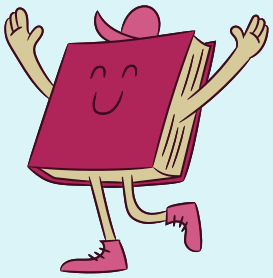


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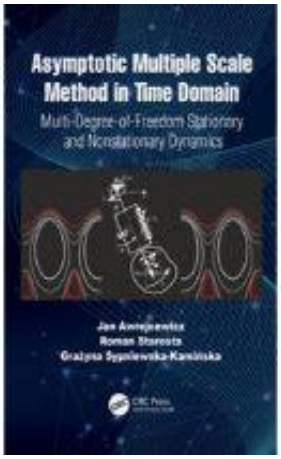
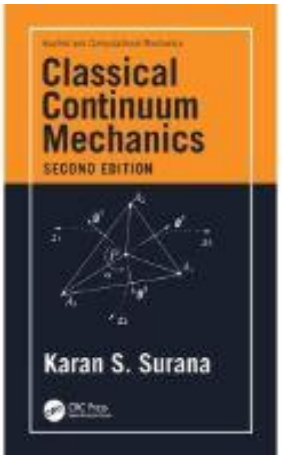
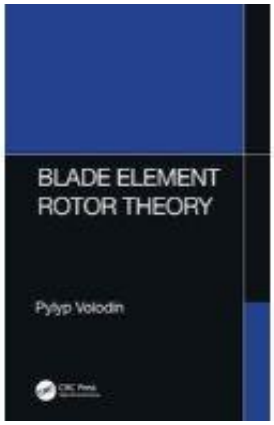
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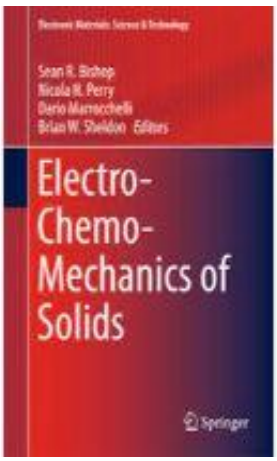
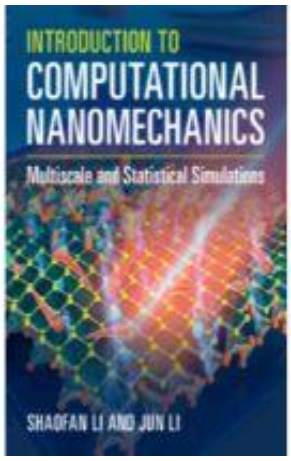
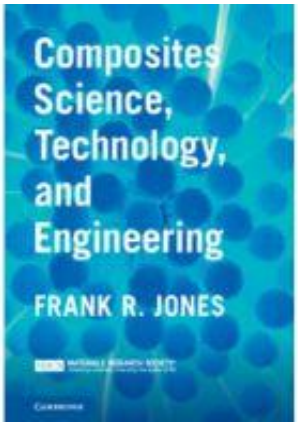
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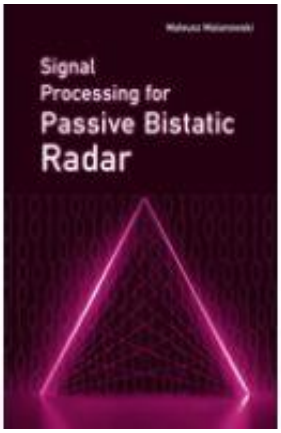
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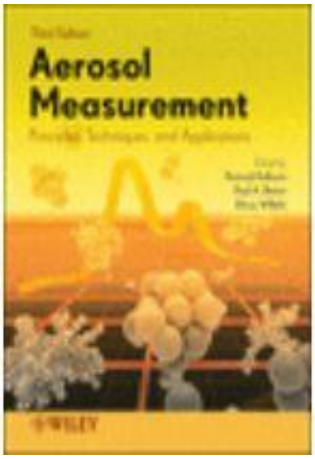
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1	
	Asymptotic multiple scale method in time domain: multi-degree-of-freedom stationary and nonstationary dynamics by Jan Awrejcewicz, Roman Starosta and Grażyna Sypniewska-Kamińska, Boca Raton: CRC Press, 2022. xiv, 396 p. ISBN: 9781032219417 Subject Terms: Differential equations - Asymptotic theory, Dynamical systems, Multiscale modeling, Structural Engineering, Fluid Mechanics
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2	
	Classical continuum mechanics by Karan S. Surana, 2nd ed. Boca Raton: CRC Press, 2022. xxi, 509 p., - Applied and Computational Mechanics. ISBN: 9780367612962 Subject Terms: Spin tensor, Constitutive theories, Thermo hyper-elastic solids, Thermodynamic relations, Thermoviscous fluids, Thermoviscoelastic solids
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3	
	Blade element rotor theory by Pylyp Volodin, Boca Raton: CRC Press, 2023. xv, 169 p. ISBN: 9781032283036 Subject Terms: Aerospace, Engineering, Aircraft design, Aeronautics, Flapping hinge, Swashplate mechanism
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4		Electro-chemo-mechanics of solids edited by Sean R. Bishop... (et al.), Cham: Springer, 2017. ix, 192 p., - Electronic materials: science & technology. ISBN: 9783319514055 Subject Terms: Carbon neutral energy, Dielectrics, Electrochemistry batteries, Electrochemomechanics, Nonstoichiometric oxides, Energy storage research 531:544.6 -ELE 178398; 178472; CL; AM **Click here for more details.**
5		Introduction to computational nanomechanics: multiscale and statistical simulations by Shaofan Li and Jun Li, Cambridge: Cambridge University Press, 2022. x, 572 p. ISBN: 9781107011151 Subject Terms: Quantum physics, Statistical mechanics, Molecular dynamics – Mathematics, Nanotechnology Molecular physics 530.145:531.19 LI-I 178355; CL **Click here for more details.**
6		Composites science, technology, and engineering by Frank R. Jones,. Cambridge: Cambridge University Press, 2022. xv, 389 p., - Materials Research Society. ISBN: 9781107036123 Subject Terms: Composites materials, Materials science, Matrices, Composites fabrication, Fibres 620.1 JON-C 178368; CL **Click here for more details.**
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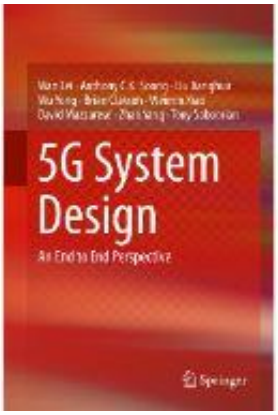
Applied Research in Electronics

7		Signal processing for passive bistatic radar by Mateusz Malanowski, Norwood: Artech house, 2019. x, 367 p. ISBN: 9781630816629 Subject Terms: Signal processing - Digital techniques, Adaptive signal processing, Correlation processing, Detection estimation, Bistatic tracking 621.396.96:621.391 MAL-S 178403; CL **Click here for more details.**

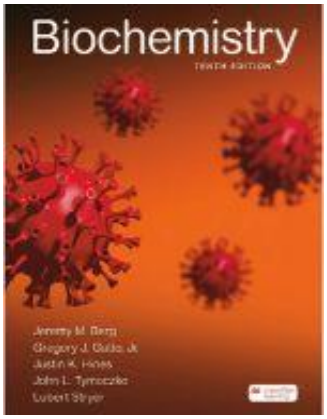
Atmospheric Sciences

8		Aerosol measurement: principles, techniques, and applications edited by Pramod Kulkarni, Paul A. Baron and Klaus Willeke, 3rd ed. Hoboken: Wiley, 2011. xiv, 883 p., ISBN: 9780470387412 Subject Terms: Atmospheric aerosols, Inhalation toxicology, Atmospheric particle measurement, Radioactive Aerosols, Aerosol characterization 544.772:628.53 -AER 178351; CL **Click here for more details.**
9		Aerosol technology: properties, behavior, and measurement of airborne particles by William C. Hinds and Yifang Zhu, 3rd ed.Hoboken: Wiley, 2022. xxii, 425 p., ISBN: 9781119494041 Subject Terms: Aerosol concentration, Properties of gases, Uniform particle motion, Particle size statistics, Adhesion of particles 544.772 HIN-A 178352-178353; CL;CAS **Click here for more details.**

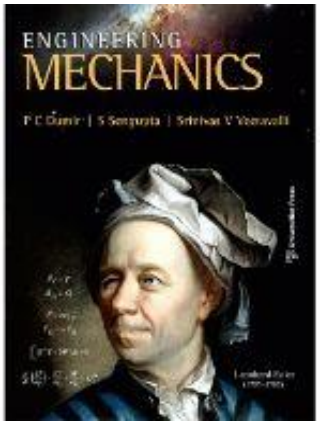
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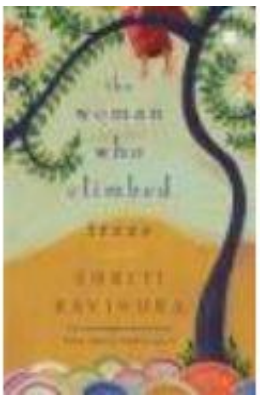
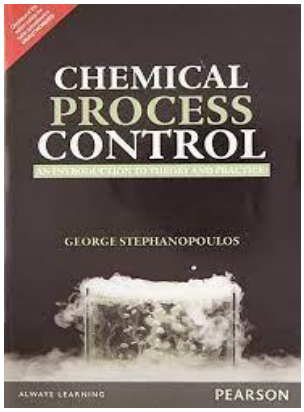
10		5G system design: an end to end perspective by Wan Lei... (et al.), 2nd ed.Cham: Springer, 2021. xxxiv, 668 p. ISBN: 9783030737023 Subject Terms: Computer communication networks, 5G system architecture, Computer networks, Internet of things, Wireless communication systems 621.391 -FIV 178385; CL **Click here for more details.**

Biochemical Engineering & Biotechnology

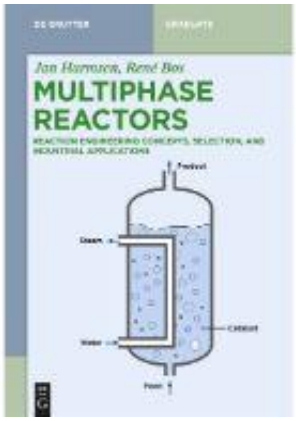
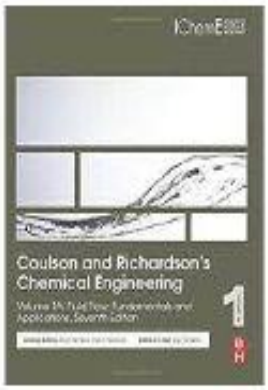
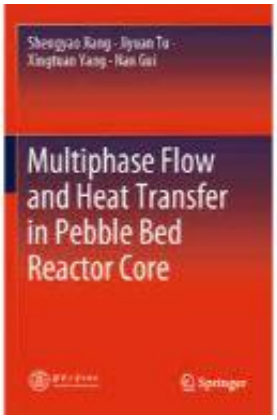
11		Biochemistry by Jeremy M. Berg... (et.al.), 10th ed.New York: Macmillan Learning, 2023. v.p. ISBN: 9781319498504 Subject Terms: Protein composition, Carbohydrates and Glycoproteins, Glycoproteins, Enzymes, Nucleotide biosynthesis 577.1 -BIO 178381-178382; CL;SBS **Click here for more details.**

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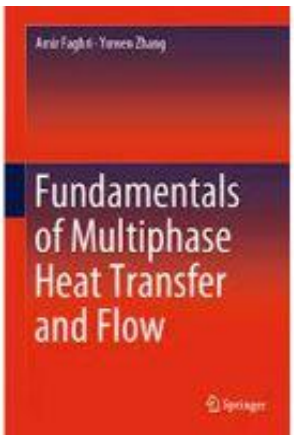
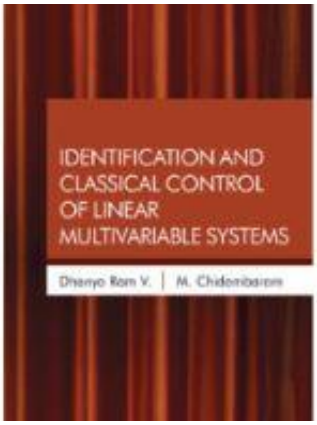
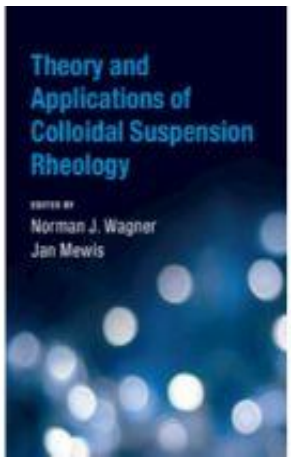
12		Engineering mechanics by P C Dumir, S Sengupta and Srinivas V Veeravalli, Hyderabad: Universities Press, 2020. x, 830 p., ISBN: 9789389211573 Subject Terms: Kinematics, Axioms and force systems, Dynamics of rigid body, Variational mechanics Statics 531:62 DUM-E 178369-178372; BB76685-BB76689; CL; TB; BB **Click here for more details.**

