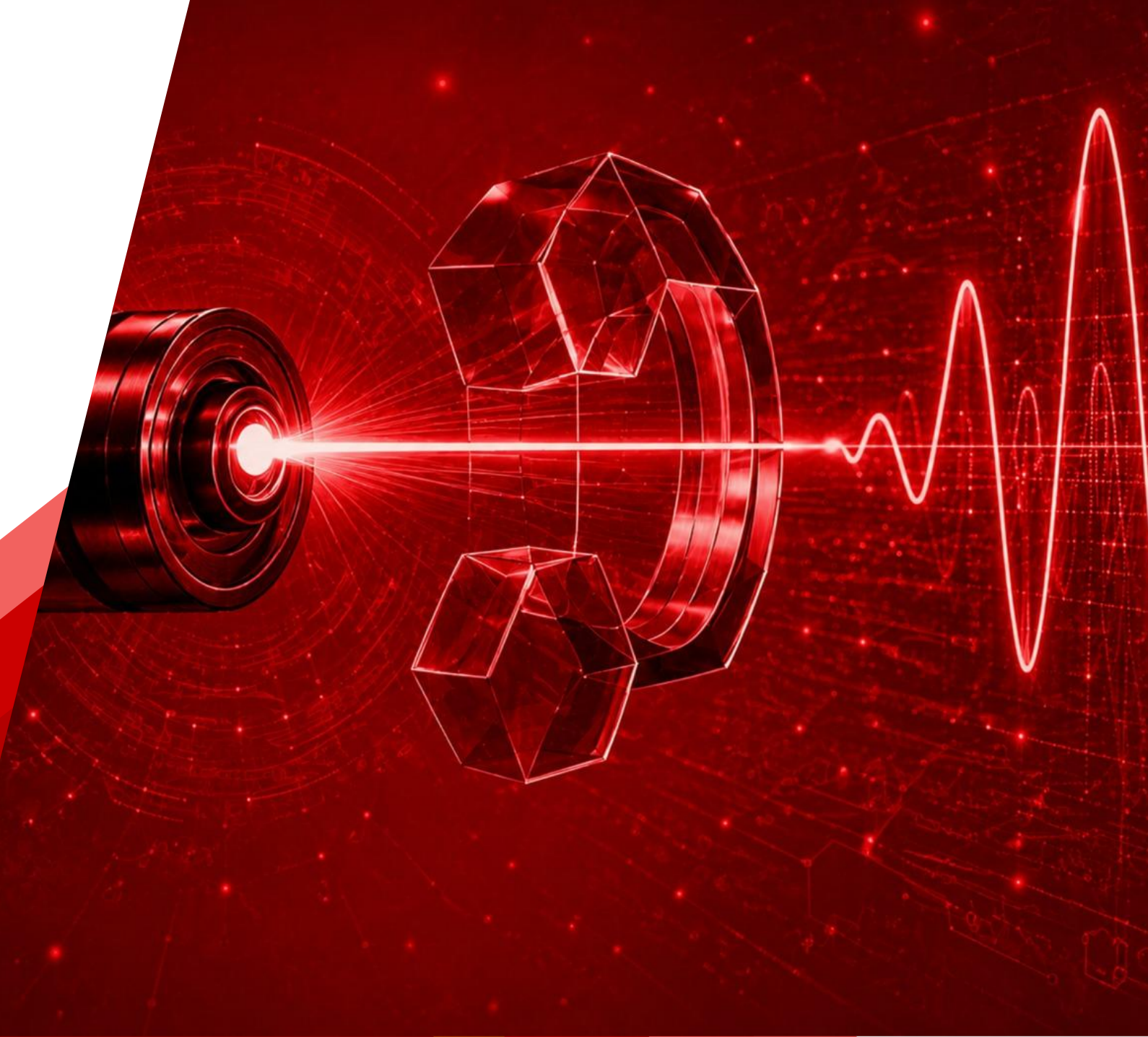


(((o))) Patents filed since 2023

This collection showcases pioneering IISc inventions in sensors and photonics, spanning advanced optical materials, nonlinear optics, flexible sensors, gas detectors, imaging systems, OLED emitters, and biomedical devices. Each patented technology addresses real-world challenges - from communication and environmental monitoring to healthcare and manufacturing - with novel, ready-to-license solutions. Industry partners are invited to explore these innovations for licensing, joint development, or research collaborations. The following list highlights unique, high-impact IPs bridging cutting-edge research and practical application. We look forward to fostering productive academia industry partnerships.

