

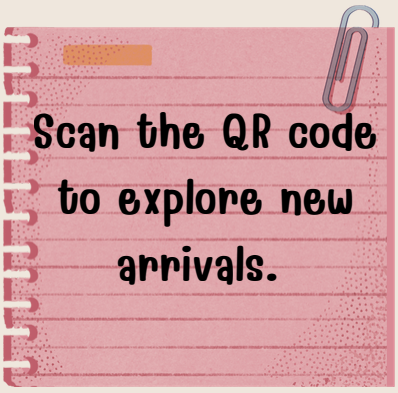
CENTRAL LIBRARY

NEW ARRIVALS

Theses Collections
(Added during 1st-28th February, 2026)

How to Recommend Book(s)?

You may recommend the books by filling out recommendation forms available on the website: https://library.iitd.ac.in/book-recommendation or through the online recommendation system: https://library.iitd.ac.in/obrs using your Kerberos ID and password.







Contact Us:

Collection Development Division
Central Library, IIT Delhi
Email: cdd@library.iitd.ac.in
Phone: 011-2659-6652/6096



THESES COLLECTIONS

Title	:	Multiscale modelling of elastic moduli and creep of cementitious materials
Researcher	:	Amit Kumar
Department	:	Department of Civil Engineering, IITD
Year	:	2025
Supervisor	:	Bishnoi, Shashank (Prof.) - CEE (Guide)
Physical description	:	x, 196 p.
Subject terms	:	Versatile semi-analytical framework; Micromechanical model; Homogenization techniques; Viscoelasticity; Maxwell model
Barcode	:	TH8517
Call No.	:	TH 666.94:539.32 AMI-M
Title	:	Augmenting the dielectric, electrical and electro-optical properties of liquid crystals using nano-inclusions
Researcher	:	Aysha Rani
Department	:	Department of Physics, IITD
Year	:	2025
Supervisor	:	Sinha, Aloka (Prof.) - PH (Guide)
Physical description	:	xxxviii, 253 p.
Subject terms	:	Thermotropic liquid crystal; Isotropic; Sawada model; Photoluminescence; Viscosity
Barcode	:	TH8518
Call No.	:	TH 544.25 AYS-A
Title	:	Plasmonic hybrid nanostructures: unifying semiconductor and organic molecules for advanced spectroscopic and electrochemical applications
Researcher	:	Dhillon, Ashish Kumar
Department	:	Department of Chemistry, IITD
Year	:	2025
Supervisor	:	Siddhanta, Soumik (Assoc. Prof.) - CHY (Guide)
Physical description	:	xxxiii, 215 p.
Subject terms	:	Surface plasmon polaritons; Covalent organic frameworks; Localized surface plasmon resonance; Cyclic voltammetry; Raman spectroscopy
Barcode	:	TH8519
Call No.	:	TH 620.3:620.22 DHI-P

Title	:	Narratives of resistance: a literary study of indigenous Australian and Dalit Malayalam literatures
Researcher	:	Gurudas, Gopika
Department	:	IIT Delhi and University of Queensland
Year	:	2025
Supervisor	:	Dwivedi, Divya (Prof.) - HSS (Guide); LaCaze, Marguerite (Prof.) - University of Queensland, Australia (Guide)
Physical description	:	xiii, 190 p.
Subject terms	:	Dynamics of caste in India; Untouchability; Swan book; Sociopolitical phenomena; Indian caste system
Barcode	:	TH8520
Call No.	:	TH 81=72=214 GUR-N
Title	:	Development of multi attribute monitoring method for the characterization of biopharmaceuticals and biosimilarity assessment
Researcher	:	Savane, Tushar Sharad
Department	:	School of Interdisciplinary Research, IITD
Year	:	2025
Supervisor	:	Rathore, Anurag Singh (Prof.) - CHE (Guide); V. Haridas (Prof.) - CHY (Guide)
Physical description	:	xxiv, 329 p.
Subject terms	:	Mass spectrometry; Liquid chromatography; Tryptophan; Monoclonal antibodies; Trypsin digestion
Barcode	:	TH8521
Call No.	:	TH 615.47:542.8 SAV-D
Title	:	Physical and numerical modelling of tunnel intersections under impact and blast loads
Researcher	:	Sinha, Shipra
Department	:	Department of Civil and Environmental Engineering, IITD
Year	:	2025
Supervisor	:	Rao, K. S. (Prof.) - CEE (Guide); Chakraborty, Tanusree (Prof.) - CEE (Guide)
Physical description	:	xxxii, 225 p.
Subject terms	:	Physical modelling; Tunnel intersections; Dynamic response; Shock wave propagation; Protective design
Barcode	:	TH8522
Call No.	:	TH 624.191.82 SIN-P