13		Woman who climbed trees: a novel by Smriti Ravindra, Haryana: Harper Collins, 2023. x, 421 p. ISBN: 9789356296237 Subject Terms: English Literature, English Novel, English fiction, Women's Image - Indian scenario, Contemporary women
		821.111-31 RAV-W
		178392; CL
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14		Chemical process control an introduction to theory and practice by George Stephanopoulos, Noida: Pearson, 2015. xxi, 696 p. ISBN: 9789332549463 Subject Terms: Chemical engineering, Higher-order systems, Laplace Transforms, Feedback Control, Z-Transforms
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15		Algorithm design by Jon Kleinberg and Eva Tardos, Noida: Pearson, 2014. 824 p. ISBN: 9789332518643 Subject Terms: Computer algorithms – Design, Data structures, Dynamic programming, Network flow, Randomized algorithms
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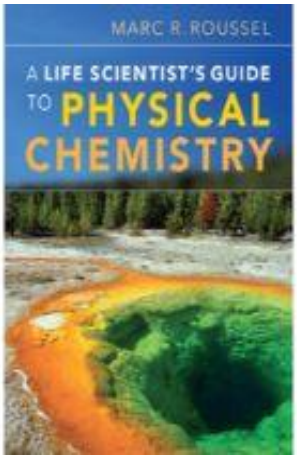
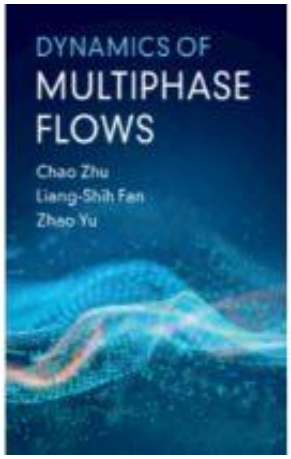
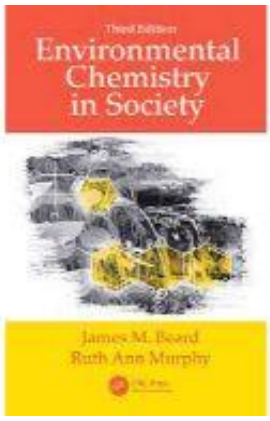
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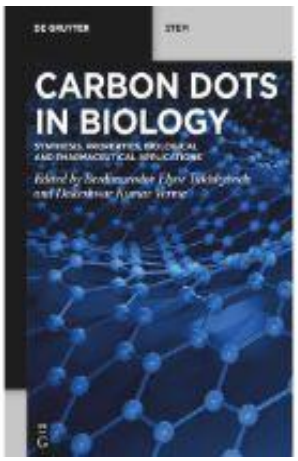
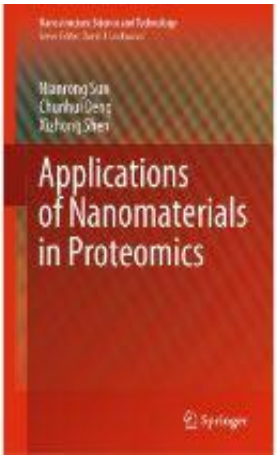
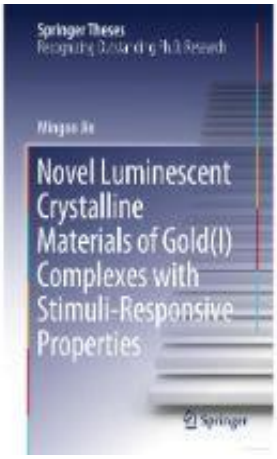
16		Multiphase reactors: reaction engineering concepts, selection, and industrial applications by Jan Harmsen and René Bos, Berlin: De Gruyter, 2023. xix, 321p., - Graduate. ISBN: 9783110713763 Subject Terms: Heat management, Heat transfer, Mass transfer, Plant design, Industrial chemistry, Chemical process engineering 66.0 HAR-M 178437; CL **Click here for more details.**
17		Coulson and Richardson's chemical engineering edited by Raj Chhabra and V. Shankar, 7th ed., Oxford: Elsevier, 2018. xxxiv, 536 p., - Coulson & Richardson's Chemical Engineering series. ISBN: 9780081010990 Subject Terms: Transport theory, Fluid dynamics, Mass transfer, Heat – Transmission, Flow chemistry, Hydrodynamics 66.0 -COU 178471; CL **Click here for more details.**
18		Multiphase flow and heat transfer in pebble bed reactor core by Shengyao Jiang...(et.al.), Singapore: Springer, 2021. xvi, 500 p. ISBN: 9789811595646 Subject Terms: Fluid mechanics, Computer simulation, Engineering fluid dynamics, Mass transfer, Heat transmission 621.039.51 -MUL 178457; CL **Click here for more details.**

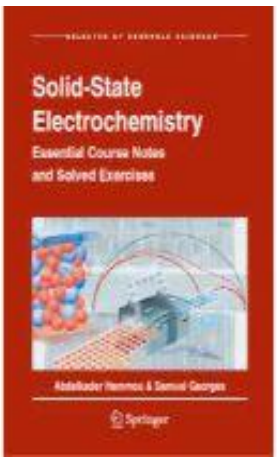
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19		Fundamentals of multiphase heat transfer and flow by Amir Faghri and Yuwen Zhang, Cham: Springer, 2020. xxxi, 820 p. ISBN: 9783030221393 Subject Terms: Chemical engineering, Energy systems, Engineering fluid dynamics, Multiphase flow, Transport theory, Thermodynamics 536.24 FAG-F 178464; CHE **Click here for more details.**
20		Identification and classical control of linear multivariable systems by Dhanya Ram V. and M. Chidambaram, Cambridge: Cambridge University Press, 2022. xxix, 386 p ISBN: 9781316517215 Subject Terms: Linear control systems, Multiple criteria decision making, MIMO systems, TITO systems, Control theory 621.3-50 DHA-I 178405; CL **Click here for more details.**
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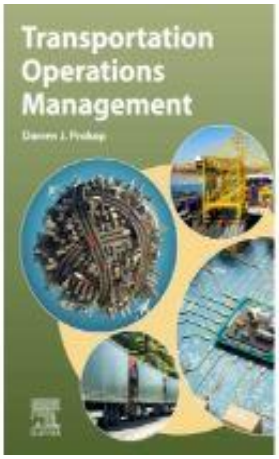
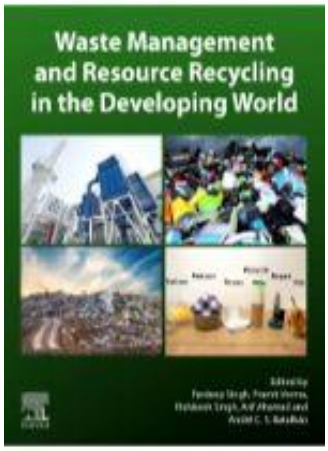
Chemistry

22		Life scientist's guide to physical chemistry by Marc R. Roussel, Cambridge: Cambridge University Press, 2012. xiv, 442 p. ISBN: 9780521186964 Subject Terms: Life sciences – textbooks, Life sciences - Mathematical models, Life sciences - Problems exercises, Chemistry, physical and theoretical – Textbooks, Chemistry, physical and theoretical - Mathematical models, Chemistry, physical and theoretical - Problems 544 ROU-L 178410; CHY **Click here for more details.**
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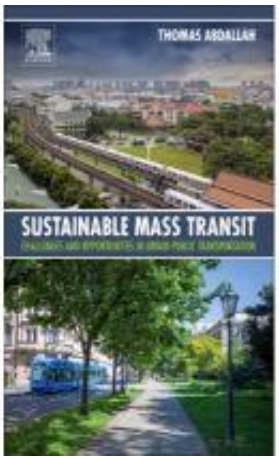
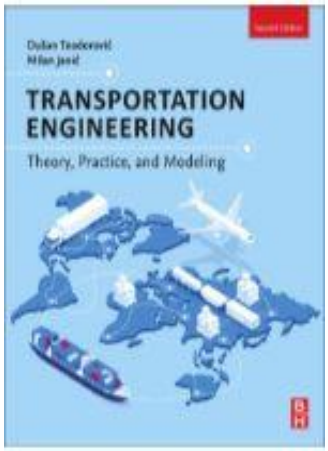
25		Carbon dots in biology: synthesis, properties, biological and pharmaceutical applications edited by Berdimurodov Elyor Tukhliyivich and Dakeshwar Kumar Verma, Berlin: De Gruyter, 2023. xiii, 328 p., - De Gruyter STEM. ISBN: 9783110799927 Subject Terms: Carbon dot-based composite, Graphene quantum dots, Carbon quantum dots, Biological science, Medicinal chemistry, Pharmacology
		546.26:57.08 -CAR
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26		Applications of nanomaterials in proteomics by Nianrong Sun, Chunhui Deng and Xizhong Shen, Singapore: Springer, 2021. xi, 423 p., - Nanostructure science and technology. ISBN: 9789811658150 Subject Terms: Phosphorylated proteins, Glycosylated proteins, Endogenous peptides, Magnetic nanoparticles, Functionalized nanomaterials, Sample pretreatment
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27		Novel luminescent crystalline materials of gold(I) complexes with stimuli-responsive properties by Mingoo Jin, Singapore: Springer, 2020. X, 191 p., - Springer theses. ISBN: 9789811540622 Subject Terms: Chemiluminescence, Mechanical grinding, Homochiral gold, X-ray diffraction, Crystal structure analyses
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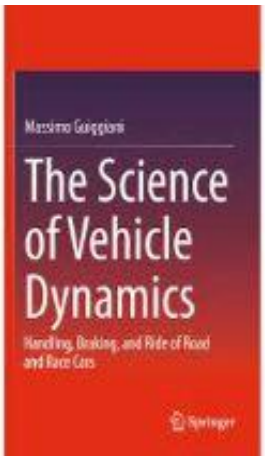
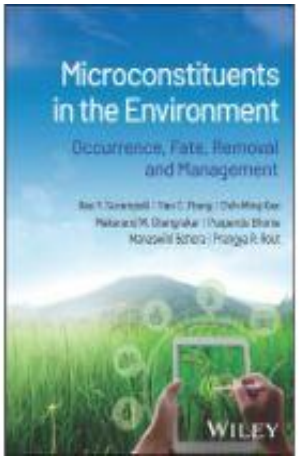
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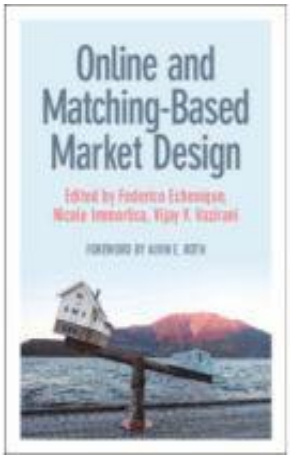
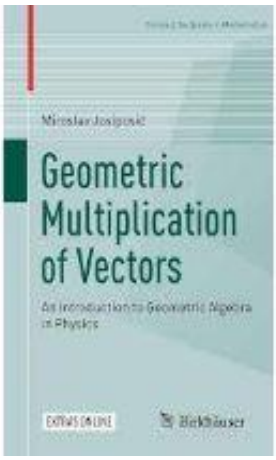
31		Resource utilization of plastic waste with supercritical water treatment by Hui Jin ...(et al.), Amsterdam: Elsevier, 2023. xxv, 256 p. ISBN: 9780323954020 Subject Terms: Plastic, Scrap, Recycling, Waste plastics, Gasification, Liquefaction, Plastic scrap - Environmental aspects 628.4.043:628.47 -RES 178348; CL **Click here for more details.**
32		Transportation operations management by Darren J. Prokop, Amsterdam : Elsevier, 2022. xvii, 222 p. ISBN: 9780128154151 Subject Terms: Transportation, Supply chain management, Transportation fleet management, Artificial intelligence in transportation, Blockchain in transportation 656.07 PRO-T 178349; CL **Click here for more details.**
33		Waste management and resource recycling in the developing world edited by Pardeep Singh... (et al.), Amsterdam: Elsevier, 2023. xxxi, 838 p. ISBN: 9780323904636 Subject Terms: Developing countries – Civilization, Vermicomposting, E-waste Industrial waste, Sustainable waste management, Waste – Recycling, Urban waste 628.477.6(1-773) -WAS 178350; CL **Click here for more details.**

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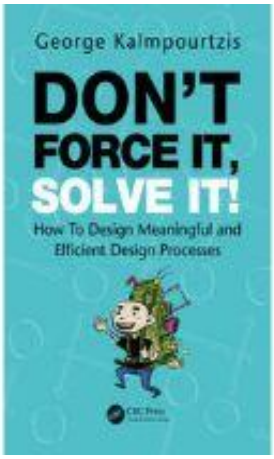
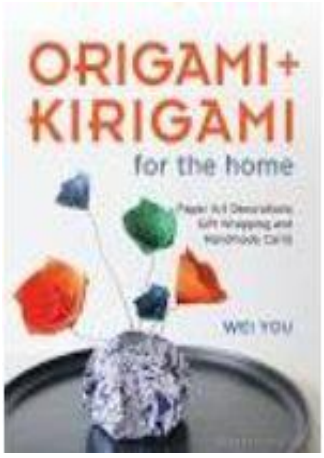
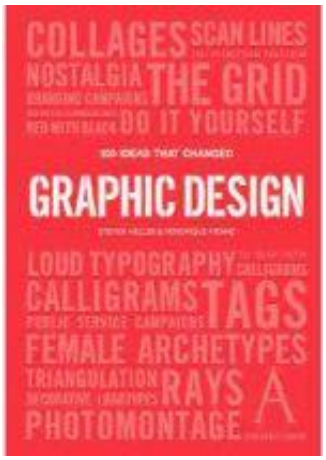
34		Smart urban mobility: transport planning in the age of big data and digital twins by Ivana Cavar Semanjski, Amsterdam: Elsevier, 2022. vii, 257 p. ISBN: 9780128207178 Subject Terms: Intelligent transportation systems, Smart cities, Urban transportation policy, Urban transportation - Technological innovations, Smart mobility innovations, Electric vehicle 656(1-21) SEM-S 178424; CL **Click here for more details.**
35		Sustainable mass transit: challenges and opportunities in urban public transportation by Thomas Abdallah, 2nd ed. Amsterdam: Elsevier, 2023. xii, 251 p. ISBN: 9780443152719 Subject Terms: Local transit - Environmental aspects, Sustainable urban development, Public transportation, Mass transit infrastructure, Mass transit 656.1/.5(1-21) ABD-S 178425; CL **Click here for more details.**
36		Transportation engineering: theory, practice and modeling by Dusan Teodorovic and Milan Janić, 2nd ed. Oxford: Elsevier, 2022. xxviii, 984 p. ISBN: 9780323908139 Subject Terms: Transportation - Mathematical models, Transportation – Planning, Civil engineering, Traffic control, Public transportation systems 656 TEO-T 178426; CL **Click here for more details.**
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37		Biotechnology for environmental protection edited by Rangabhashiyam Selvasembian, Eric D. van Hullebusch and Joyabrata Mal, Singapore: Springer, 2022. x, 310 p. ISBN: 9789811949364 Subject Terms: Environmental pollutants, Biosorption Bioremediation technologies, Biological treatment, Biodegradation, Treatment of sludge 502.17:606 -BIO 178423; CL **Click here for more details.**
38		Science of vehicle dynamics: handling, braking, and ride of road and race cars by Massimo Guiggiani, 3rd ed. Cham: Springer, 2023. xxiii, 575 p. ISBN: 9783031064609 Subject Terms: Applied dynamical systems, Automatic control, Automotive engineering, Control and system theory, Motor vehicles - Design and construction 629.33 GUI-S 178468; CL **Click here for more details.**
39		Microconstituents in the environment: occurrence, fate, removal and management by Rao Y. Surampalli ...(et al.), Hoboken: Wiley, 2022. xxxiii, 582 p. ISBN: 9781119825258 Subject Terms: Waste water treatment plant, Ground water contamination, Atmospheric microplastics Micropollutants, Contaminants of emerging concerns (CEC) 504.5 -MIC 178422; CL **Click here for more details.**

