Centre of Excellence
in
Underwater Robotics and
Communication

The CoE URC was inaugurated by Dr. M. Ravichandran, Secretary, Ministry of Earth Sciences (MoES) on 30th September 2022 in presence of Dr. S. Somanath, Chairman, Indian Space Research Organization (ISRO).

The CoE URC carries out advanced research in various areas proposed by the MoES in the Deep Ocean Mission. The CoE URC will offer unique research opportunities for students and industry partners to uplift their skills in the areas of (1) Design and Development of Bio-memetic Underwater Vehicles, (2) Smart Nanomaterials for Underwater Devices, (3) Communication (4) AI and ML Assisted IOT Signal Processing.

The CoE URC will offer under graduate and post graduate level advanced research projects along with regular PhD research work.

To establish indigenously developed underwater technologies focusing on advanced materials, devices and communication networks.

To offer viable and feasible solutions to existing problems in the research areas of underwater technologies.

VISION

MISSION

To improve technical merits of underwater vehicles, devices and communication networks.

To make the CoE URC as a potential service provider for various fields focusing on the underwater technologies.

OBJECTIVES

Design and development of underwater vehicle for ocean mining, surveillance, tracking and monitoring marine ecosystem.

Synthesis of smart materials to fabricate devices for underwater applications such as sensors, detectors, nanomembranes and photovoltaics.

Development of distributed antenna for communication between autonomous underwater vehicles and Wireless sensor nodes to off-load data and receive instructions.

Development of EM Transceiver by designing low profile antenna with high radiating power and extended coverage range with high data rate and minimal channel bandwidth.

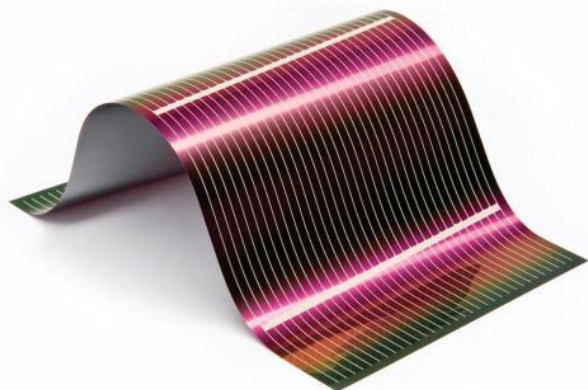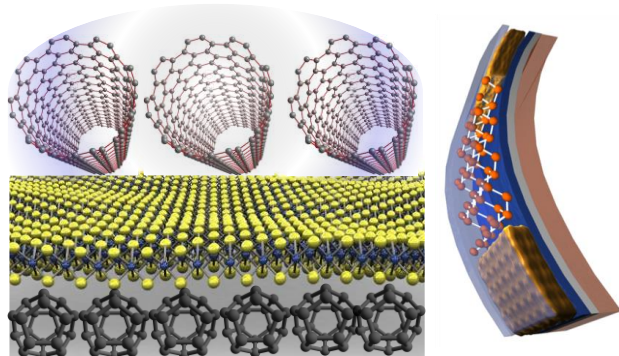Design and development of drones for ocean surveillance.

Bio-mimetic Underwater Vehicles
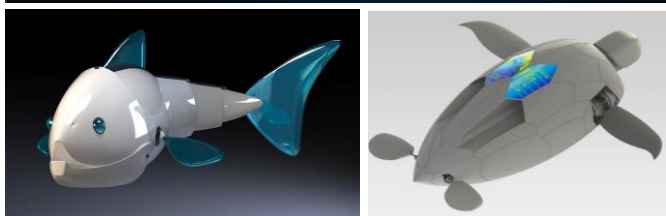
Underwater Communication

Smart Nanomaterials for Underwater Devices

IOT Signal Processing Using AI & LM

Research   Thrust   Areas