Title	:	Contemporary patterns of spouse selection: matchmaking through online matrimonial website in India
Researcher	:	Mondal, Sristi
Department	:	Department of Humanities and Social Science, IITD
Year	:	2026
Supervisor	:	Kaur, Ravinder (Prof.) - HSS (Guide)
Physical description	:	xiv, 352 p.
Subject terms	:	Digital matchmaking; Spouse selection; Online partner selection; Marriage and technology; Indian matrimonial platforms
Barcode	:	TH8523
Call No.	:	TH 173.1(540) MON-C
Title	:	Engineering of synthetic bio-receptors for rapid detection of staphylococcus aureus
Researcher	:	Narula, Kritika
Department	:	Department of Biochemical Engineering and Biotechnology, IITD
Year	:	2026
Supervisor	:	Mishra, Prashant (Prof.) - BEB (Guide)
Physical description	:	xvi, 164 p.
Subject terms	:	Molecular recognition; Biosensor engineering; Staphylococcus aureus detection; Rapid pathogen detection; Diagnostic biosensors
Barcode	:	TH8524
Call No.	:	TH 616-072:579.22 NAR-E
Title	:	Energy balancing strategy in modular power converters with distributed energy resources
Researcher	:	Nayak, Subhasis
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Das, Anandarup (Prof.) - EE (Guide)
Physical description	:	141 p.
Subject terms	:	Modular multilevel converters; Cascaded h-bridge converters; Fundamental frequency zero sequence voltage; Electric vehicle; Photovoltaic
Barcode	:	TH8525
Call No.	:	TH 621.314.57 NAY-E

Title	:	Aerosol-cloud interactions over the south Asian monsoon region: a modeling study
Researcher	:	Sharma, Puneet
Department	:	School of Interdisciplinary Research, IITD
Year	:	2026
Supervisor	:	Ganguly, Dilip (Prof.) - CAS (Guide); Habib, Gazala (Prof.) - CEE (Guide)
Physical description	:	x, 136 p.
Subject terms	:	General circulation model; Observation simulator package; Community atmosphere model; Community earth system model; Indian summer monsoon
Barcode	:	TH8526
Call No.	:	TH 551.585.3:54-138 SHA-A
Title	:	Load distribution analysis between interconnected slabs-formwork systems during the construction of high-rise reinforced concrete buildings
Researcher	:	Shaikhjan, Abdul Ghaffar
Department	:	Department of Civil and Environmental Engineering, IITD
Year	:	2025
Supervisor	:	Jha, K. N. (Prof.) - CEE (Guide)
Physical description	:	xxxi, 240 p.
Subject terms	:	Construction stage loading; Concrete slab systems; Structural analysis; Temporary structural systems; Load transfer mechanisms
Barcode	:	TH8527
Call No.	:	TH 69:624.04 SHA-L
Title	:	Switchable Divergent benzannulations of vinly sulfoxonium ylides with eletron deficient alkynes
Researcher	:	Davas, Daksh Singh
Department	:	Department of Chemistry, IITD
Year	:	2026
Supervisor	:	Vaitla, Janakiram (Assoc. Prof.) - CHY (Guide)
Physical description	:	xx, 387 p.
Subject terms	:	Reaction control; Cyclization; Divergent synthesis; Switchable reaction; Regioselectivity
Barcode	:	TH8528
Call No.	:	TH 547.21 DAV-S