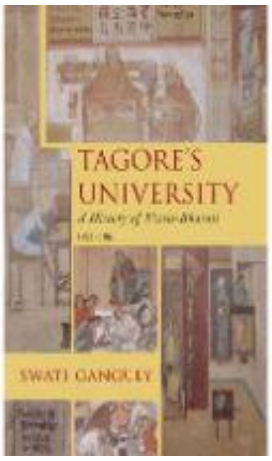
Computer Science and Engineering

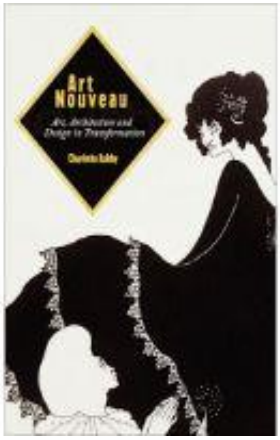
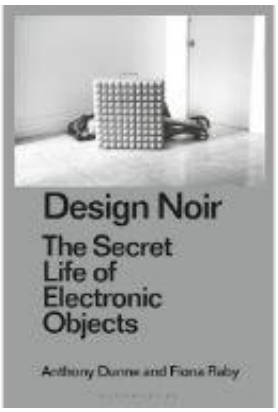
40		Online and matching-based market design edited by Federico Echenique,Nicole Immorlica and Vijay V. Vazirani ; foreword by Alvin E. Roth, Cambridge: Cambridge University Press, 2023. xxii, 697 p. ISBN: 9781108831994 Subject Terms: Stable matching, Pseudomarkets, Dynamic matching, Contract theory, Spectrum auctions
		339.13.017 -ONL
		178435; CL
		Click here for more details.
41		Multi-winner voting with approval preferences by Martin Lackner and Piotr Skowron, Cham: Springer, 2023. xi, 121 p., - Springer briefs in intelligent systems. ISBN: 9783031090158 Subject Terms: Artificial Intelligence, Open access , Computational social choice, Approval based committee voting Proportionality, Fairness axioms Strategic voting Collective decisions
		681.3:342.8 LAC-M
		178387-178388; CL;CSE
		Click here for more details.
42		Geometric multiplication of vectors: an introduction to geometric algebra in physics by Miroslav Josipovic, Cham: Springer, 2020. xxv, 240 p., - Compact Textbooks in Mathematics. ISBN: 9783030017552 Subject Terms: Mathematical physics, Quantum theory, Algebra Matrix theory, Special theory of relativity
		514.74:53 JOS-G
		178466; CL
		Click here for more details.

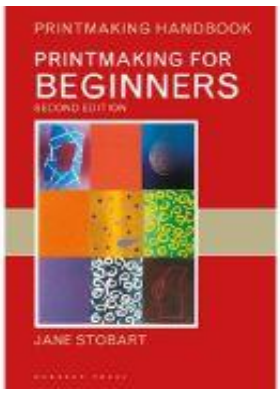
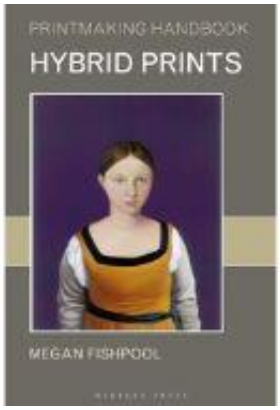
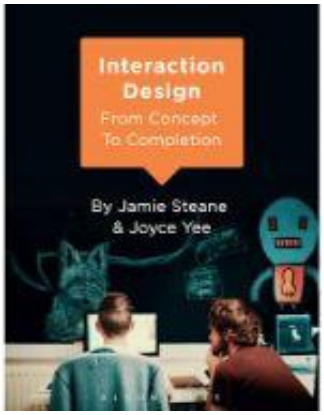
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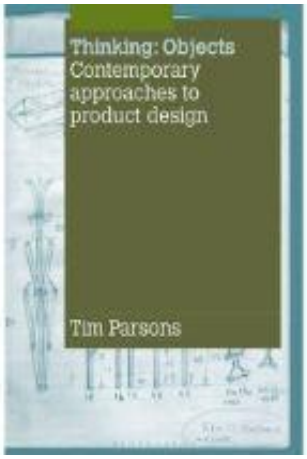
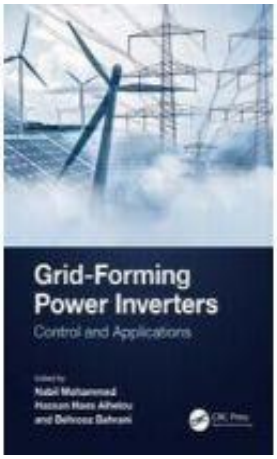
43		Don't force it, solve it: how to design meaningful and efficient design processes by George Kalmpourtzis, Boca Raton: CRC Press, 2022. xiv, 260 p. ISBN: 9780367505653 Subject Terms: Industrial design, Product design, User-centered system design, Design process, Design process - Development 7.05 KAL-D 178473; CL **Click here for more details.**
44		Origami + kirigami : for the home paper art decorations, gift wrapping, and homemade cards by Wei You, London: Herbert Press, 2022. 159 p. ISBN: 9781789940824 Subject Terms: Handicrafts Paper, folding art, Wall art, Origami tools, Origami decorations 745.54 YOU-O 178446; CL **Click here for more details.**
45		100 ideas that changed graphic design by Steven Heller and Véronique Vienne, London: Laurence King, 2022. 216 p. ISBN: 9781786273895 Subject Terms: Art and design, Arts graphiques – Innovations, Arts graphiques – Innovations, Graphic arts – History, Supergraphics 766 HEL-H 178449; CL **Click here for more details.**

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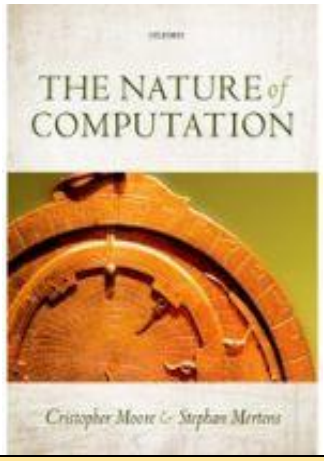
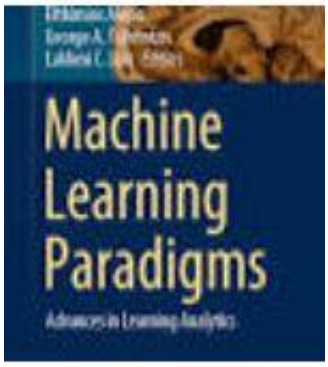
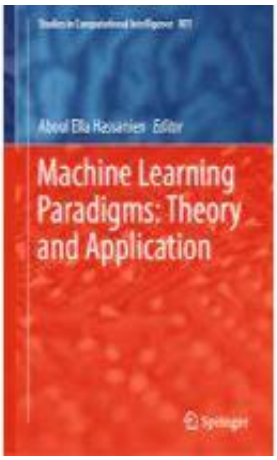
46		After the bauhaus, before the internet: a history of graphic design pedagogy edited by Geoff Kaplan, New York: no place press, 2022. 447p. ISBN: 9781949484090 Subject Terms: Graphic design – History, Graphic design - Study and teaching, Graphic design - Teaching methods, Graphic arts – History, Design teaching 74:37.013 -AFT 178450; CL **Click here for more details.**
47		Tagore's university: a history of Visva-Bharati 1921–1961 by Swati Ganguly, Bangalore: Orient Blackswan, 2022. xix, 488 p. ISBN: 9788178246741 Subject Terms: Santiniketan Ashram school - Rabindranath Tagore, Photographs - Visva Bharti, Community and culture - Visva Bharti Sriniketan 378.4:94(540.33)VIS GAN-T 178441; CL **Click here for more details.**
48		Visualizing complexity: modular information design handbook by Darjan Hil and Nicole Lachenmeier, Berlin: Birkhauser Verlag, 2022. 223 p. ISBN: 9783035625042 Subject Terms: Information presentation, Data design, Modular information design, Information visualization, Graphical presentation - information 76:001.103 HIL-V 178448; CL **Click here for more details.**
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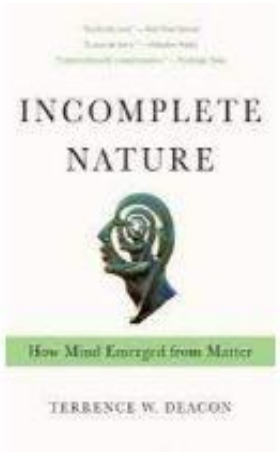
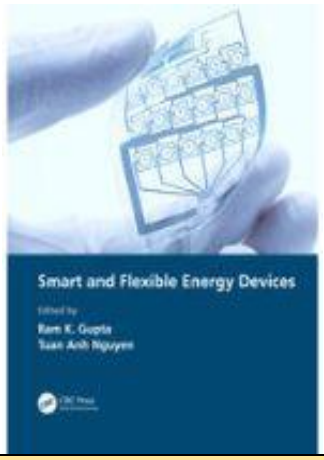
49		Art nouveau: art, architecture and design in transformation by Charlotte Ashby, London: Bloomsbury, 2022. xi, 254 p. ISBN: 9781350061149 Subject Terms: 19th century – Art, Dream spaces - Art nouveau interior, Colonial period - Art Modern - Art Modern - Architecture
		7.035.93 ASH-A
		178428; CL
		Click here for more details.
50		Design noir: the secret life of electronic objects by Anthony Dunne and Fiona Raby, London: Bloomsbury, 2021. xiv, 162 p. ISBN: 9781350070639 Subject Terms: Hertzian space, Technology - psychological aspect, Design and technology, Electronique Art and electronics
		7.05:621.38 DUN-D
		178429; CL
		Click here for more details.
51		Introduction to service design: designing the invisible by Lara Penin, London: Bloomsbury, 2018. 342 p. ISBN: 9781472572585 Subject Terms: Economics of services, Sharing economy, Environmental sustainability, Customer services design, Design - Service industries
		7.05 PEN-D
		178442; CL
		Click here for more details.
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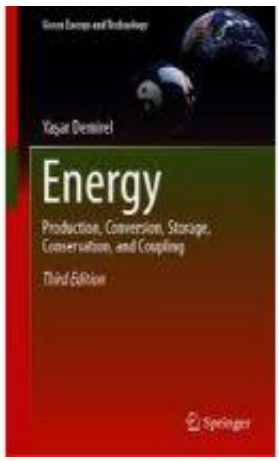
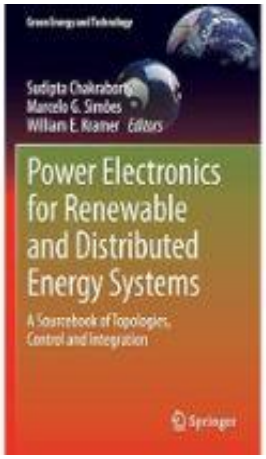
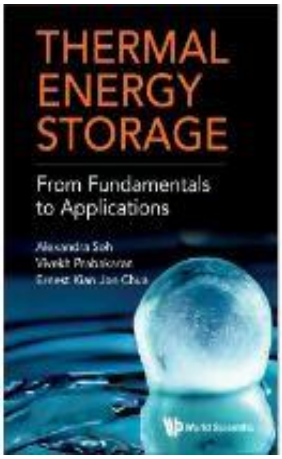
52		Printmaking for beginners by Jane Stobart, 2nd ed. London: Bloomsbury, 2021. 128 p., - Printmaking Handbook. ISBN: 9781789941395 Subject Terms: Monotype Printmaking techniques, Collagraph, Screenprinting, Lithography 655.3 STO-P 178443; CL **Click here for more details.**
53		Hybrid prints by Megan Fishpool, London: Bloomsbury, 2009. 144 p., - Printmaking handbook. ISBN: 9781789940237 Subject Terms: Lenticular prints, Digital printmaking, Relief print, Collagraph, Lithography 655.3 FIS-H 178444; CL **Click here for more details.**
54		Interaction design : from concept to completion by Jamie Steane and Joyce Yee, London: Bloomsbury, 2018. 224 p. ISBN: 9781474232395 Subject Terms: Interactive products, Digital services, Invisible systems, Virtual identities, Digital products 766:681.3 STE-I 178445; CL **Click here for more details.**

55		Thinking: objects contemporary approaches to product design by Tim Parsons, London: Bloomsbury, 2019. 208 p. ISBN: 9781350152885 Subject Terms: Industrial design, Product design, Industrial design - Ethics and morals aspects, Industrial design - case studies, Product design - aesthetics 745/749 PAR-T 178447; CL **Click here for more details.**
Electrical Engineering		
56		Grid-forming power inverters: control and applications edited by Nabil Mohammed, Hassan Haes Alhelou and Behrooz Bahrani, Boca Raton: CRC press, 2023. xvi, 290 p. ISBN: 9781003302520 Subject Terms: Electric current converters, Smart power grids, Small-Signal modeling, Power systems, Energy storage system 621.313.1 -GRI 178477; CL **Click here for more details.**
57		Sensory systems for robotic applications edited by Ravinder Dahiya, Oliver Ozioko and Gordon Cheng, London: Institution of Engineering and Technology, 2022. xii, 316 p., - The IET international series on sensors. ISBN: 9781849199483 Subject Terms: Tactile sensors - intelligent robotics, Detectors Soft robotics, Robotic perception, Audio sensors, Vision sensors 681.586-52 -SEN 178400; Cl **Click here for more details.**

