



ST. XAVIER'S COLLEGE, MAPUSA GOA

Report of Activity conducted in the Academic Year 2026-27

Name of Activity	FROM CURIOSITY TO INNOVATION: TURNING IDEAS INTO IMPACT
Date/Duration	28 th August 2026
Venue	Seminar Hall, St. Xavier's College, Mapusa – Goa
Name of organizing Department/Cell	Department of Chemistry
In collaboration with	
Name/s of Faculty Coordinator	Dr. Andrew D'Souza and Dr. Johnross Albuquerque
Stratum of Event	Department Level / Institutional Level
Name & details of Resource Person/s If any	Dr. Vaibhav Naik, Assistant Professor, P.E.S.'s RSN College of Arts and Science, Goa
Report	The Department of Chemistry organized an expert lecture on "Research, Curiosity, and Carbon Dots" for undergraduate students with the objective of fostering a research-oriented mindset and introducing students to emerging developments in nanomaterials and analytical chemistry. The session was conducted by Dr. Vaibhav, who delivered an engaging and interactive presentation focused on demystifying the research process and highlighting the importance of curiosity in scientific inquiry. He addressed common misconceptions regarding research, emphasizing that meaningful scientific discoveries are not limited to individuals with exceptionally high intelligence or access to advanced laboratory facilities. Instead, he explained that research is an iterative process driven by curiosity, critical thinking, persistence, and a willingness to learn from failures. As part of the presentation, Dr. Vaibhav shared his personal research journey. His curiosity was sparked by a newspaper article questioning the presence of gold deposits in Goan soil. This simple question evolved into a long-term scientific investigation that eventually led him to develop a selective sensor for gold detection. He demonstrated how reframing a research question can lead to innovative solutions, describing the development of gel-based sensor strips capable of detecting gold through a visible color change to purple. The technical segment of the lecture focused on carbon dots, a class of carbon-based nanoparticles typically ranging from 2 to 10 nanometers in size. Students were introduced to their structure,

	surface functional groups, synthesis methods, and remarkable properties, including high water solubility, chemical stability, low toxicity, and environmentally friendly preparation techniques. Dr. Vaibhav further explained the fluorescence characteristics of carbon dots and discussed their diverse applications in chemical sensing, bioimaging, bioluminescence studies, environmental monitoring, and diagnostic technologies. The session provided valuable insights into how nanomaterials are contributing to advances across multiple scientific disciplines. The lecture concluded with an inspiring message encouraging students to nurture curiosity, remain resilient in the face of experimental setbacks, and recognize that negative results are a natural component of the scientific process. The session successfully motivated participants to view research as an accessible and rewarding pursuit driven by meaningful questions and continuous learning. Outcome of the Activity • Students gained a better understanding of the scientific research process. • Participants learned about the significance and applications of carbon dots. • The session promoted critical thinking, curiosity, and innovation among students. • Students were encouraged to pursue research-oriented projects and scientific inquiry. • Awareness was created regarding nanomaterials and their role in modern science and technology.
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Photographs	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/09/images-of-FROM-CURIOSITY-TO-INNOVATION-TURNING-IDEAS-INTO-IMPACT.pdf
List of participants With signatures	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/09/ATTENDANCE-of-FROM-CURIOSITY-TO-INNOVATION-TURNING-IDEAS-INTO-IMPACT.pdf
Certificate	NA