Title	:	Advancing crash frequency modelling and hazardous roadway segment identification using spatial frequency domain analysis
Researcher	:	Parveen Kumar
Department	:	Transportation Research and Injury Prevention Centre, IITD
Year	:	2026
Supervisor	:	Tiwari, Geetam (Prof.) - TRIPC (Guide); Paul, Sourabh Bikas (Assoc. Prof.) - HSS (Guide)
Physical description	:	xxviii, 182 p.
Subject terms	:	Power spectral segment length; Road transport; Kernel density empirical bayes model; Negative binomial Lindley model; Spatial frequency domain analysis
Barcode	:	TH8529
Call No.	:	TH 656.1+528 PAR-A
Title	:	Development and application of multiscale simulations for structure-property relationship in polymer-clay nanocomposites
Researcher	:	Patidar, Ankit
Department	:	Department of Chemical Engineering, IITD
Year	:	2026
Supervisor	:	Goel, Gaurav (Prof.) - CHE (Guide)
Physical description	:	xxiv, 197 p.
Subject terms	:	Thermo-mechanical properties; Material science; Coarse-grain models; Glycosidic linkage conformations; Young's modulus
Barcode	:	TH8530
Call No.	:	TH 620.1:678 PAT-D
Title	:	High-pressure colloidal hydrogen aphrons (CHAs): a study on generation, storage, stability ,and release
Researcher	:	Rajput, Priyank
Department	:	Department of Chemical Engineering, IITD
Year	:	2026
Supervisor	:	Bhaskarwar, Ashok N. (Prof.) - CHE (Guide)
Physical description	:	xxiii, 153 p.
Subject terms	:	Hydrogen storage; Aphron generation; Microbubble formation; Colloidal stability; Mass transfer dynamics
Barcode	:	TH8531
Call No.	:	TH 546.11:620.92 RAJ-H

Title	:	Sodium based transition-metal anode materials for high-performance lithium and sodium-ion batteries
Researcher	:	Sharma, Akshita
Department	:	Department of Chemistry, IITD
Year	:	2026
Supervisor	:	Ganguli, Ashok K. (Prof.) - CHY (Guide); Chowdhury, Pramit K. (Prof.) - CHY (Guide)
Physical description	:	xxiv, 184 p.
Subject terms	:	Dual-ion battery systems; Electrochemical energy storage; Anode materials; High-rate capability; Charge–discharge kinetics
Barcode	:	TH8532
Call No.	:	TH 621.354:546.34 SHA-S
Title	:	Novel retaliation strategies against artillery threats
Researcher	:	Sharma, Manoj
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Kar, Subrat (Prof.) - EE (Guide); Roy, Sumantra Dutta (Prof.) - EE (Guide)
Physical description	:	xx, 135 p.
Subject terms	:	Artillery threat; Defense strategy innovation; Sensor–shooter integration; Counter-battery systems; Battlefield survivability
Barcode	:	TH8533
Call No.	:	TH 621.39:355.4 SHA-N
Title	:	Exploring the crowded milieu: enzyme behaviour and phase separation
Researcher	:	Singh, Arvind
Department	:	Department of Chemistry, IITD
Year	:	2026
Supervisor	:	Chowdhury, Pramit Kumar (Prof.) - CHY (Guide)
Physical description	:	xlii, 236 p.
Subject terms	:	Macromolecular crowding; Enzyme kinetics; Biomolecular condensates; Intracellular environment; Diffusion limitation
Barcode	:	TH8534
Call No.	:	TH 577.15 SIN-E