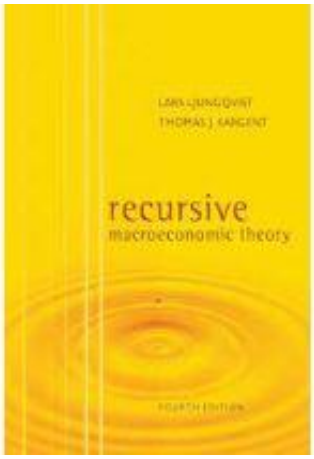
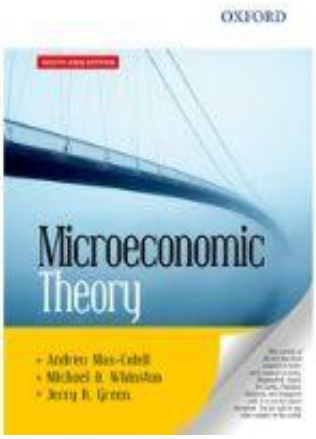
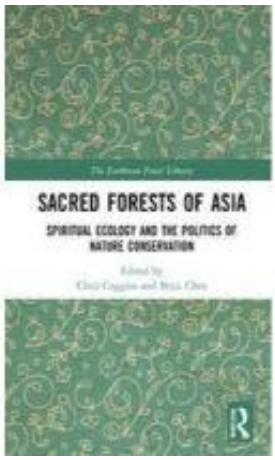
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58		Nature of computation by Cristopher Moore and Stephan Mertens, Oxford: Oxford University Press, 2011. xviii, 985 p. ISBN: 9780199233212 Subject Terms: Algebra, Statistical physics, Quantum Computation Optimization, Algorithms
		519.6 MOO-N
		178418; CL
		Click here for more details.
59		Machine learning paradigms: advances in learning analytics edited by Maria Virvou ...(et. al.), Cham: Springer, 2020. xvi, 223p., - Intelligent Systems Reference Library. ISBN: 9783030137427 Subject Terms: Learning analytics, Artificial intelligence, Learning management systems, Architectural perspective, Mobile learning
		681.3 -MAC
		178453; CL
		Click here for more details.
60		Machine learning paradigms theory and application edited by Aboul Ella Hassanien, Cham: Springer, 2019. ix, 474 p., - Studies in Computational Intelligence. ISBN: 9783030023560 Subject Terms: Artificial intelligence, Computational intelligence, Pattern recognition, Bio-inspired optimization, Classification and ontology
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		178454; CL
		Click here for more details.
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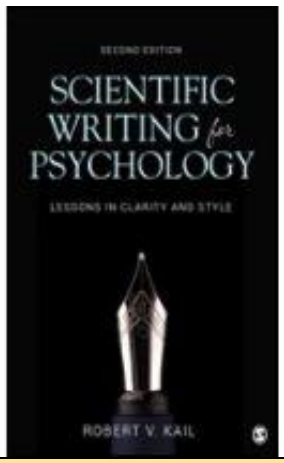
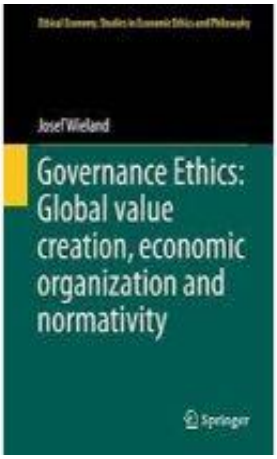
61		Machine understanding: machine perception and machine perception MU by Zbigniew Les and Magdalena Les, Cham: Springer, 2020. xvii, 215 p., - Studies in computational intelligence. ISBN: 9783030240691 Subject Terms: Artificial intelligence, Machine perception, Visual reasoning, Senses and sensation, Computational intelligence
		681.3 LES-M
		178455; CL
		Click here for more details.
62		Incomplete nature: how mind emerged from matter by Terrence W. Deacon, New York: W. W. Norton, 2013. xi, 604 p. ISBN: 9780393343908 Subject Terms: Biological sciences, Life - Origin, Brain, Consciousness, Phenomenology, Autogenesis
		612.82:159.922 DEA-I
		178415; CL
		Click here for more details.
Energy Science and Engineering		
63		Smart and flexible energy devices edited By Ram K. Gupta and Tuan Anh Nguyen, Boca Raton: CRC Press, 2022. xix, 600 p. ISBN: 9781032033242 Subject Terms: Electric batteries, Fuel cells, Solar cells, Flexible electronics, Photovoltaic solar cells
		621.352/.355 -SMA
		178404; CL
		Click here for more details.

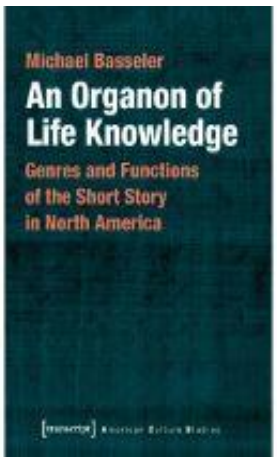
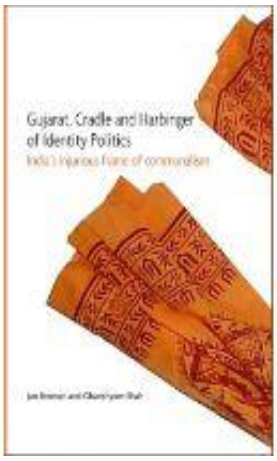
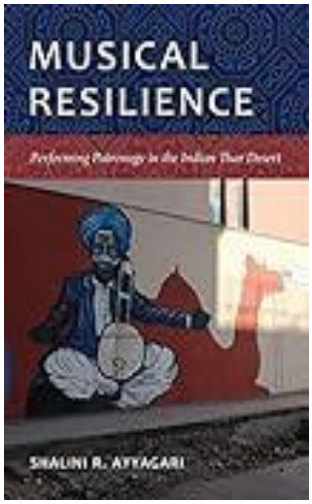
64		Energy production, conversion, storage, conservation, and coupling by Yaşar Demirel, 3rd ed. Cham: Springer, 2021. xxii, 650 p., - Green energy and technology. ISBN: 9783030561635 Subject Terms: Energy conservation, Energy coupling, Energy production, Energy storage 620.9 DEM-E 178391; CL **Click here for more details.**
65		Power electronics for renewable and distributed energy systems: a sourcebook of topologies, control and integration edited by Sudipta Chakraborty, Marcelo G. Simoes and William E. Kramer, London: Springer, 2013. x, 609 p., - Green energy and technology. ISBN: 9781447151036 Subject Terms: Renewable energy, Power electronics, Convertor topologies, Energy integration, Energy storage 621.311.1/.2:621.382 -POW 178401-178402; CL;CES **Click here for more details.**
66		Thermal energy storage: from fundamentals to applications by Alexander Soh, Singapore: World Scientific, 2023. Xvi, 211 p. ISBN: 9789811271175 Subject Terms: Heat Storage, TES study, Thermochemical energy storage systems, District cooling, Urban and commercial thermal management 620.9 SOH-T 178356; CL **Click here for more details.**

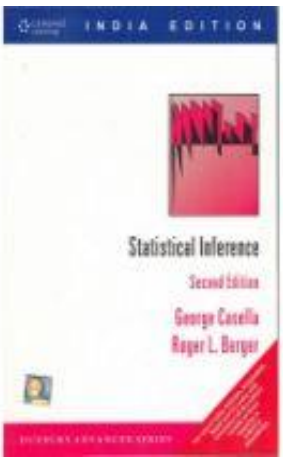
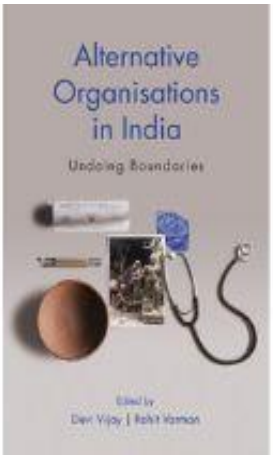
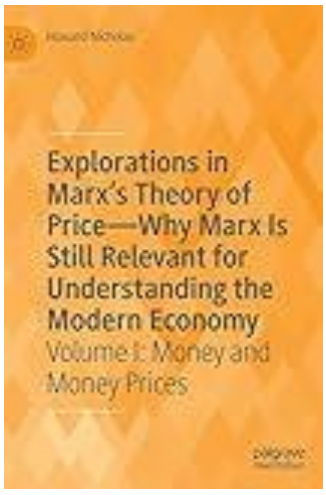
Humanities & Social Sciences

67		Recursive: macroeconomic theory by Lars Ljungqvist and Thomas J. Sargent, 4th ed. Cambridge: MIT Press, 2018. Xxxvii, 1437 p. ISBN: 9780262038669 Subject Terms: Macroeconomics, Dynamic programming, Ricardian equivalence, Asset pricing theory, Credit and Currency
		330.101.541 LJU-R
		178421; CL
		Click here for more details.
68		Microeconomic theory by Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green, New York: Oxford University Press, 2006. Xvii, 981 p. ISBN: 9780198089537 Subject Terms: Consumer choice, Classical demand theory, Aggregate demand, Game theory, Market equilibrium
		330.101.542 MAS-M
		178393-178396; CL;TB
		Click here for more details.
69		Sacred forests of Asia: spiritual ecology and the politics of nature conservation edited by Chris Coggins and Bixia Chen, London: Routledge, 2022. xvii, 330 p., - Earthscan forest library. ISBN: 9780367698720 Subject Terms: Forest conservation, Political ecology, Sacred space, Forest – Asia, Biodiversity conservation
		304:630(5) -SAC
		178416; CL
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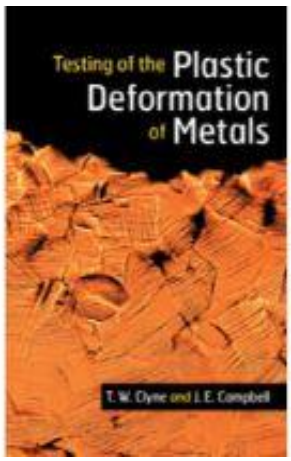
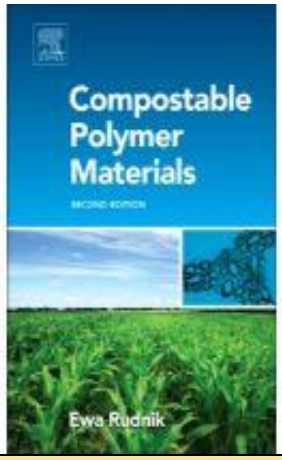
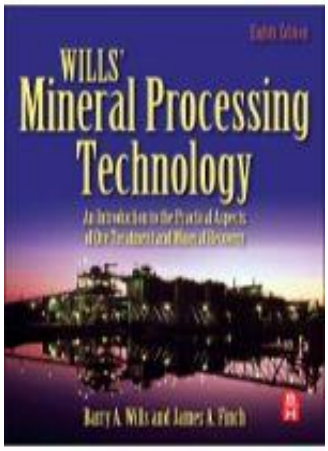
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70		Scientific writing for psychology: lessons in clarity and style, 2nd ed. Los Angeles: SAGE, 2019. xv, 136 p. ISBN: 9781544309620 Subject Terms: Authorship, Writing clearly Framing, Discussing your findings, Adding emphasis, Writing concisely 808.1:159.9 KAI-S 178397; CL **Click here for more details.**
71		Econometric analysis of panel data by Badi H. Baltagi, 6th ed. Cham: Springer, 2021. xx, 424 p., - Springer texts in business and economics. ISBN: 9783030539528 Subject Terms: Panel analysis, Economics, Mathematical statistics, Component regression model, Pseudo-panels 330.43:303.446.3 BAL-E 178474; CL **Click here for more details.**
72		Governance ethics global value creation, economic organization and normativity by Josef Wieland, Cham: Springer, 2014. xi, 246p., - Ethical economy. Studies in economic ethics and philosophy. ISBN: 9783319079226 Subject Terms: Business ethics, Global nomadism, Formal institutions, Informal institutions, Corporate social responsibility 174 WIE-G 178475; CL **Click here for more details.**

