B.M.S. COLLEGE OF ENGINEERING

DEPARTMENT OF CHEMISTRY

UPCOMING EVENT

GUEST LECTURE ANNOUNCEMENT

Topic:

"The Science and Impact of Electroless Nickel Coatings in Aerospace and Beyond"

Guest Speaker:

Dr. J N Balaraju
Chief Scientist & Head
Surface Engineering Division
CSIR National Aerospace Laboratories, Bangalore

Date & Time:

Date: 9th December 2025
Time:11.30 AM
Venue: ISE Department Seminar Hall, 5th Floor, PJ Block

About the Lecture:

Electroless nickel alloy (**Ni–P, Ni–B**) coatings offer excellent uniformity, adhesion, and corrosion/wear resistance, and have been used by CSIR–NAL in **ISRO's INSAT sun-shield mirrors** and **Aditya Mission** components. Advanced **nickel polyalloys and composite coatings** were developed as eco-friendly alternatives to hard chromium with comparable performance. These coatings improved **drilling efficiency**, protected **AZ31B Mg alloys**, and supported **EMI-shielding and microelectronic applications**. The talk links **materials science innovations** with real aerospace and industrial challenges. It also highlights **sustainable coating technologies** and introduces students to **research and career opportunities** in advanced surface engineering.

About the Speaker:

Dr. J. N. Balaraju, Chief Scientist and Head of the Surface Engineering Division at **CSIR-NAL**, specializes in reflective space coatings, eco-friendly aerospace treatments, and advanced nanocrystalline nickel and Ni-Ti surface technologies. He has earned several prestigious awards, including the **IIT Madras Best PhD Thesis Award**, **Raman Research Fellowship**, **N.M. Sampat Award**, and NAL innovation and performance awards. With **70 publications**, he has guided numerous research scholars, organized major conferences, and serves as a **Life Member** of multiple professional societies and a **CII Steering Committee Member**.

Who Can Attend:

UG/PG Students | Research Scholars | Faculty Members

ALL ARE CORDIALLY INVITED!