



## Towards Sustainability...

### THE - Impact Rankings 2024

7 AFFORDABLE AND  
CLEAN ENERGY



Ensure access to affordable, reliable, sustainable and modern energy for all

#### 7.2.3 Carbon reduction & emission reduction process:

We have 2113 kWp of roof top solar PV panels and Solar water heater with Heat pump for hot water systems in place. Also we procure 1.23 crore unites of electricity procured yearly through third art power purchase from wind power. Innovative radiant cooling, District cooling based on centralised chilled water HVAC systems are used effectively to reduce the energy consumption there by carbon reduction is achieved.

Over and above this we have 40 kW off grid solar power installed at agriculture research field. Also we have 5 standalone solar PVs for open well pump and 40 numbers of solar PV based street lighting.



Silver Jubilee Tower Block



International collaboration research papers published in the Journal of Chemical Engineering Journal 15.6 Impact Factor related to SDGs

**1) Gold nanoclusters supported Molybdenum diselenide-porous carbon composite as an efficient electrocatalyst for selective ultrafast probing of chlorpyrifos-pesticide -**

Chlorpyrifos (CPS) is an organophosphorus pesticide widely utilized in agricultural production. Much like other commonly used highly toxic and hazardous substances, is harmful to humans, plants, and animals. Thus, the development of highly efficient electrocatalysts that can monitor and detect levels of CPS in environmental samples is urgently required.

**2) Palladium nanoparticles anchored MoS<sub>2</sub>-MXene composite modified electrode for rapid sensing of toxic bisphenol A in aqueous media –**

Bisphenol A (BPA) is a commonly used, highly toxic organic phenolic that can damage the human nervous, reproductive, and immune systems, and thus, a rapid onsite test method is required to detect BPA in environmental samples. In this research, we coated screen-printed carbon electrodes (SPCEs) with Pd nanoparticles (NPs) anchored on a MoS<sub>2</sub>-modified MXene for the accurate onsite sensing of BPA contamination in aquatic environmental samples.

**Funds Received**

SI.No	Details of Funded Projects
1.	<p>Dr. Sakthivel G CAT (PI)</p> <p>Dr. Lakshmi Pathi Jakkamputi (SMEC) (Co-PI)</p> <p>Dr. R Jegadeeshwaran (SMEC) (Co-PI)</p> <p>Dr. R. SivaKumar (SMEC) (Co-PI)</p> <p>Dr. D. Saravanakumar (CAT) (Co-PI)</p> <p><b>Funding Agency</b>-Royal Academy of Engineering, U.K. (RAENgg)</p> <p><b>Title</b>-Capability Building and Collaborative Research on Developing an Electric Compact Tractor for Sustainable Family Farming</p> <p><b>Sanctioned Amount</b>- INR 77,00,000</p>

Sl.No	Details of Funded Projects
2.	<p>Dr. Ananiah Durai Sundararajan (Co-PI) CNVD</p> <p><b>Funding Agency-</b> Ministry of Higher Education, Malaysia</p> <p><b>Title-</b>Duplex AESHA3 Lightweight Crypto-Hardware for Medical IOT Device security with new SubBytes architecture (RM103000)</p> <p><b>Sanctioned Amount-</b> INR 18,93,282</p>
3.	<p>Dr.John Sahaya Rani SENSE (PI)</p> <p>Dr.Jeetashree Aparajeeta (Co-PI)</p> <p><b>Funding Agency-</b>India-Taiwan S&amp;T Cooperation Programme – Call for Proposal (CFP) 2021</p> <p><b>Title-</b> Deep learning-based multitask and multimodal study to assess the progressive nature of Alzheimer’s disease</p> <p><b>Sanctioned Amount-</b> INR 38,40,528</p>
4.	<p>Dr.V.Vijayalakshmi SSL (PI)</p> <p><b>Funding Agency</b> -Quaker Service Australia</p> <p><b>Title-</b> Evaluation work for the PBRC's "Integrated Village Rural Development in Nadukuppam Project" funded by Quaker Service Australia</p> <p><b>Sanctioned Amount</b> – INR 2,00,000</p>
5.	<p>Dr. Ravi kumar Biroju SAS (PI)</p> <p><b>Funding Agency-</b> Royal Society of Chemistry</p> <p><b>Title-</b> Exploring Atomically Thin Alloys for Optoelectronic Devices</p> <p><b>Sanctioned Amount-</b>4000 Pounds</p>