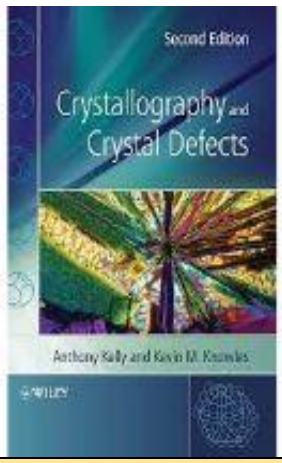
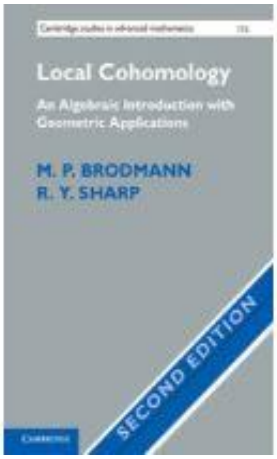
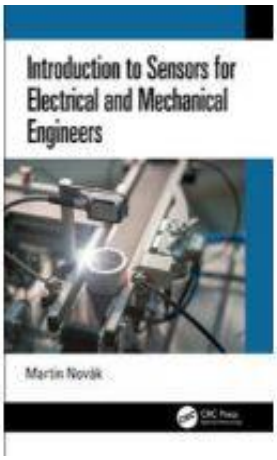
73		Organon of life knowledge: genres and functions of the short story in North America by Michael Basseler, Bielefeld: Transcript Verlag, 2019. 274 p., - American culture studies. ISBN: 9783837646429 Subject Terms: Short stories – American, American - History and criticism, Fiction genres, Literature and knowledge, Literary studies 821.111(7) BAS-O 178339; CL **Click here for more details.**
74		Gujarat, cradle and harbinger of identity politics: India's injurious frame of communalism by Jan Breman and Ghanshyam Shah, New Delhi: Tulika Books, 2022. xvii, 371 p. ISBN: 9788195055944 Subject Terms: Gujarat – Politics, Communal riots – Gujarat, Identity politics - India – Gujarat, Politics and government Communalism, Hinduism and politics 323.269.3(540.51) BRE-G 178417; CL **Click here for more details.**
75		Musical resilience: performing patronage in the Indian Thar desert by Shalini R. Ayyagari, Connecticut: Wesleyan University Press, 2022. xx, 226 p, ISBN: 9780819500106 Subject Terms: Music-Social aspects , Cultural Resilience - India, Indian festivals, Musicians - India - Rajasthan, Resilience - India (Rajasthan) 78.078(213.521.6) AYY-M 178479; CL **Click here for more details.**
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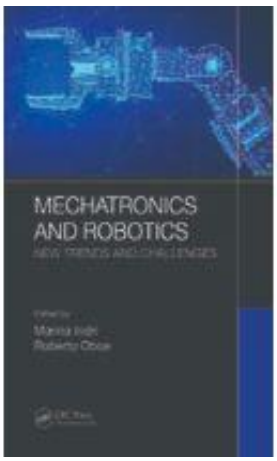
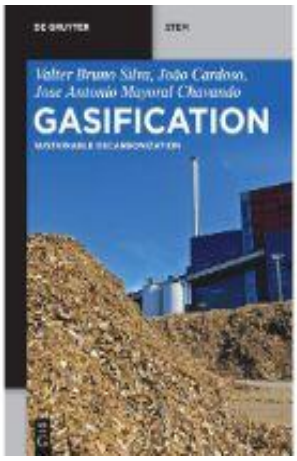
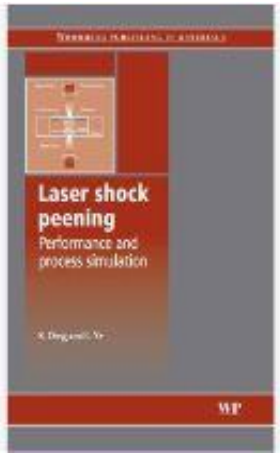
76		Statistical inference by George Casella and Roger L. Berger, 2nd ed. Delhi: Cengage Learning, 2002. xxviii, 660 p., - Duxbury advanced series. ISBN: 9788131503942 Subject Terms: Mathematical statistics, Probabilities Statistical analysis, Decision theory, Regression modeling 519.23 CAS-S 178343-178346; TB **Click here for more details.**
Management Studies		
77		Alternative organisations in India: undoing boundaries edited by Devi Vijay and Rohit Varman, Cambridge: Cambridge University Press, 2018. 256 p. ISBN: 9781108422178 Subject Terms: Organizational sociology – India, Psychology - Social psychology, Special investigation team - Supreme court, Corporate culture, Shaheed hospital - Ideology 658(540) -ALT 178419; CL **Click here for more details.**
78		Explorations in Marx's theory of price-why Marx is still relevant for understanding the modern economy by Howard Nicholas Vol I: money and money prices, London: Palgrave Macmillan, 2023. xv, 317 p ISBN: 9781137565631 Subject Terms: Money price, Marxian economics, Neoclassicals Ricardo Commodity, Exchange of money 336.74:330.85 NIC-E 178414; CL **Click here for more details.**

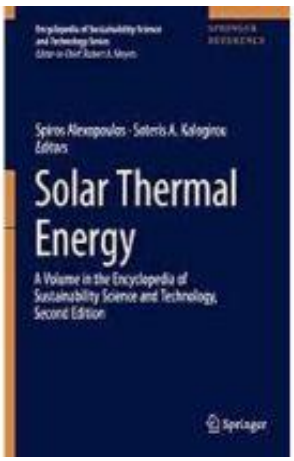
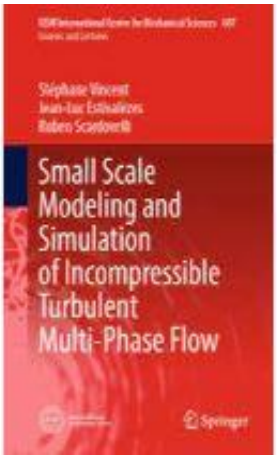
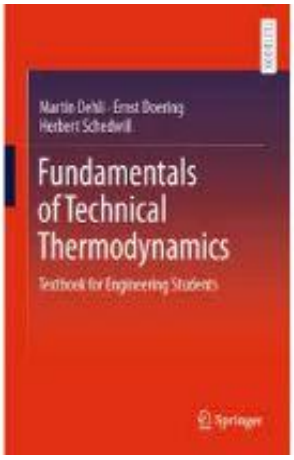
Materials Science and Engineering

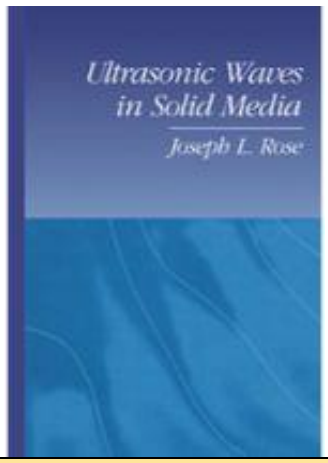
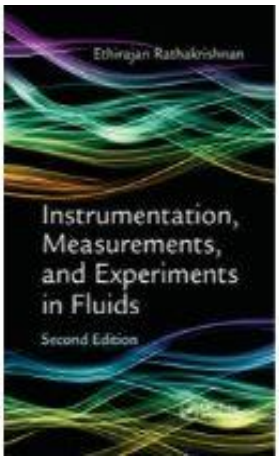
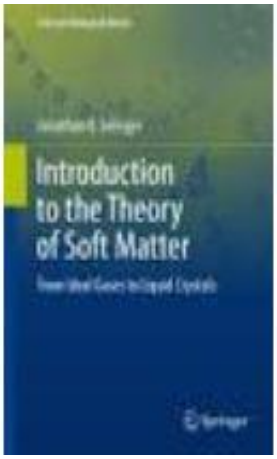
79		Testing of the plastic deformation of metals by T. W. Clyne and J. E. Campbell, Cambridge: Cambridge university press, 2021. xvii, 277 p. ISBN: 9781108837897 Subject Terms: Metals - Plastic properties, Metals – Testing, Continuum plasticity Plastometry, Micropillar compression 620.1:539.214 CLY-T 178436; CL **Click here for more details.**
80		Compostable polymer materials by Ewa Rudnik, 2nd ed. Amsterdam: Elsevier, 2019. xii, 397 p. ISBN: 9780080994383 Subject Terms: Thermooxidative degradation, Ecotoxicology, Blends, Composting standards, Polymer recycling 502.174.2:678.5 RUD-C 178452; CL **Click here for more details.**
81		Wills' mineral processing technology: an introduction to the practical aspects of orc treatment and mineral recovery by Barry A. Wills and James A. Finch, 8th ed. Amsterdam: Elsevier, 2016. xiv, 498 p. ISBN: 9780080970530 Subject Terms: Gravity concentration, Ore handling Tailing, Disposal Dense medium separation, Froth Flotation, Magnetic separator Electrical separation 622.2/.3 WIL-W 178470; CL **Click here for more details.**

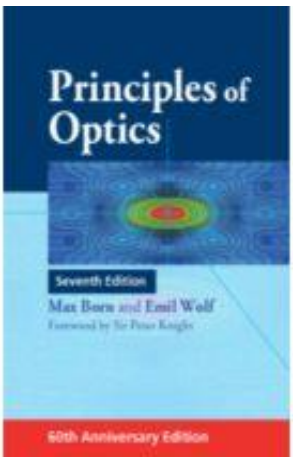
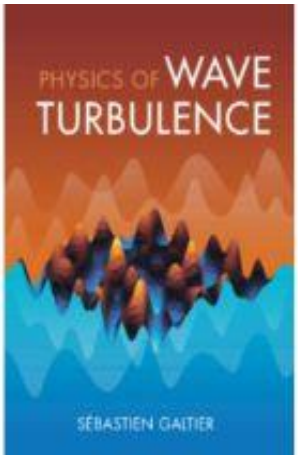
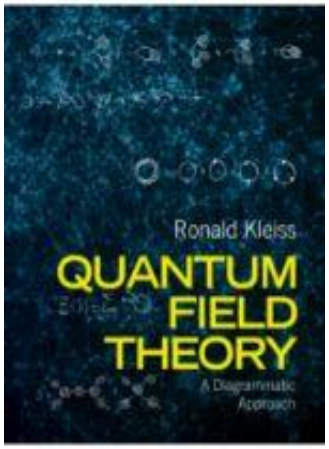
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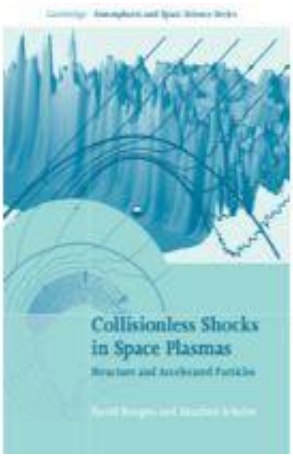
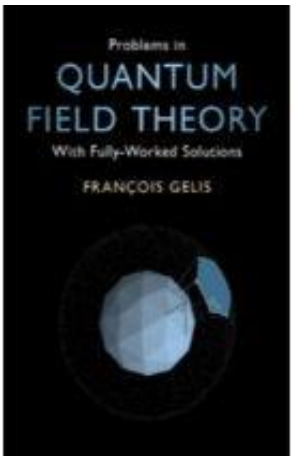
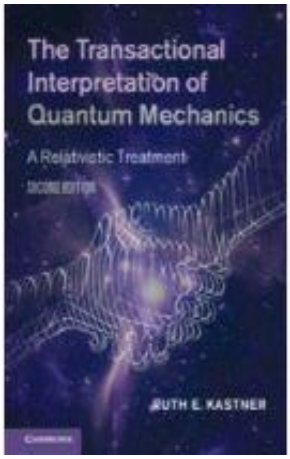
82		Crystallography and crystal defects by Anthony Kelly and Kevin M. Knowles, 3rd ed. Hoboken: Wiley, 2020. xiv, 568 p. ISBN: 9781119420170 Subject Terms: Lattice Geometry, Tensors Glide, Twinning Texture 548 KEL-C 178431; CL **Click here for more details.**
Mathematics		
83		Local cohomology: an algebraic introduction with geometric applications by M. P. Brodmann and R. Y. Sharp, 2nd ed..New York: Cambridge University Press, 2013. xxii, 491 p. Cambridge studies in advanced mathematics. ISBN: 9780521513630 Subject Terms: Algebra - Homological Sheaf cohomology, Commutative algebra, Hilbert polynomials, Canonical modules, Lichtenbaum - Hartshorne theorems 512.73 BRO-L 178389; CL **Click here for more details.**
Mechanical Engineering		
84		Introduction to sensors for electrical and mechanical engineers by Martin Novák, Boca Raton: CRC Press, 2021. xiii, 314 p. Includes index (p. 309-314). ISBN: 9780367534011 Subject Terms: Detectors Electrical engineering, Engineering instruments, Mechatronics, Mechanical engineers 681.586:621 NOV-I 178407; ME **Click here for more details.**

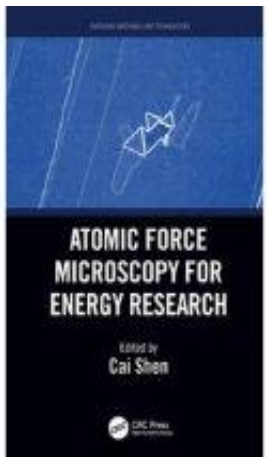
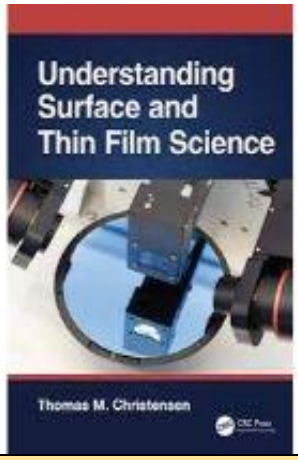
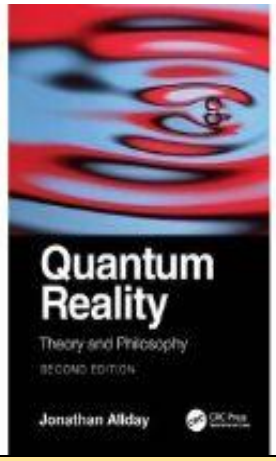
85		Mechatronics and robotics: new trends and challenges edited by Marina Indri and Roberto Oboe, Boca Raton: CRC Press, 2022. xiv, 266 p. ISBN: 9780367562045 Subject Terms: Advanced sensors for mechatronics, Control and manipulation, Navigation Human-robot interaction, Robot programming
		621.3-50 -MEC
		178408; CL
		Click here for more details.
86		Gasification: sustainable decarbonization by Valter Bruno Silva, Joao Cardoso and Jose Antonio Mayoral Chavando, Berlin: De Gruyter, 2023. ix, 139 p. ISBN: 9783110758207 Subject Terms: Synthesis gas, Gas manufacture and works, Biomass gasification, Numerical modeling formulation, Solid waste conversion
		628.475.4 SIL-G
		178354; CL
		Click here for more details.
87		Laser shock peening: performance and process simulation by K. Ding and L. Ye, Cambridge: Elsevier, 2006. viii, 162 p. Woodhead Publishing in Materials. ISBN: 9781855739291 Subject Terms: Surface treatment technique, Metals - Finishing, Finite element modelling, Shock wave, Residual stress
		621.787 DIN-L
		178378; CL
		Click here for more details.