Title	:	Unravelling the path to firms sustainability: investigating key antecedents and the role of sustainability measurement schemes
Researcher	:	Chandra, Akriti
Department	:	Department of Management Studies, IITD
Year	:	2025
Supervisor	:	Sharma, Seema (Prof.) - MS (Guide); Dwivedi, Gourav (Assoc. Prof.) - MS (Guide)
Physical description	:	xv, 232 p.
Subject terms	:	Sustainability measurement schemes; Micro small and medium enterprises; Enviornmentally sustainable business; Total interpretive structural modelling; Entrepreneurial ecosystem dynamics
Barcode	:	TH8535
Call No.	:	TH 502.131.1 CHA-U
Title	:	Quality management in multi-storeyed residential building construction
Researcher	:	Sreedevi A. R.
Department	:	Department of Civil Engineering, IITD
Year	:	2026
Supervisor	:	Jha, Kumar Neeraj (Prof.) - CEE (Guide)
Physical description	:	xxiii, 320 p.
Subject terms	:	Construction practices; Building construction management; Multi-storeyed buildings; Quality assurance; Residential building construction
Barcode	:	TH8536
Call No.	:	TH 69:005.6 SRE-Q
Title	:	Trustworthy machine learning on resource-constrained IoT platforms
Researcher	:	Jabbeen, Mehreen
Department	:	Department of Computer Science and Engineering, IITD
Year	:	2026
Supervisor	:	Sen, Rijurekha (Assoc. Prof.) - CSE (Guide); Vireshwar Kumar (Asst. Prof.) - CSE (Guide)
Physical description	:	xix, 124 p.
Subject terms	:	Adversarial machine learning; Keyword spotting; Tsetlin machines; Transformer model; Automated speech recognition
Barcode	:	TH8537
Call No.	:	TH 004.85 JAB-T

Title	:	Essays on monetary policy in India
Researcher	:	Kundu, Suranjana
Department	:	Department of Humanities and Social Sciences, IITD
Year	:	2026
Supervisor	:	Paul, Sourabh B. (Assoc. Prof.) - HSS (Guide)
Physical description	:	xvi, 102 p.
Subject terms	:	Heterogenous agent model; Macroeconomic model; Indian household survey data; Economics of India; Equilibrium model
Barcode	:	TH8538
Call No.	:	TH 336.7(540) KUN-E
Title	:	Physiological artifacts reduction in electroencephalograms with signal processing and deep learning
Researcher	:	Malo, Anupam
Department	:	Bharti School of Telecommunication Technology and Management, IITD
Year	:	2026
Supervisor	:	Gandhi, Tapan K. (Prof.) - EE (Guide); Panigrahi, Bijaya K. (Prof.) - EE (Guide)
Physical description	:	xvi, 141 p.
Subject terms	:	Blind source separation; Long short term memory; Dictionary learning; Wavelet de-noising based techniques; Adaptive filters
Barcode	:	TH8539
Call No.	:	TH 616.8:004.93 MAL-P
Title	:	Wet electrode atmospheric pressure microplasma for multielement analysis of metal ions in aqueous samples
Researcher	:	Manjeet Kumar
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Mitra, Bhaskar (Assoc. Prof.) - EE (Guide)
Physical description	:	xxi, 124 p.
Subject terms	:	Plasma optical emission spectroscopy; Analytical detection; Chemical sensors; Electrolyte cathode glow discharge; Silver nanoflowers
Barcode	:	TH8540
Call No.	:	TH 537.5:543 MAN-W

