Aditya Tiwari (fourth from left) and Professor V. Ram Gopal Rao, Director, IIT Delhi (fifth from left) during the launch of 'Hope'

Electric Scooter 'Hope'

Gelios Mobility, an Indian Institute of Technology (IIT), Delhi incubated start-up has launched an electric scooter called 'Hope' having running cost of around 20 paisa per kilometre. This electric scooter is well-suited for last-mile delivery and personal travelling. It comes with a portable charger and a portable Li-ion battery that can be easily charged through a domestic socket found in households thereby eliminating the requirement of a charger in the parking area. The battery can be fully charged in four hours with a nominal current. The vehicle is integrated with a battery management system, data monitoring system and pedal-assist unit developed in-house. It is IOT enabled for data analytics and fleet management applications.

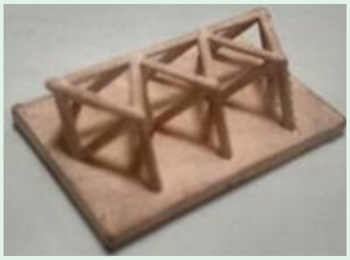
Source: India Science Wire

Giga Mesh deployed at the Indian Institute of Science campus for connectivity trials

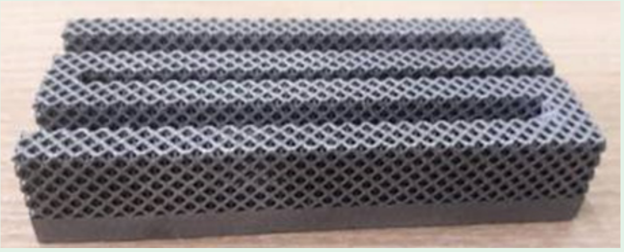
Giga Mesh

A women-led startup, Astrome, has developed an innovative wireless product called Giga Mesh. It provides fibre-like bandwidth at a fraction of the cost of fibre to help telecom operators deliver reliable low-cost internet services to suburban and rural areas. It could enable telecom operators deploy quality, high-speed rural telecom infrastructure at five times lower cost.

Source: PIB, Press release



Electroplated Sample

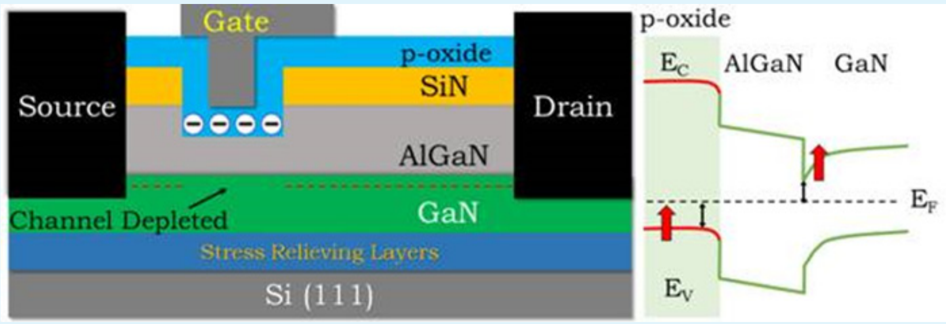


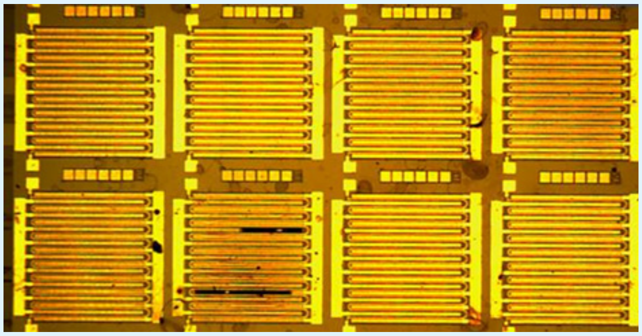
Octet Porous Flow-through Fin Heat Sinks

Multifunctional Heat Sink

Scientists from IIT Bombay with support from the Department of Science & Technology, Government of India under the 'Make in India' initiative have developed a multifunctional heat sink enabled by 3D printing technology in combination with electroplating, which can dissipate heat from mechanical devices at 50 per cent enhanced rate compared to conventional sinks. It can be used to develop heat exchangers, heat pipes, vapour chambers and noise reducing heat sinks. It can also be used in the electronics cooling, electronics as well as power or cooling industry.

Source: PIB, Press release





Optical image of the fabricated e-mode HEMTs with meandering gate structure

High Electron Mobility Transistor (HEMTs)

Scientists from the Indian Institute of Science Bangalore (IISc), have developed a device made from Gallium Nitride (GaN), a highly reliable, High Electron Mobility Transistor (HEMTs) that is a normally OFF device and can switch currents up to 4A and operates at 600V. This device is useful in locomotives, electric cars, power transmission and other areas requiring high voltage and high-frequency switching and would reduce the cost of importing such stable and efficient transistors required in power electronics. Such transistors are called enhancement mode or e-mode transistors.

Source: PIB, Press release