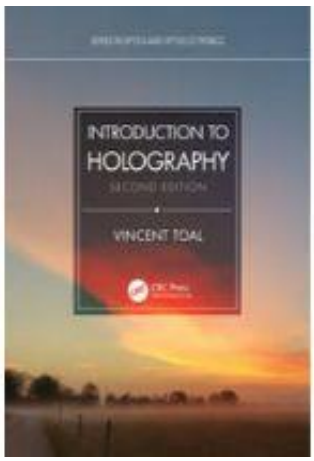
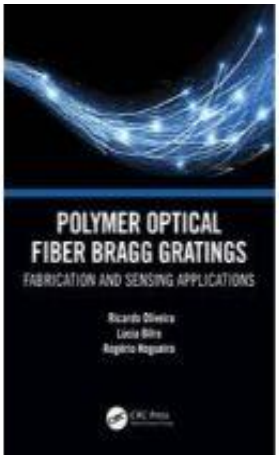
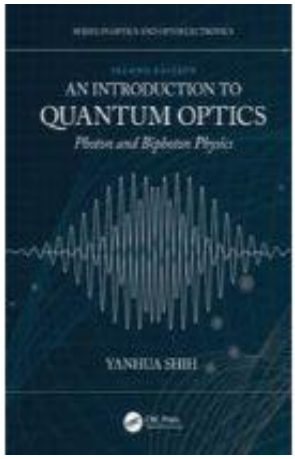
88		Solar thermal energy: a volume in the encyclopedia of sustainability science and technology edited by Spiros Alexopoulos and Soteris A. Kalogirou, New York: Springer, 2022. xix, 511 p., - Encyclopedia of Sustainability Science and Technology Series. ISBN: 9781071614211 Subject Terms: Solar power, Solar technology, Solar energy harvesting, Solar dish systems, Solar updraft towers
		621.472 -SOL
		178375; CL
		Click here for more details.
89		Small scale modeling and simulation of incompressible turbulent multi-phase flow by Stephane Vincent, Jean-Luc Estivalezes and Ruben Scardovelli, Cham: Springer, 2022. ix, 312 p., - CISM international centre for mechanical sciences; courses and lectures. ISBN: 9783031092633 Subject Terms: Turbulence - Mathematical models, Multiphase flows - Mathematical models Interface tracking Mesh refinement Particulate flows
		532.517.4:519.872 VIN-S
		178379; CL
		Click here for more details.
90		Fundamentals of technical thermodynamics: textbook for engineering students by Martin Dehli, Ernst Doering and Herbert Schedwill, Wiesbaden: Springer, 2023. xvii, 606p. ISBN: 9783658389093 Subject Terms: Chemical thermodynamics, Heat transfer, Entropy, Thermal energy, Cyclic processes
		536.7:621 DEH-F
		178380; ME
		Click here for more details.

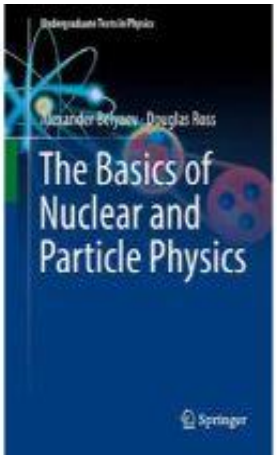
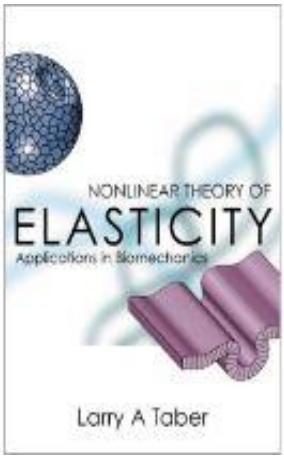
91		Ultrasonic waves in solid media by Joseph L. Rose, Cambridge: Cambridge University Press, 2004. xvi, 454 p. ISBN: 9780521548892 Subject Terms: Anisotropic media, Ultrasonic testing, Wave mechanic,s Viscoelastic media, Wave propagation
		534.321.9 ROS-U
		178390; CL
		Click here for more details.
92		Instrumentation, measurements, and experiments in fluids by Ethirajan Rathakrishnan, 2nd ed. Boca Raton: CRC Press, 2017. xxv, 586 p. ISBN: 9781138385870 Subject Terms: Fluid mechanics, Fluid dynamic measurements, Fluid mechanics - Experiments Flow visualization, Gas dynamics, Hot-wire anemometry
		532.5.01/.08 RAT-I
		178367; CL
		Click here for more details.
		Physics
93		Introduction to the theory of soft matter: from ideal gases to liquid crystals by Selinger Jonathan V., Cham: Springer, 2016. x, 185 p., - Soft and biological matter. ISBN: 9783319370576 Subject Terms: Landau theory, Tensor Chemometrics, Phase transitions, Liquid crystals
		538.9 SEL-I
		178433; CL
		Click here for more details.
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94		Principles of optics by Max Born and Emil Wolf, 7th ed. ; 60th anniversary edition Cambridge: Cambridge University Press, 2023. xi, 952 p. ISBN: 9781108477437 Subject Terms: Electromagnetic field, Geometrical optics, Optical imaging, Image-forming instruments Interference Optics of metals 535 BOR-P 178434; PH **Click here for more details.**
95		Physics of wave turbulence by Sebastien Galtier, Cambridge: Cambridge University Press, 2023. xii, 277 p. ISBN: 9781009275897 Subject Terms: Turbulence and heating, Hydrodynamics, Inertial wave turbulence, Alfven wave turbulence, Gravitational wave turbulence 532.517.4 GAL-P 178438-178439; CL;PH **Click here for more details.**
96		Quantum field theory: a diagrammatic approach by Ronald Kleiss, Cambridge: Cambridge University Press, 2021. xx, 541 p. ISBN: 9781108486217 Subject Terms: Vector particles, Electroweak theory, Dirac particles, Feynman diagram, Quantum chromodynamics 530.145 KLE-Q 178440; CL **Click here for more details.**
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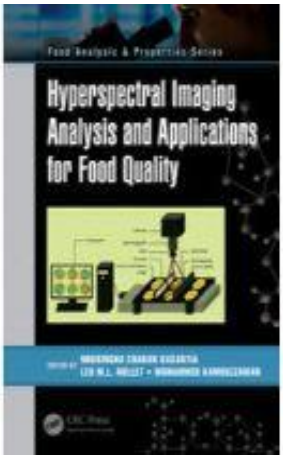
97		Collisionless shocks in space plasmas: structure and accelerated particles by David Burgess and Manfred Scholer, Cambridge: Cambridge University Press, 2015. x, 356 p., - Cambridge Atmospheric and Space Science Series. ISBN: 9780521514590 Subject Terms: Collisionless plasmas, Space plasmas, Quasi perpendicular shock, Electron acceleration, Electron heating 533.951 BUR-C 178451; CL **Click here for more details.**
98		Problems in quantum field theory: with fully-worked solutions by Francois Gelis, Cambridge: Cambridge University Press, 2021. xiii, 357 p. ISBN: 9781108972352 Subject Terms: Scattering amplitudes, Non-abelian fields, Gross-Neveu model, Stochastic quantization Convergence theorem 530.145 GEL-P 178462; CL **Click here for more details.**
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99		Transactional interpretation of quantum mechanics: a relativistic treatment by Ruth E. Kastner, 2nd ed., Cambridge: Cambridge University Press, 2022. x, 250 p. ISBN: 9781108830447 Subject Terms: Quantum theory, Transactional interpretations, Quantum Peculiarities, Radical relationalism, Two-split experiment 178476; CL **Click here for more details.**

100		Atomic force microscopy for energy research edited by Cai Shen, Boca Raton: CRC Press, 2022. xiii, 441 p., - Emerging materials and technologies. ISBN: 9781032004075 Subject Terms: Solar cell research, Power resources, Hybrid AFM technique, Spectroscopy Lithium batteries research
		620.91:543.4 -ATO
		178373; CL
		Click here for more details.
101		Understanding surface and thin film science by Thomas M. Christensen, Boca Raton: CRC Press, 2023. xv, 356 P. ISBN: 9781482233032 Subject Terms: Thin film growth, Plasmas Atomic motion, Thermodynamics, Vacuum Technology
		539.216 CHR-U
		178420; CL
		Click here for more details.
102		Quantum reality: theory and philosophy by Jonathan Allday, 2nd ed. Boca Raton: CRC Press, 2023. xxi, 482 p. ISBN: 9781032122380 Subject Terms: Particles, Quantum states, Scattering identical bosons, Heisenberg, Quantum computing
		530.145 ALL-Q
		178458-178459; CL
		Click here for more details.

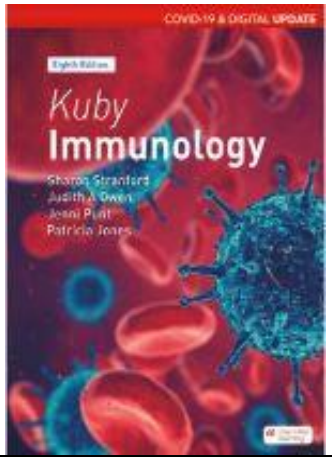
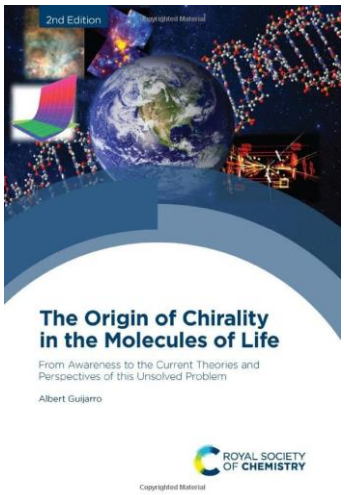
103		Introduction to holography by Vincent Toal, 2nd ed. Boca Raton: CRC Press, 2023. xvii, 430 p., - Series of Optics and Optoelectronics. ISBN: 9780367712341 Subject Terms: Physical optics, Volume holography, Coherence Holographic Interferometry, Holographic sensing 535.4 TOA-I 178460; CL **Click here for more details.**
104		Polymer optical fiber bragg gratings: fabrication and sensing application by Ricardo Oliveira, Lucia Bilro and Rogerio Nogueira, Boca Raton: CRC Press, 2020. xi, 225 p. ISBN: 9781138612624 Subject Terms: Optical fiber detector, Polymer optical fibers, POFBG pH sensor, Uniform bragg gratings, Electricity technology 681.586.5 OLI-P 178469; CL **Click here for more details.**
105		Introduction to quantum optics: photon and biphoton physics by Yanhua Shih, 2nd ed. Boca Raton: CRC Press, 2021. xv, 426 p., - Series in optics and optoelectronics. ISBN: 9780367673598 Subject Terms: Photonics Field quantization, Electromagnetic wave theory, Quantum entanglement, Quantum imaging 535.14 SHI-I 178478; PH **Click here for more details.**
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106		Active matter within and around us: from self-propelled particles to flocks and living forms by Len Pismen, Cham: Springer, 2022. x, 230 p., - The Frontiers Collection. ISBN: 9783030684204 Subject Terms: Molecular biology, Active colloids, Biotechnology, Microorganisms Live tissues 577.2 PIS-A 178413; PH **Click here for more details.**
107		Basics of nuclear and particle physics by Alexander Belyaev and Douglas Ross, Cham: Springer, 2021. xxvii, 401 p. Undergraduate Texts in Physics. ISBN: 9783030801151 Subject Terms: Rutherford scattering, Radioactivity, Gamma decay, Nuclear fission Particle accelerators, Higgs mechanism 539.1 BEL-B 178463; CL **Click here for more details.**
108		Nonlinear theory of elasticity: applications in Biomechanics by Larry A Taber, Singapore: World Scientific, 2023. xviii, 452 p. ISBN: 9789811270512 Subject Terms: Mechanobiology, Dyadics and tensors, Tensor Invariants, Thermodynamics of deformation, Elastic deformation - Soft tissues 539.3:577.3 TAB-N 178430; CL **Click here for more details.**

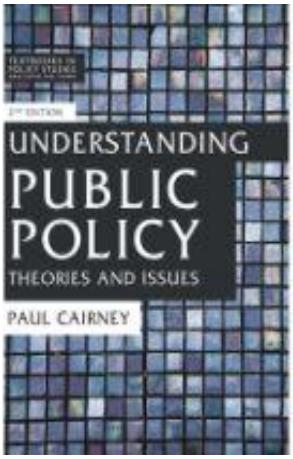
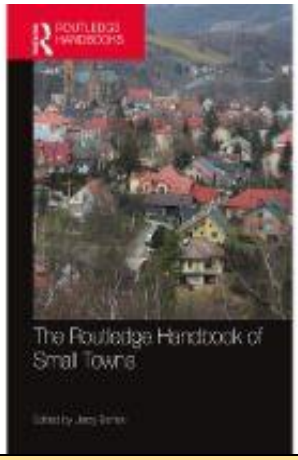
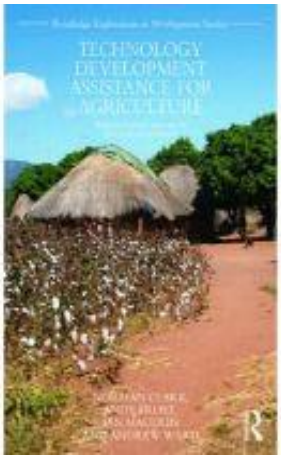
Rural Development & Technology

109		Hyperspectral imaging analysis and applications for food quality edited by N.C. Basantia, Leo M.L. Nollet and Mohammed Kamruzzaman, Boca Raton: CRC Press, 2019. xvii, 283 p., - Food analysis and properties. ISBN: 9781138630796 Subject Terms: Food analysis, Hyperspectral imaging, Artificial neural networks, Image processing, Food engineering 664 -HYP 178399; CL **Click here for more details.**

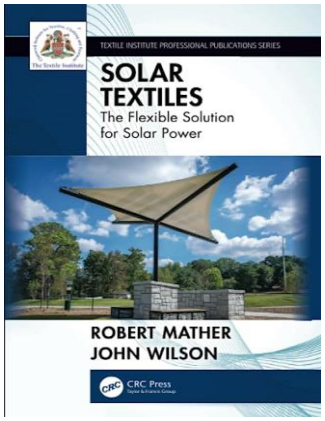
School of Biological Sciences

110		Kuby immunology by Sharon Stranford... (et al.), 8th ed. New York: Macmillan Learning, 2023. v. p. ISBN: 9781319498658 Subject Terms: Autoimmunity, T-cell development, Immune system, Immunity, Immunization and vaccines 615.37:577.27 -KUB 178383-178384; CL; SBS **Click here for more details.**
111		Origin of chirality in the molecules of life: from awareness to the current theories and perspectives of this unsolved problem by Albert Guijarro, 2nd ed. London: Royal Society of Chemistry, 2022. xiv, 227 P. ISBN: 9781839162343 Subject Terms: Biochemistry, Biomolecular homochirality, Chiral physical forces, Symmetry breaking, Molecular Chirality 544.122.3 GUI-O 178432; CL **Click here for more details.**

School of Public Policy

112		Understanding public policy: theories and issues by Paul Cairney, 2nd ed. London: Bloomsbury Academic, 2020. xx, 296 p., - Textbooks in policy studies. ISBN: 9781137545183 Subject Terms: Public administration, Policy sciences, Politics and Government, Political planning, Policy learning
		334.021:351 CAI-U
		178342; CL
		Click here for more details.
113		Routledge handbook of small towns edited by Jerzy Banski, New York: Routledge, 2022. xxii, 425 p. ISBN: 9780367555900 Subject Terms: Small towns -Handbooks, Regional Planning, City Planning, Urban Sociology, Urban Studies
		RL-HB 711.435 (021) -ROU
		178340; CL
		Click here for more details.
114		Technology development assistance for agriculture: putting research into use in low income countries by Norman Clark...(et al.), London: Routledge, 2013. xv, 184 p., - Routledge explorations in development studies. ISBN: 9780415827027 Subject Terms: Agriculture assistance - Developing countries, Agricultural development projects, Engineering - Sustainable agriculture, Agricultural research, Biotechnology projects
		338.43 -TEC
		178341; CL
		Click here for more details.

