Indian National Academy of Engineering (INAE)

India-Taiwan Programme of Cooperation In Science & Technology

List of jointly selected proposals with Taiwan
Call 2023

A joint call for proposals was invited by INAE and NSTC Taiwan in the areas of (1) Artificial Intelligence, IoT (Internet of Things), Big Data, Cyber Security, (2) Green Energy Technology/ Renewable Energy (solar energy and bioenergy)/ Clean Energy, (3) Micro/Nano-electronics, Embedded Systems & Sensors, (4) Biotechnology, Healthcare including Functional Genomics, Drug Development and Biomedical Devices, Agriculture and Food Sciences, and (5) Aerospace Technology. The Call was advertised in June 2023. In total, 123 common eligible proposals were received against the joint call for which last date was July 31st, 2023. Based on scientific merit, complementarities of the project objectives, scientific strengths of the project coordinators and priorities of the two sides, the INAE India and NSTC Taiwan have jointly decided to support following 15 proposals. Project coordinators are being informed separately to complete administrative formalities for release of grants from INAE.

Sl. No.	Project Title	Indian PI	Taiwan PI
1	Experimental and Numerical Study on Combustion Characteristics of the Green Propellants with Nitrous Oxide Fuel Blend	Amit Kumar, Indian Institute of Technology, Madras	Hsin-Yi Shih, Chang Gung University/ Taoyuan, Taiwan
2	Room Temperature Ferroelectricity in Two-Dimensional Janus TMDs for Image Processing	Shaibal Mukherjee, Indian Institute of Technology Indore	Yu-Lun Chueh, National Tsing Hua University
3	Self-powered wound dressing for treatment of diabetic foot ulcers	Siddharth Jhunjhunwala, Indian Institute of Science, Bangalore	Zong-Hong Lin, National Taiwan University
4	Highly Efficient Sperm Sorting Chip and Commercialization	Tuhin Subhra Santra, Indian Institute of Technology Madras	Fan-Gang Tseng, National Tsing Hua University, Taiwan
5	CO_2 Photoreduction For Producing Value Added Fuels Using Halide Perovskite Heterocatalysts	Soumitra Satapathi, Indian Institute of Technology Roorkee	Di-Yan Wang, Tunghai University
6	Sustainable Hydrogen Production, Storage and Utilization using Hybrid Photoelectrocatalysts	Rakesh K Sharma, Indian Institute of Technology Jodhpur	Jeffrey C. S. Wu, College of Engineering, National Taiwan University (NTU)
7	Design and synthesis of dendrimer-based organic photocatalysts for the applications in sustainable clean energy	Rajamalli Pachaiyappan, Indian Institute of Science, Bangalore	Ho-Hsiu Chou, National Tsing Hua University

8	Solar Fuels: Green H_2 via Solar Thermochemical Splitting of Water and Conversion of CO_2 to CO over Reducible Oxides	Sounak Roy, BITS Pilani Hyderabad Campus	Bor Kae Chang, National Central University, Taiwan
9	Development of portable NMR prototype and its application in medical field using AI/ML	Arup Polley, Indian Institute of Science, Bangalore	Henry Horng-Shing Lu, National Yang Ming Chiao Tung University
10	Localizing fast radio bursts with BURSTT	Saurabh Singh, Raman Research Institute Bengaluru	Ue-Li Pen, Institute of Astronomy and Astrophysics, Academia Sinica
11	Design and Technology Co-Optimization of Stacked Nanosheet RF for 6G Applications	Yogesh Singh Chauhan, Indian Institute of Technology, Kanpur	Chee Wee Liu, National Taiwan University
12	Heterogeneously Integrated CMOS-Piezoelectric MEMS Low Phase Noise Oscillator	Gayathri Pillai, Indian Institute of Science, Bangalore	Ming-Huang Li, National Tsing Hua University
13	Design and Development of Self energized battery operated FEP based Tribo-electric nanogenerator coupled for machine tool condition monitoring	Anand Palani Iyamperumal, Indian Institute of Technology, Indore	Chuan-pu Liu, National Cheng Kung University, Taiwan
14	Design and Development of Group-III nitride based LEDs for UV-Blue region for underwater communication	Nikhil Deep Gupta, National Institute of Technology (VNIT), Nagpur	Ray Hua Horng, National Yang Ming Chiao Tung University/ Hsinchu, Taiwan
15	Feasibility study of emergency cooling in an air-cooled datacenter using PCM (phase change material) thermal module	Atul Bhargav, Indian Institute of Technology Gandhinagar	Chi-Chuan Wang, National Yang Ming Chiao Tung University