Title	:	Development of computer vision and generative artificial intelligence based frameworks for healthcare domain
Researcher	:	Patil, Sanjeet Sanjay
Department	:	Department of Chemical Engineering, IITD
Year	:	2026
Supervisor	:	Rathore, Anurag S. (Prof.) - CHE (Guide); Ramteke, Manojkumar C. (Prof.) - CHE (Guide)
Physical description	:	xx,132 p.
Subject terms	:	Artificial intelligence; Magnetic resonance imaging; Convolutional neural network; Medical image translation; Large language models in healthcare
Barcode	:	TH8541
Call No.	:	TH 61:004.8 PAT-D
Title	:	Design and development of microfluidic chip for platelet separation from whole blood for point-of-care application
Researcher	:	Sharma, Komal
Department	:	Centre for Biomedical Engineering, IITD
Year	:	2026
Supervisor	:	Jha, Sandeep K. (Prof.) - CBME (Guide)
Physical description	:	xxvi, 169 p.
Subject terms	:	Scanning electron microscopic; Microfluids; Density gradient centrifugation; Hydrodynamic; Dielectrophoresis
Barcode	:	TH8542
Call No.	:	TH 615.47:616.15 SHA-D
Title	:	Development of digital twin for material extrusion-based 3D printing process
Researcher	:	Shende Snehal Arun
Department	:	Department of Mechanical Engineering, IITD
Year	:	2026
Supervisor	:	Pandey, Pulak Mohan (Prof.) - ME (Guide); Jha, Sunil (Prof.) - ME (Guide)
Physical description	:	xxiii, 171 p.
Subject terms	:	Fused filament fabrication; Digital twin; Machine learning; Image processing techniques; Sensor integration
Barcode	:	TH8543
Call No.	:	TH 681.62:004.932 SHE-D

Title	:	Synthesis, characterization and evaluation of polymer-iron oxide hybrid nanosystems for targeting and imaging applications
Researcher	:	Mahajan, Shveta
Department	:	Department of Materials Science and Engineering, IITD
Year	:	2012
Supervisor	:	Choudhary, Veena (Prof.) - MSE (Guide); Koul, Veena (Prof.) - CBME (Guide)
Physical description	:	xxi, 154 p.
Subject terms	:	Nanotechnology nanomaterials; Magnetic nanoparticles; Iron oxide nanoparticles; Polymer nanocomposites; Hybrid nanosystems
Barcode	:	TH8544
Call No.	:	TH 620.3:616-073 MAH-S
Title	:	Turning a blind eye to ethics for self-interest: conceptualization, scale development and cross-cultural validation of ethical blindfolding at work
Researcher	:	Aishwarya
Department	:	Department of Management Studies, IITD
Year	:	2026
Supervisor	:	Bhal, Kanika T. (Prof.) - MS (Guide)
Physical description	:	xiv, 239 p.
Subject terms	:	Unethical workplace Behaviors; Ethical blidness; Moral muteness; Deliberate ignorance; Employee silence
Barcode	:	TH8545
Call No.	:	TH 159.9:331.1 AIS-T
Title	:	Stab resistance behaviour of high-performance textile materials and structures
Researcher	:	Das, Jyotirmoy
Department	:	Department of Textile and Fibre Engineering, IITD
Year	:	2026
Supervisor	:	Majumdar, Abhijit (Prof.) - TFE (Guide); Butola, Bhupendra Singh (Prof.) - TFE (Guide)
Physical description	:	xxi,191 p.
Subject terms	:	Sher thickening fluid; Denier per filament; Nonwoven and unidirectional fabrics; Testing of stab resistance; Fabric manufacturing
Barcode	:	TH8546
Call No.	:	TH 677.047:620.168 DAS-S

Title	:	From sequence to structure: hierarchical self-assembly into structurally distinct architectures
Researcher	:	Dutta, Souvik
Department	:	Department of Chemistry, IITD
Year	:	2026
Supervisor	:	Haridas, V. (Prof.) - CHY (Guide)
Physical description	:	xxx, 227 p.
Subject terms	:	Tissue engineering; Nanoelectronics and molecular devices; Therapeutics; Scanning electron microscopy; Pseudopeptides
Barcode	:	TH8547
Call No.	:	TH 577.2 DUT-F
Title	:	MBE growth of 2D MoTe2 and heterostructures with investigations on phase engineering and charge transfer effects
Researcher	:	Kamlesh
Department	:	Department of Physics, IITD
Year	:	2026
Supervisor	:	Singh, Rajendra (Prof.) - PH (Guide)
Physical description	:	xxx, 203 p.
Subject terms	:	Molecular beam epitaxy; Molybdenum ditelluride; Spectroscopy; Quantum tunneling; Transmission electron microscopy
Barcode	:	TH8548
Call No.	:	TH 539.196:621.382 KAM-M
Title	:	Stochastic modeling of derivative pricing incorporating risk and regime switching dynamics
Researcher	:	Mittal, Priya
Department	:	Department of Mathematics, IITD
Year	:	2026
Supervisor	:	Dharmaraja, S. (Prof.) - MA (Guide)
Physical description	:	xxii, 105 p.
Subject terms	:	Heston and hull-white framework; Stochastic liquidity; Volatility risk; Financial market; European options
Barcode	:	TH8549
Call No.	:	TH 519.21:336.76 MIT-S

