Event Report

Organised by : JU-ECell, IIC

Title of the Session: Creating Novel Materials and Translational Devices: Solving Real World Problems

Date and Time of Organization: 23.11.22

Venue: Jadavpur Campus, Mechanical Engineering Seminar Hall

Brief Intro of Program:

The Session was organized to inform and educate the students on the development of Novel materials which can in-turn be used to solve real world problems efficiently and effectively

Speakers: Dr Rakesh Prasad Sahu (Director of Operations of Centre of Excellence in Protective Equipment and Materials at McMaster University, Canada)

Faculty Coordinator in Charge: Pranibesh Mandal

Attendance Sheet – (total students 41)
https://docs.google.com/spreadsheets/d/1Z8shgaiXsEY8uhHX1ry6iKsF9Qiz0O_bTItgmQ1L6UU/edit?usp=sharing

Detailed Report:

Solving today's real-world problems require a multitude of skillsets from different disciplines of engineering. In this talk, the speaker explains how teams with diverse backgrounds can create new materials and develop devices to address challenges.

Through the session, the speaker explained how Magnetic property of materials depends on the electron distribution within the material. Application of magnetic fields can manipulate these materials to form desired assemblies. Carbon nanotubes (CNTs) are excellent nanomaterials with superior properties. However, the limitations in processing conditions restricts its usage in various applications. We will learn how carbon nanotubes are magnetized to produce magnetic carbon nanotubes (mCNTs). The mCNTs are introduced into inks that are magnetoresponsive and electrically conductive colloidal suspensions. Suspensions containing cells are manipulated to rapidly form 3D aggregates that can be used for bioprinting and drug screening applications.3D aggregates serve as a template for testing chemicals and drugs, reduces the use of animals and time for testing.

The Session ended with a round of Q&A where the speaker cleared doubts which came in the attendees mind during the session.

Pictures of the Event: