. Shashank maldar expressing gratitude to Mr. Prasanna Mahavarkar for his expertise and to the organizing team for their dedication in making the seminar a success.

**Photos of the Seminar on Innovations in Optical Instrumentation:**





Dr. Bhanudas Naik  
Coordinator, Assistant  
Professor, Department of  
Chemistry



Ms. Manisha Mhalsekar  
Incharge, Department of  
Chemistry



Principal

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