Title	:	Discovering novel cell-type specific non-coding RNA and dissecting their role in cancer
Researcher	:	Pavithra, Prakrithi
Department	:	IIT Delhi and University of Queensland
Year	:	2026
Supervisor	:	Gupta, Ishaan (Assoc. Prof.) - BEB (Guide); Nguyen, Quan - University of Queensland, Australia (Guide)
Physical description	:	xxvii, 169 p.
Subject terms	:	Spatial transcriptomics; Single cell; Bioinformatics; long read sequencing; Long non-coding RNA
Barcode	:	TH8550
Call No.	:	TH 577.21:616-006.6 PAV-D
Title	:	Penetration mechanics of low-velocity shrapnel in soft tissues and their surrogates
Researcher	:	Terefe, Tesfaye Olana
Department	:	Department of Mechanical Engineering, IITD
Year	:	2026
Supervisor	:	Datla, Naresh V. (Prof.) - ME (Guide); Chawla, Anoop (Prof.) - ME (Guide)
Physical description	:	xx, 166 p.
Subject terms	:	Finite element modelling; Transmitted force; Depth of penetration; Blast induced injuries; Friction sensitive analysis
Barcode	:	TH8551
Call No.	:	TH 616-001:611.018 TER-P
Title	:	Development of molecular cobalt and copper catalysts for spectrochemical and electrochemical oxygen reduction reaction
Researcher	:	Das, Avijit
Department	:	Department of Chemistry, IITD
Year	:	2026
Supervisor	:	Paria, Sayantan (Assoc. Prof.) - CHY (Guide)
Physical description	:	xxi, 258 p.
Subject terms	:	Metalloenzymes; Biomimetic model; Mononuclear; Electrochemical; Electron reduction
Barcode	:	TH8552
Call No.	:	TH 66.094.2 DAS-D

Title	:	OTFS-based channel estimation and multiple-access in doubly spread wireless channel
Researcher	:	khan, Imran Ali
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Saif Khan Mohammed (Prof.) - EE (Guide)
Physical description	:	xviii, 123 p.
Subject terms	:	Channel estimation; Multiple access techniques; Wireless communications; Next-generation wireless systems; High-mobility communications
Barcode	:	TH8553
Call No.	:	TH 621.391 KHA-O
Title	:	Carbon fiber paper electrode of high capacitance for supercapacitor
Researcher	:	Mythili, Peparthi
Department	:	Department of Chemical Engineering, IITD
Year	:	2026
Supervisor	:	Shukla, Anupam (Prof.) - CHE (Guide)
Physical description	:	xxiv, 155 p.
Subject terms	:	Carbon fiber paper; Electrochemical energy storage; Supercapacitors; High capacitance; Electrode materials
Barcode	:	TH8554
Call No.	:	TH 621.319.4:621.3.032.2 MYT-C
Title	:	Resource allocation in multi-cell OTFS and precoded zak-OTFS for low-complexity receiver equalization
Researcher	:	Pathak, Amit Kumar
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Mohammed, Saif Khan (Prof.) - EE (Guide)
Physical description	:	xxi, 144 p.
Subject terms	:	Resource allocation; Orthogonal time frequency space; Multi-cell networks; Precoding techniques; Receiver equalization
Barcode	:	TH8555
Call No.	:	TH 621.391 PAT-R