Textile & Fibre Engineering

115		Solar textiles: the flexible solution for solar power by Robert Mather and John Wilson, Boca Raton: CRC Press, 2023. xiv, 109 p., - Textile institute professional publications. ISBN: 9780367706029 Subject Terms: Textile fabrics, Solar cells, Photovoltaic effect, Fabrics - Solar cells, Clothing - Solar energy 677.1/.5:621.383.51 MAT-S 178386; CL **Click here for more details.**
116		March of the pigments: color history, science and impact, London: Royal Society of Chemistry, 2022. xxi, 477 p. ISBN: 9781839163159 Subject Terms: Dyes and dying - Chemistry, Pigments - history, Dyes and dying - history, Synthetic Colors, Color mixing 667.622 ORN-M 178357; CL **Click here for more details.**
117		Tanning chemistry: the science of leather by Anthony D. Covington and William R. Wise, 2nd ed. London: Royal Society of Chemistry, 2020. xlvi, 685 p. ISBN: 9781788012041 Subject Terms: Leather industry and trade, Soaking Dyeing, Tanning chemistry, Mineral tanning 675.24 COV-T 178358; CL **Click here for more details.**

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118		Advances in silk research by N. Gokarneshan, New Delhi: Woodhead Publishing India, 2017. xiv, 268 p. ISBN: 9789385059216 Subject Terms: Weighing silk, Silk fibre, Raw silk, Fibres – Silk, Dyeing of silk, Polyester fabrics - Silk
		677.37 GOK-A
		178411; TT
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Title	Biological treatment of wastewaters using inverse fluidized bed reactor
Researcher	by Maneesh N.
Department	Department of Civil Engineering, IITD
Year	2023
Supervisor	Alappat, Babu J. (Prof.) - CE Sreekrishnan, T. R. (Prof.) - DBEB
Physical description	xxi, 165 p.
Subject terms	Anaerobic wastewater treatment, Autotrophic denitrification, Heterotrophic denitrification, Phenol removal, Ammonia removal, Hydrodynamics
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Title	Investigation on direct steam generation in parabolic trough solar collector
Researcher	by Ram Kumar Pal
Department	Department of Energy Science and Engineering, IITD
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Supervisor	K. Ravi Kumar (Assoc. Prof.) - ESE
Physical description	xxxi, 237 p.
Subject terms	Direct steam generation, Thermo-hydraulic analysis, Solar energy, Solar flux, Circumferential, Grooves
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Title	Three D (3D) In-vitro platform to study diseases
Researcher	by Shreemoyee De
Department	Centre for Biomedical Engineering, IITD
Year	2023
Supervisor	Singh, Neetu (Assoc. Prof.) - CBME
Physical description	xxx, 156 p.
Subject terms	Non scaffold techniques, Oncogene expression, Cellular migration, Metastatic potential, Culturing primary cells
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Title	Waste management: a framework for intervention

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Researcher	by Kaveri Kala
Department	Department of Mechanical Engineering, IITD
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Supervisor	Bolia, Nomesh B. (Prof.) - ME
Physical description	227 p.
Subject terms	Contextual policy, Stakeholders - waste management, Citizen engagement, Municipal solid waste management, Contextual policy
Barcode	TH7327
Call No.	TH 628.3/.4 KAL-W
Title	Development of high-efficiency anaerobic digestion of kitchen, vegetable, and fruit wastes for biogas production
Researcher	by Adya Isha
Department	Centre for Rural Development & Technology, IITD
Year	2023
Supervisor	Vijay, Virendra Kumar (Prof.) - CRDT Subbarao, P. M. V. (Prof.) - ME Chandra, Ram (Asst. Prof.) - CRDT
Physical description	xxv, 184 p.
Subject terms	Anaerobic digestion plant, Natural additives, Biogas production, Pulverization, Techno economic greenhouse, Waste water
Barcode	TH7328
Call No.	TH 662.767.2 ISH-D
Title	Growth and investigations of Co-based spin gapless semiconducting equiatomic quaternary heusler alloy thin films for spintronic applications
Researcher	by Vireshwar Mishra
Department	Department of Physics, IITD
Year	2023
Supervisor	Chaudhary, Sujeet (Prof.) - PH
Physical description	xxiv, 185 p.
Subject terms	Magnetoresistance, Spintronics, Thin film characterization, Weak localization, Perpendicular magnetic anisotropy
Barcode	TH7329
Call No.	TH 537.6/.8:669.018.5 MIS-G
Title	Growth, structural, optoelectronic, and photoelectrochemical properties of 2D transition metal chalcogenide-based semiconductors and their heterostructures

Researcher	by Narinder Kaur
Department	Department of Physics, IITD
Year	2023
Supervisor	Mehta, B.R. (Prof.) - PH Singh, Rajendra (Prof.) - PH
Physical description	xxxi, 148 p.
Subject terms	Photoelectrochemical cell, Photodetectors, Characterization techniques, Chemical vapor deposition, X-ray diffraction
Barcode	TH7330
Call No.	TH 621.382:546.302 KAU-G
Title	Development of functional food product using mushroom (Calocybe indica) mycelia fermented agro-waste
Researcher	by Mandira Kapri
Department	Centre for Rural Development & Technology, IITD
Year	2023
Supervisor	Sharma, Satyawati (Prof.) - CRDT Srivastav, Prem Prakash (Prof.) - IIT Kharagpur
Physical description	xxii, 250 p.
Subject terms	Mushroom polysaccharide, Beta glucans, Fermentation process, Anti cancer activity of indica mycelium, Mushroom cultivation
Barcode	TH7331
Call No.	TH 635.82:641.1 KAP-D
Title	Identification and band engineering of new topological materials
Researcher	by Anupam Bhattacharya
Department	Department Mechanical Engineering, IITD
Year	2023
Supervisor	Dutt, Jayanta Kumar (Prof.) - ME Chatterjee, Ratnamala (Prof.) - PH Mishchenko, Artem (Prof.) - Univ. of Manchester, U.K.
Physical description	xxiv, 240 p.
Subject terms	Flat band lattices, Topology switching, RE half heusler alloys, Schrodinger equation, Topological invariance
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Title	Modelling and mitigation of unexpected slips and falls in hospitals
Researcher	by Subhodip Chatterjee

Department	Centre for Biomedical Engineering, IITD
Year	2023
Supervisor	Chanda, Arnab (Prof.) - CBME
Physical description	xx, 161 p.
Subject terms	Barefoot slip testing, Nurses footwear, Hospital staff footwear, Biofidelic slip tester, Footwear outsoles
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Title	Coopetition: antecedents, interplay and impact on firm performance
Researcher	by Abhilasha Meena
Department	Department of Management Studies, IITD
Year	2023
Supervisor	Dhir, Sanjay (Prof.) - MS Sushil (Prof.) - MS
Physical description	xxiii, 318 p.
Subject terms	Innovation performance, Organisational learning theory, Moderator, Control variable, Dynamic capability theory
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Call No.	TH 658.1 MEE-C
Title	Pulsed power circuit design techniques for electromagnetic launchers
Researcher	by Dipta Chaudhuri
Department	Department of Electrical Engineering, IITD
Year	2023
Supervisor	Chatterjee, Shouri (Prof.) - EE Bhuvaneswari, G. (Prof.) - EE
Physical description	xvi, 178 p.
Subject terms	Pulsed power sources, Rail design, Thermal circuit analogy, Electromagnetic railgun, Pulsed power supply
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Title	Growth and characterization of GaN nanostructures and A1GaN/GaN heterostructures for device applications
Researcher	by Mansi Agrawal

Department	Department of Physics, IITD
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Supervisor	Mehta, B.R. (Prof.) - PH Muralidharan, R. - IISc
Physical description	xxx,188 p.
Subject terms	Sensing applications, Semiconductors, High electron mobility transistor, Molecular beam epitaxy, Raman spectroscopy
Barcode	TH7336
Call No.	TH 621.315.59 AGR-G
Title	Synthesis, structural, gas sensing in-situ XPS and KPFM investigation PLD grown 2D materials based nanostructures
Researcher	by Prashant Bisht
Department	Department of Physics, IITD
Year	2023
Supervisor	Mehta, B. R. (Prof.) - PH Singh, J. P. (Prof.) - PH
Physical description	v. p.
Subject terms	Characterization techniques, 2D materials, Heterostructure, Pulsed laser deposition technique, Gas sensors, Electron microscopy
Barcode	TH7337
Call No.	TH 620.3 BIS-S
Title	Study of select issues in the management of service supply chain for integrated smart grid in India
Researcher	by Laxmi Gupta
Department	Bharti School of Telecommunication Technology and Management
Year	2023
Supervisor	Shankar, Ravi (Prof.) – DMS
Physical description	xxvi, 384p.
Subject terms	Transmission grid system, Energy storage system, Power grid - India Battery integration
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Title	Hybrid polymeric composites for tribological applications
Researcher	by Neha Singh
Department	Department of Mechanical Engineering, IITD

Year	2023
Supervisor	Sinha, Sujeet Kumar (Prof.)-ME
Physical description	xxvi, 177p.
Subject terms	Tribology, Lubrication, Epoxy composites, Bicycle wheel bearing, Motor bearing – drone
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Title	Unravelling optical, excitonic and polaronic effects in perovskites using many body perturbation theory
Researcher	by Manjari Jain
Department	Department of Physics, IITD
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Supervisor	Bhattacharya, Saswata (Prof.) - PH
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Subject terms	Green's function, Density functional theory, Dyson's equation, Polaron parameters, Wannier exciton
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Title	Nanostructured materials for thermoelectric devices
Researcher	by Amish Kumar Gautam
Department	Department of Physics, IITD
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Supervisor	Khare, Neeraj (Prof.) - PH
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Subject terms	Electrical conductivity, Hydrothermal method, Thermal conductivity, Raman spectroscopy, Characterization techniques
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Researcher	by Yetendra Prasad Jha
Department	Department of Physics, IITD

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Supervisor	Malik, Hitendra K. (Prof.) - PH Mayank Kumar (Prof.) - ME
Physical description	xxvii, 105 p.
Subject terms	Plasma potential, Sheath formulation, Bohm velocity, Virtual cathode, Floating wall condition
Barcode	TH7342
Call No.	TH 533.9 JHA-S
Title	Extraction and characterization of bioactives from giloy (Tinospora cordifolia) and its application in herbal yogurt formulation
Researcher	by Nitin Kumar
Department	Centre for Rural Development and Technology, IITD
Year	2023
Supervisor	Sahu, Jatindra K. (Prof.) - CRDT Naik, S.N. (Prof.) - CRDT
Physical description	xix, 170 p.
Subject terms	Green extract, Bioactive compounds, Herbal yoghurt, Ultrasound-assisted extraction, Antidiabetic properties
Barcode	TH7343
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Title	Multi-scale indentation and scratch behavior of oxide glasses
Researcher	Kasimuthumaniyan S
Department	Department of Material Science and Engineering, IITD
Year	2023
Supervisor	Gosvami, Nitya Nand (Assoc. Prof.) - MSE Krishnan, N. M. Anoop (Assoc. Prof.) - CE
Physical description	xvii, 150 p.
Subject terms	Mechanical properties - Oxide glasses, Indentation, Scratch test - Oxide glasses, Borosilicate glass, Sodium aluminophosphosilicate glass
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Title	Processing and characterization of HDPE/plasticized UHMWPE/MWCNT nanocomposites and their foams for EMI shielding effectiveness
Researcher	by Ashok Kumar Bakshi
Department	Department of Materials Science and Engineering, IITD

Year	2023
Supervisor	Ghosh, Anup K. (Prof. Emeritus) - MSE Banerjee, Shib Shankar (Asst. Prof.) - MSE
Physical description	xxxi, 211 p.
Subject terms	In-situ polymerization, Quantification of EMI, Electromagnetic waves, Nanoindentation test, Cell size distribution
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Title	Civil aviation and security in the Indian context: creating a virtuous cycle
Researcher	by Bibhuti Bhusan Dash
Department	Department of Management Studies, IITD
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Supervisor	Chaudhry, Harish (Prof.) - MS
Physical description	xxi, 258 p.
Subject terms	Air transport, AVSEC, Satisfaction, Participation, Hold baggage system
Barcode	TH7346
Call No.	TH 347.82(540) DAS-C
Title	Development and tribodynamic studies of new micro-grooved and textured radial ball bearing
Researcher	by Bansidhar Gouda
Department	Centre for Automotive Research and Tribology, IITD
Year	2023
Supervisor	Tandon, N. (Emeritus Prof.) - CART Pandey, R. K. (Prof.) - ME Babu, C. K. (Dy. General Manager) - HAL, Bangalore
Physical description	xxii,181p.
Subject terms	Bearing performance evaluation, Film thicknes, Frictional torque, Lubrication – Bearings, Micro grooved races
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Call No.	TH 621.822.7 GOU-D
Title	Electron and ion scale magnetic turbulence studies relevant to laboratory astrophysics
Researcher	by Indraj Singh
Department	Department of Energy Science and Engineering, IITD
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Supervisor	Uma, R. (Prof.) - ESE Sharma, R. P. (Prof.) - ESE
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Subject terms	Laser plasma interaction, Supernova remnant, Plasma - mathematical descriptions, Solar wind, Model dynamic equations
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Title	Metabolic engineering of Zymomonas mobilis for lactic acid production and xylose utilization
Researcher	by Arun Thapa
Department	Department of Biochemical Engineering and Biotechnology, IITD
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Supervisor	Misra, Ashish (Asst. Prof.) - BEB
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Title	Assessment of the impacts of intra-household interactions on household activity-travel behavior
Researcher	by Punyabeet Sarangi
Department	Department of Civil Engineering, IITD
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Supervisor	Manoj, M. (Assoc. Prof.) - CE
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Researcher	by Shilpa Sharma
Department	Department of Chemistry, IITD

