



**DCT's**

Dhempe College of Arts and Science  
Miramar, Goa

### **Report of symposium on 'Advances in Nanochemistry'**

Department of Chemistry, under the DBT Star college scheme, organised a symposium on 'Advances in Nanochemistry,' on Monday, 10<sup>th</sup> March 2025, at the Swami Vivekanand Hall, DCT's Dhempe College of Arts and Science, Miramar-Goa. This symposium was conducted under the DBT Star College scheme. This symposium was intended to promote nanochemistry and research among students and academicians for the benefit of the society.

The Inaugural program of the symposium started with welcoming of all the dignitaries on the dais, the Chief Guest, Dr. Umesh Gawas, Associate Professor from DM's College of Arts, Science and Commerce, Assagao-Goa, Principal of Dhempe College of Arts & Science,

Prof. (Dr.) Ramu Murthy, convener of the symposium and in charge of the chemistry department, Mrs. Manisha Mhalsekar and organizing secretary of the symposium, Dr. Durga Timble. Principal, Prof. (Dr.) Ramu Murthy, welcomed the participants and the resource persons at the Inaugural program of the symposium, following the lighting of the lamp by all the dignitaries on the dais. Prof. Murthy expressed his views on the importance of nanochemistry in the subject of physics and chemistry and highlighted the importance of technology in making efficient miniaturizing possible. He spoke about how one needs to think and apply knowledge when identifying materials for developing innovative materials, solar cell materials, photovoltaic devices, etc

The Inaugural program was followed by the first session of the symposium by Dr. Umesh Gawas, Associate Professor from DM's College of Arts, Science and Commerce on 'engineering nanomaterials from lab to life.' Mrs. Manisha Mhalsekar introduced the speaker, briefly explaining his research interest and work experience. Dr. Umesh provided deep insights on material science, design and discovery of new materials. He emphasized on the crucial role of

material scientists in tuning the material under study. He also mentioned how the processing of materials influences the structure, properties and performance of the materials. He discussed the fundamentals of material chemistry and modern-day inventions and also engaged students in small exercises. Students were briefed about different synthetic routes and characterization techniques that one can utilize, including some of his research work. He ended his talk by mentioning that progress in nanotechnology is driven by curiosity and critical thinking and that one needs to share his ideas and innovation in growing in this field of chemistry. Mrs. Manisha Mhalsekar presented a token of appreciation to Dr. Umesh Gawas.

The second session by Dr. Shrikant Naik, Assistant Professor at the School of Chemical Sciences, Goa University, on 'Emerging Frontiers in Chemistry and Materials Science' started immediately after a short tea break. Dr. Durga Timble welcomed and introduced the speaker. Dr. Shrikant shared his ideas on his project topic including synthesis and characterization methods for nanomaterials and gave an in-depth view of their applications. He began by discussing the subject of his research work during his Ph.D. and mentioned how one must approach the solution to any research problem. He emphasized on synthesis and applications of garnets which are magnetic materials. The session ended with questions from the participants. Dr. Durga Timble further thanked the speaker and handed him a token of appreciation as a symbol of gratitude.

The third session of the day was by Dr. Narendra Nath Ghosh, FRSC, Nanomaterial Labs, Department of Chemistry, BITS Pilani, KK Birla, Goa Campus, on 'Efficient Photocatalysts and Electrocatalyst for Water Treatment and Hydrogen evolution, and Oxygen Evolution Reaction,' following a brief lunch break at 2.15 pm. Dr Bhanudas Naik introduced the speaker and his excellence in chemistry. Prof. Ghosh mentioned about the challenges faced in heterogeneous catalysis and the immense potential of nanomaterials. He mentioned the use of nanomaterials in cosmetic industry and Ayurveda. He spoke about his research interest in catalysis for hydrogen generation and tuning the band gaps to make desired materials for the applications. The session concluded with some interesting and curious questions from students. Mrs. Deepa Audi thanked the speaker and gave him a token of appreciation. Dr. Shashank Mhaldar gave the concluding remarks and a vote of thanks at the end of the symposium. Majority of the Participants gave excellent rating for the symposium. A total of 63 students and 13 faculty members participated in this symposium.





Program details		
Sr.no	Time	Program Schedule
01	10.00am	Welcome to the dignitaries
02	10:05 am	Lighting of the traditional lamp
03	10:10 am	Floral welcome
04	10:15 am	Welcome address by the Principal of DCT's Dhempe College of Arts and Science Prof.(Dr.)Ramu Murthy
05	10:30 am	Introduction of Speaker Dr. Umesh Gawas by Mrs Manisha Mhalsekar
06	10:25 am	Lecture 1: Engineering Nanomaterials: From Lab to Life by Dr. Umesh Gawas, Associate Professor, Dnyanprassarak Mandal's College and Research Centre
07	11:25 am	Q/A session
08	11:30 am	Tea break
09	12:00 pm	Introduction of Speaker Dr. Shrikant Naik by Dr. Durga Timble
10	12:05 pm	Lecture 2: Emerging Frontiers in Chemistry and Materials Science by Dr. Shrikant Naik, Assistant Professor, SCS, Goa University
11	12:55 pm	Q/A session
12	1:00 pm	Lunch break

13	2:00 pm	Introduction of speaker Prof. Narendra Nath Ghosh by Dr. Bhanudas Naik
14	2:05pm	Lecture 3: Efficient Photocatalysts and Electrocatalyst for Water Treatment and Hydrogen evolution, and Oxygen Evolution Reaction, By Prof. Narendra Nath Gosh, Professor, Department of Chemistry, BITS Pilani, Goa Campus
15	2:55 pm	Q/A session
16	3:00 pm	Vote of Thanks by Dr. Shashank Mhaldar

Compere – Ms. Geeta Thakur

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**Dr. Durga Timble**  
Organizing secretary

**Mrs. Manisha Mhalsekar**  
Convener & Incharge  
Dept. of Chemistry

**Prof. (Dr.) Ramu Murthy**  
Principal  
Dhempe College of Arts & Science