Title	:	Amino acid-based hydrogel composites for atmospheric water harvesting and purification applications
Researcher	:	Sahoo, Sandeep Kumar
Department	:	Department of Materials Science and Engineering, IITD
Year	:	2026
Supervisor	:	Tripathi, Bijay P. (Assoc. Prof.) - MSE (Guide)
Physical description	:	xxxii, 242 p.
Subject terms	:	Water scarcity; Metal organic frameworks; Photothermal activity; Organogels; Synergistic hygroscopic properties
Barcode	:	TH8556
Call No.	:	TH 547.466:551.577.13 SAH-A
Title	:	Design and development of switched reluctance motor drive for low power applications
Researcher	:	Singh, Vipin Kumar
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Singh, Bhim (Prof.) - EE (Guide)
Physical description	:	xxi, 282 p.
Subject terms	:	Electric machines; Mechatronics; Motor control techniques; Power electronics; Energy-efficient drives
Barcode	:	TH8557
Call No.	:	TH 621.313.13 SIN-D
Title	:	Harnessing the rhizobiome and pathobiome for mitigation of fusarium wilt in cajanus cajan
Researcher	:	Tyagi, Rashi
Department	:	Department of Biochemical Engineering and Biotechnology, IITD
Year	:	2026
Supervisor	:	Sharma, Shilpi (Prof.) - BEB (Guide)
Physical description	:	xxiv, 194 p.
Subject terms	:	Rhizobiome; Biological disease management; Plant-microbe interactions; Soil microbiome; Sustainable agriculture
Barcode	:	TH8558
Call No.	:	TH 632.24 TYA-H

Title	:	Design of a pipeline for the detection, tracking and classification of road signs
Researcher	:	Ansari, Farah Jamal
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Agarwal, Sumeet (Assoc. Prof.) - SAI (Guide); Hanmandlu, M. (Retd. Prof.) - EE (Guide)
Physical description	:	xvi, 136 p.
Subject terms	:	Support vector machine; Convolutional neural network; Particle competitive cooperative learning model; Hanman transform variants; Detection tracking classification
Barcode	:	TH8559
Call No.	:	TH 656.05:004.8 ANS-D
Title	:	Scattering of massless dirac fermions in modulated graphene junctions and its effect on electron transport
Researcher	:	Banerjee, Partha Sarathi
Department	:	Department of Physics, IITD
Year	:	2026
Supervisor	:	Marathe, Rahul (Assoc. Prof.) - PH (Guide); Ghosh, Sankalpa (Prof.) - PH (Guide)
Physical description	:	xvi. 115 p.
Subject terms	:	Optical theorem; Differential scattering cross section; Electrostatic and magnetic barriers; Graphene based superconducting devices; Quantum hall- superconductor junctions
Barcode	:	TH8560
Call No.	:	TH 621.382:537.521 BAN-S
Title	:	Studies on underwater 3D acoustic imaging
Researcher	:	Bisla, Nidhi
Department	:	Centre for Applied Research in Electronics, IITD
Year	:	2026
Supervisor	:	Arun Kumar (Prof.) - CARE (Guide); Bahl, Rajendar (Prof.) - CARE (Guide)
Physical description	:	xxvi, 155 p.
Subject terms	:	Deconvolution approach for mapping of sources; Linear frequency modulated; Single-shot transmission; Single-to-noise ratio conditions; Sonar equation analysis
Barcode	:	TH8561
Call No.	:	TH 534.6:004.932 BIS-S