IP Reference Number	IP Title	Faculty Inventor @ IISc
MS-CPDM-2025-115	Sensor Integrated Modular Actuator and Haptic Interaction Based Scalable High-Fidelity Radial Artery Pulse Training Simulator	Abhijit Biswas
IDR-CeN-2026-002	Magnetically Maneuvered Quantum Sensors	Ambarish Ghosh
IDR-CeN-2024-131	A method and system for sorting particles with motility	
IDR-CeN-2024-130	Systems and methods for thermal characterization of materials at nanoscale	
IDR-CeN-2023-008	Method for transporting magnetic materials in a medium	
MS-ME-2023-017	A novel accordion-like disk resonator gyroscope (ADRG) with high sense capacitance	G K Ananthasuresh
MPS-PHY-2025-061	A magnetic field measurement device	P S Anil Kumar
CS-SSCU-2025-128	Luminescent markers, process of preparation and applications thereof	Anshu Pandey
MPS-PHY-2025-074	Two-dimensional (2d) photodetector and a method of forming thereof	Arindam Ghosh
ES-DESE-2025-188	An electronic device for nanopore sensing and a method thereof	Arup polley
MPS-PHY-2023-004	Manufacturing an aspherical optical component	Aveek Bid
ES-EE-2025-142	An integrated device for flow field monitoring and a method of manufacturing thereof	Gopalaratnam Narayanan
ES-DESE-2025-181	A spoon	Hardik J Pandya
ES-DESE-2025-015	A wearable device for monitoring hydration level of a subject and a method thereof	
ES-DESE-2023-116	Multiplexed sensor for electrochemical analysis	
MS-MAT-2026-007	Conducting hydrogel composite, method of preparation and implementations thereof"	Kaushik Chatterjee
IDR-CeN-2023-026	Design, Development, Fabrication and Packaging of 600 mbar (Gauge and Differential) MEMS Pressure Transducers	M.M.Nayak
IDR-CeN-2025-150	Acoustic Control of Biomolecule Translocation in Nanopore Sensing.	Manoj Varma
IDR-CeN-2025-004	Multiplexed molecular sensing using nanopore sequencing	
IDR-CeN-2024-128	Solid State Nanopore Signal Simulator for Training Deep Learning Models'	
IDR-CeN-2023-155	Buried membranes for nanopore sensing	
CS-OC-2024-111	Amphiphilic compounds, a sensor and processes thereof	
CS-OC-2025-047	A process for preparing s-aryl carbamothioates by nano-catalyst comprising l-cysteine carbon quantum dots	Mrinmoy De
IDR-CeN-2025-155	Gas sensor array	Navakanta Bhat
IDR-CeN-2025-199	Method, device, and system for detecting subthreshold input signal in ferroelectric device	Pavan Nukala
MS-CEaS-2024-070	Symmetric autoencoder-based method for detection of sub-surface anomalies and a system thereof	Pawan Bharadwaj
MS-CPDM-2025-116	A collaborative multi-layer display system and a method thereof	Pradipta Biswas
IDR-CeN-2024-161	Methods of manufacturing piezoresistor samples as strain gauges/sensors of high gauge factor for thickness as well as length	Prosenjit Sen
IDR-CeN-2024-043	Textile electrode, method of fabrication and application(s) thereof	
IDR-CeN-2023-024	Droplet-based oscillation system for sensing physical properties of fluids using a droplet as test fluid	
MPS-IAP-2023-139	Porous PDMS based sensors	



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IP Reference Number	IP Title	Faculty Inventor @ IISc
ES-ECE-2023-068	Non-linear optical mirror for up conversion of light beams and a method of manufacturing thereof	Varun Raghunathan
ES-ECE-2023-054	Optical reconfigurable system for a multi-user optical wireless communication and method thereof"	
CS-MRC-2025-066	Organic compounds as thermally activated delayed fluorescence emitters	P Rajamalli
CS-MRC-2025-048	A surface passivated quantum dot using aromatic ligand and process thereof	
CS-MRC-2023-160	Fabrication of electroluminescent leds utilizing gold-copper bimetallic nanoclusters as emissive layer	
MPS-PHY-2023-157	Cubic phase tin(iv) oxide for trace level gas sensing	Ramesh K
IDR-BSSE-2024-045	Asymmetric glycerol-substituted zinc phthalocyanine compounds and theranostic compositions thereof	Sanhita Sinharay
MS-ME-2025-197	System and method for generating controlled arrays of liquid droplets	Saptarshi Basu
CS-SSCU-2025-081	Perchlorate ion sensor comprising diketopyrrolopyrrole-based polymers	Satish Patil
CS-SSCU-2023-050	Diketopyrrolopyrrole polymers, an electrochromic substrate, an electrochromic device and implementations thereof	
MS-ME-2024-165	A tribometer	Satish Vasu Kailas
IDR-CeN-2023-035	Polarizatiion filter and cwm using a hybrid waveguide platform	Shankar Kumar Selvaraja
ES-ECE-2025-121	Systems and methods to perform an intensity based optical interrogation	E S Shivaleela
ES-ECE-2025-110	Chirped Fiber Bragg Grating as an Edge Filter for Wavelength-to-Intensity Conversion based Optical Interrogation Technique	
ES-ECE-2025-078	Systems and methods to perform an intensity based optical interrogation	
MS-MAT-2023-020	Analog to digital converter as a switch for detection of signal limits	Subho Dasgupta
CS-MRC-2025-019	Method for selective detection of copper ions using a hydrogel	Subinoy Rana
IDR-CeN-2025-038	Method and system for temperature measurement of semiconductor wafer	Supradeepa V R
IDR-CeN-2023-108	Pyroelectric IR photodetector for fire sensing	Sushoban Avasti
MPS-IAP-2025-202	Layered metasurface architecture for spectrally routed multiband imaging	Tapajyoti Das Gupta
MPS-IAP-2025-040	Method for forming Electrically conductive Ga film on Sebs substrate and substrate thereof	
MPS-IAP-2025-072	Super resolution meta-lens surface and method of designing super resolution meta-lens surface	
MS-CE-2024-084	Method for fabrication of flexible hydrogen detection sensor	Venugopal Santhanam
MS-CE-2024-078	A method of manufacturing meta-structured article	
MS-CPDM-2025-022	Convertible modular cabin enclosure for adapting to interior spaces and a method thereof	Vishal Singh
MS-CPDM-2024-086	Integrated navigation system and method for navigation assistance within built facility	
MS-CPDM-2024-060	Aggregated elevator system and method of operation thereof	
ES-EE-2023-087	System and method for converting alternating current (ac) to direct current (dc)	Vishnu Mahadeva Iyer