Title	:	Efficiency improvement of two-stage electric vehicle powertrain
Researcher	:	Khan, Mohammad Saleh
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Nag, Soumya Shubhra (Assoc. Prof.) - EE (Guide); Das, Anandarup (Prof.) - EE (Guide)
Physical description	:	xxii, 198 p.
Subject terms	:	Pulse width modulation; Input parallel output-series; Voltage source inverter; Non-inverting buck-boost; Three- phase unfolding
Barcode	:	TH8562
Call No.	:	TH 629.064.5:621.314 KHA-E
Title	:	Earnings management around mergers and acquisitions: empirical evidence from BRICS Nations
Researcher	:	Lalwani, Diksha
Department	:	Department of Management Studies, IITD
Year	:	2026
Supervisor	:	Jain, Sonali (Asst. Prof.) - MS (Guide)
Physical description	:	xxiv, 286 p.
Subject terms	:	Emerging economies; Acquirers; Discretionary accruals; Institutional differences; Performance
Barcode	:	TH8563
Call No.	:	TH 657:658.168.5 LAL-E
Title	:	Quenchofluorometric investigation of alternative solvent media
Researcher	:	Manish Kumar
Department	:	Department of Chemistry, IITD
Year	:	2026
Supervisor	:	Pandey, Siddharth (Prof.) - CHY (Guide)
Physical description	:	xlvi, 287 p.
Subject terms	:	Volatile organic solvent; Fluorescence probes; Perfluorinated solvents; Dynamic quenching; Spectroscopic techniques
Barcode	:	TH8564
Call No.	:	TH 543.426 MAN-Q

Title	:	Investigation of retinal biomarkers for early detection of visual impairment
Researcher	:	Pappu, Geeta Pavani
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Gandhi, Tapan Kumar (Prof.) - EE (Guide); Biswal, Birendra - (Prof.) GVPCE, Visakhapatnam (Guide)
Physical description	:	xxvi, 168 p.
Subject terms	:	Epidemiology; Pyramid pooling module; Anatomy; Channel attention module; Optical coherence tomography scans
Barcode	:	TH8565
Call No.	:	TH 617.735:616-073 PAP-I
Title	:	Investigation of solute solvation and surfactant aggregation within deep eutectic solvents
Researcher	:	Patra, Anushis
Department	:	Department of Chemistry, IITD
Year	:	2026
Supervisor	:	Pandey, Siddharth (Prof.) - CHY (Guide)
Physical description	:	xxxix, 214 p.
Subject terms	:	Volatile organic compounds; Pyrene excimer formation; Spectroscopic techniques; Fluorophores; Microemulsion
Barcode	:	TH8566
Call No.	:	TH 544.35:544.77 PAT-I
Title	:	Health benefits of exposure to residential greenspace in Indian adults
Researcher	:	Saw, Gautam Kumar
Department	:	IIT Delhi and University of Queensland
Year	:	2026
Supervisor	:	Dey, Sagnik (Prof.) - CAS (Guide); Knibbs, Luke - University of Queensland, Australia (Guide)
Physical description	:	143 p.
Subject terms	:	Air pollution; Anaemia; National family health survey; Enhanced vegetation index; Socio-economic exposure
Barcode	:	TH8567
Call No.	:	TH 614.7:711.8(540) SAW-H

Title	:	Development of computational biomarkers for early diagnosis and differential monitoring of dementia
Researcher	:	Ranjan, Shivani
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Lalan Kumar (Prof.) - EE (Guide)
Physical description	:	xxix, 237 p.
Subject terms	:	Neuroimaging techniques; Electroencephalography; Cross-plot transition entropy; Dementia severity index; Cerebrospinal fluid
Barcode	:	TH8568
Call No.	:	TH 616.85:004.93 RAN-D
Title	:	Control and implementation of microgrids employing renewable energy sources for EV charging infrastructure
Researcher	:	Tiwari, Kripa
Department	:	Department of Electrical Engineering, IITD
Year	:	2026
Supervisor	:	Singh, Bhim (Prof.) - EE (Guide)
Physical description	:	xxxv, 322 p.
Subject terms	:	DC bus based microgrid; Solar photovoltaic array; Grid synchronization capability; Dynamic load management; MATLAB model
Barcode	:	TH8569
Call No.	:	TH 621.311.243:621.316.7 TIW-C