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Supervisor	Deep, Shashank (Prof.) - CHY
Physical description	xliv, 246 p.
Subject terms	Neurodegenerative diseases, Molecular docking, Protein aggregation, Amyotrophic lateral sclerosis, Protein folding
Barcode	TH7351
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Title	Role of E121K mutation of D-amino acid oxidase in amyotrophic lateral sclerosis
Researcher	by Upma Dave
Department	Kusuma School of Biological Sciences, IITD
Year	2023
Supervisor	Gomes, James (Prof.) - SBS
Physical description	xx, 110 p.
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Title	Investigation of climate relevant properties of aerosol and contribution of sources in arid region, Bikaner, India
Researcher	by Sayantee Roy
Department	Department of Civil Engineering, IITD
Year	2023
Supervisor	Habib, Gazala (Prof.) – CE
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Title	Framework for analysis of hit-and-run road traffic crashes
Researcher	by Alok Nikhil Jha
Department	Transportation Research and Injury Prevention Centre, IITD
Year	2023
Supervisor	Chatterjee, Niladri (Prof.) - MA Tiwari, Geetam (Prof.) - TRIPC

Physical description	xii, 178 p.
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Barcode	TH7354
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Title	Contemporary meanings of menstruation: gendered identities, anxieties, and lived experiences of rural and urban Odia women
Researcher	by Swayamshree Mishra
Department	Department of Humanities and Social Sciences, IITD
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Supervisor	Kaur, Ravinder (Prof.) – HSS
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Subject terms	Menarche rituals, Menopause, Delayed child bearing, Infertility, First menstruation – Rituals
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Title	High dynamic range CMOS image sensors for low light applications
Researcher	by Neha Priyadarshini
Department	Department of Electrical Engineering, IITD
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Supervisor	Sarkar, Mukul (Assoc.Prof.) – EE
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Title	Studies on mushroom based nutraceuticals probiotic products
Researcher	by Abhay Tiwari
Department	Centre for Rural Development and Technology, IITD
Year	2023

Supervisor	Sharma, Satyawati (Prof.) - CRDT Srivastava, Rupesh K. (Assoc.Prof.) - AIIMS, New Delhi Sharma, Vasudha (Asst. Prof.) - Jamia Hamdard University, New Delhi
Physical description	xxiii, 251 p.
Subject terms	Biology of mushroom, Mushroom based foods, Mushrooms - nutritional value, Probiotic mushroom frozen desert, Mushroom pickle
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Title	Biodegradable natural fibre-based coalescence filter and sorbent for oil separation from oily wastewater
Researcher	by Chandra Jeet Singh
Department	Department of Textile and Fibre Engineering, IITD
Year	2023
Supervisor	Rengasamy, R. S. (Prof.) - TT Mukhopadhyay, Samrat (Prof.) - TT
Physical description	xxxvii, 261 p.
Subject terms	Oil spill, Coalescence filtration, Oil-water emulsion, Kapok fibre Milkweed fibre
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Title	De-Novo assembly of short reads in minimal overlap model
Researcher	by Shashank Sharma
Department	Amar Nath and Shashi Khoshla School of Information Technology, IITD
Year	2023
Supervisor	Paul, Kolin (Prof.) – CSE
Physical description	xxii, 153 p.
Subject terms	Chain termination method, DNA sequencing, Computing threshold, Overlap graph construction, Anchor nodes
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Title	Traditional performances of the Goalpara region in Assam
Researcher	by Jyotirmay Das
Department	Department of Humanities and Social Sciences, IITD
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Supervisor	Ghosh, Arjun (Prof.) – HSS
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Subject terms	Folk performance, Mukh chandi dance, Performance arts, Khara, Taal, Marai play
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Title	Ambulance location optimization for enhanced coverage and survivability in Delhi
Researcher	by Shayesta Wajid
Department	Department of Civil Engineering, IITD
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Supervisor	Nezamuddin (Assoc. Prof.) - CE
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Subject terms	Emergency medical services, Double standard model, Inter programming, Robust Stochastic
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Title	Surface instablities in non-linear soft thin films
Researcher	by Sunita
Department	Department of Chemical Engineering, IITD
Year	2023
Supervisor	Sarkar, Jayati (Prof.) – CHE
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Title	Inclusive indoor wayfinding solution for people with visual impairment
Researcher	by Vikas Upadhyay
Department	School of Information Technology, IITD
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Supervisor	Balakrishnan, M. (Prof.) - CSE Paul, Rohan (Asst. Prof.) – CSE
Physical description	xiii, 146 p.
Subject terms	Way finding design requirements, Mapping indoor spaces, Indoor positioning systems, Annotation tools, Bluetooth beacon
Barcode	TH7363
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Title	Efficient and optimal operational planning active distribution systems
Researcher	by Shaziya Rasheed
Department	Department of Electrical Engineering, IITD
Year	2023
Supervisor	Abhyankar, A. R. (Prof.) – EE
Physical description	xxxiv, 191 p.
Subject terms	Distribution network reconfiguration, ZIP load modeling, Active distribution system, Optimal scheduling, Generalized nash equilibrium problem
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Title	Growth and investigation of ferromagnetic and antiferrromagnetic quantum material for spintronic devices
Researcher	by Kacho Imtiyaz Ali Khan
Department	Department of Physics, IITD
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Supervisor	Muduli, Pranaba Kishor (Prof.) – PH
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Subject terms	Magnetism, Magneto dynamic phenomenon, Hall effects, Chiral spin textures, Magnetization damping
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Title	Computationally efficient formulations for model predictive control and their applications
Researcher	by Keerthi Chacko
Department	Department of Electrical Engineering, IITD
Year	2023
Supervisor	Janardhanan, S (Prof.) - EE Kar, Indra Narayan (Prof.) - EE

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Subject terms	Control techniques, Active constraints aware, Event triggering, Intermittent feedback control, Approximate dynamic programming, Nonlinear systems, Tracking control, Multi tank system
Barcode	TH7366
Call No.	TH 681.513.54 CHA-C
Title	Permutation polynomials over finite fields and finite group rings
Researcher	by Pooja Gahlyan
Department	Department of Mathematics, IITD
Year	2023
Supervisor	Sharma, R. K. (Prof.) – MA
Physical description	ix, 96 p.
Subject terms	Linearized polynomials, Permutation trinomials, Useful lemma, Conjecture, Odd characteristics
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Title	Electrocatalytic water oxidation activity by molecular copper and cobalt complexes and mechanistic investigations
Researcher	by Moumita Bera
Department	Department of Chemistry, IITD
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Supervisor	Paria, Sayantan (Assoc.Prof.) – CHE
Physical description	306 p.
Subject terms	Redox active ligands, Water splitting reactions, Molecular catalyst, X-ray crystallography, DFT calculations
Barcode	TH7368
Call No.	TH 542.943'7 BER-E
	Back to content
Title	Studies on extraction and application of pearl millet (pennisetum glaucum) fibre
Researcher	by Manisha Yadav
Department	Department of Textile and Fibre Engineering, IITD
Year	2023
Supervisor	Gupta, Deepti (Prof.) -TT Rengasamy, R.S. (Prof.) -TT

Physical description	xv, 221 p.
Subject terms	Lignocellulosic materials, Pearl millet straw, Extraction – Cellulosic, Fibres – Pearl, Millet, Dye removal, Sanitary napkins
Barcode	TH7369
Call No.	TH 633.17:677.1/.5 YAD-S
Title	Spoof surface plasmon polariton-based antenna
Researcher	by Somia Sharma
Department	Centre for Applied Research in Electronics, IITD
Year	2023
Supervisor	Basu, Ananjan (Prof.) - CARE Koul, Shiban K. (Emeritus Prof.) – CARE
Physical description	xviii, 124 p.
Subject terms	Circuit model analysis, Standing wave, Wide-angle scanning, SSPP, Transition, Leaky, Wave, Antenna design
Barcode	TH7370
Call No.	TH 621.396.67 SHA-S
Title	Neural methods for monolingual and multilingual open information extraction
Researcher	by Keshav Sai Kolluru
Department	Department of Computer Science and Engineering, IITD
Year	2023
Supervisor	Mausam (Prof.) - CSE Chakrabarti, Soumen (Prof.) - CSE
Physical description	ix,120 p.
Subject terms	Open IE, Deep learning models, Generative models, Labeling models, Linguistic phenomena
Barcode	TH7371
Call No.	TH 681.3 KOL-N
Title	Modeling and analysis of smart manufacturing system implementation in Indian SMEs
Researcher	by Monica Shukla
Department	Department of Management studies, IITD
Year	2023
Supervisor	Ravi Shankar (Prof.) - MS
Physical description	xxvii, 253 p.

Subject terms	Industry 4.0, Indian government initiatives, Industrial revolution, Critical success factor, Smart manufacturing
Barcode	TH7372
Call No.	TH 658.11:67.02(540) SHU-M
Title	Theoretical insights in 2D defect engineering and van der waals heterostructures for optical and catalytic applications
Researcher	by Arunima Singh
Department	Department of Physics, IITD
Year	2023
Supervisor	Bhattacharya, Saswata (Prof.) – PH
Physical description	xxi, 126 p.
Subject terms	Density functional theory, Pseudopotentials, Defect formation energy, Green's function, Optical spectrum, Sham-schluter equation
Barcode	TH7373
Call No.	TH 544.147 SIN-T
Title	Eyeing the comic: narrativity and visuality
Researcher	by Nandan Sebastian Rosario
Department	Department of Humanities and Social Sciences, IITD
Year	2023
Supervisor	Dwivedi, Divya (Assoc. Prof.) – HSS
Physical description	ix, 347 p.
Subject terms	Irredeemable - Mark Waid, Storm - Don Lawrence, Comic book medium, Comic - Communicative act, Visual communication
Barcode	TH7374
Call No.	TH 82-341 ROS-E
Title	Studies in development of novel functional dyes for textiles
Researcher	by Ankit Kumar Singh
Department	Department of Textile and Fibre Engineering, IITD
Year	2023
Supervisor	Sheikh, Javed Nabibaksha (Assoc. Prof.) – TT
Physical description	xx, 171 p.

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Subject terms	Antibacterial textiles, Functional textiles, Mosquito repellent textiles, Flame retardant textiles, Evaluation of fastness of dyed fabrics
Barcode	TH7375
Call No.	TH 667.2:677.027 SIN-S
Title	Data-driven probabilistic methods for accounting forecast uncertainties in power system analysis and optimization
Researcher	by Attoti Bharath Krishna
Department	Department of Electrical Engineering, IITD
Year	2023
Supervisor	Abhyankar, Abhijit R. (Prof.) – EE
Physical description	xxix, 173 p.
Subject terms	Electric power grid, Quasi-Monte, Carlo methods, Sklar's theorem, Vine copula modelling, Optimal power flow (OPF)
Barcode	TH7376
Call No.	TH 621.311 KRI-D
Title	Identifying critical success factors for the health-tech startups: an empirical study in India and Australia
Researcher	by Imon Chakraborty
Department	IIT Delhi and University of Queensland Australia
Year	2023
Supervisor	Ilavarasan, Vigneswara P. (Prof.) - MS Edirippulige, Sisira (Assoc. Prof.) - COH, UQ
Physical description	xviii, 183 p.
Subject terms	CSFs of health-tech startups, Healthcare ecosystem, Challenges in healthcare services, Electronic health service, Stakeholders
Barcode	TH7377
Call No.	TH 614.2:658.1(540:94) CHA-I
Title	Program analysis under relaxed memory concurrency
Researcher	by Sanjana Singh
Department	Department of Computer Science and Engineering, IITD
Year	2023
Supervisor	Sharma, Subodh (Assoc. Prof.) – CSE
Physical description	xxvii, 211 p.

Subject terms	Memory models, Runtime efficiency, View equivalence, MoCA C/C++ memory level
Barcode	TH7378
Call No.	TH 681.3.06 SIN-P
Title	Development of SPION-based nanoabrasives for superfinish optical polishing
Researcher	by Md. Amir
Department	Centre for Sensor Instrumentation and Cyber-physical System Engineering, IITD
Year	2023
Supervisor	Khan, Gufran Sayeed (Prof.) - SeNSE Ali, S. Wazed (Prof.) - TT
Physical description	xxiv, 139 p.
Subject terms	Optical fabrication, Metrology techniques, Magnetic nanoparticles, X-ray diffraction, Superparamagnetic iron oxide nanoparticle
Barcode	TH7379
Call No.	TH 621.921:620.3 AMI-D
Title	Integrating culture in user experience design in the Indian context
Researcher	by Surbhi Pratap
Department	Department of Design, IITD
Year	2023
Supervisor	Jyoti Kumar (Assoc. Prof.) – DE
Physical description	xiv, 272 p.
Subject terms	User interface design, UX design process, Indian culture diversity, Cultural diversity, Design guidelines
Barcode	TH7380
Call No.	TH 7.012 PRA-I

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Title	Flexibility considerations in planning and operation of power systems
Researcher	by Shruti Ranjan
Department	Department of Electrical Engineering, IITD
Year	2023
Supervisor	Abhyankar, A. R. (Prof.) – EE

Physical description	xxxv, 210 p.
Subject terms	Wind power, Unit commitment, Renewable energy sources, Power market, Voltage stability analysis, Real-time adjustment cost
Barcode	TH7381
Call No.	TH 621.311 RAN-F
Title	Investigations on metrology of freeform optics and its application in infrared imaging
Researcher	by Lalit Mohan Pant
Department	Centre for Sensors, Instrumentation & Cyber-physical System Engineering, IITD
Year	2023
Supervisor	Khan, Gufran sayeed (Prof.) - SeNSE Shakher, Chandra (Prof.) – SeNSE
Physical description	xix, 119 p.
Subject terms	Optical system, Gaussian curvatures, Holo-shear lens, Wavefront, Freeform surfaces
Barcode	TH7382
Call No.	TH 535.317.2 PAN-I
Title	Investigation of multivariate fractal approximation and fractal operator on various function spaces
Researcher	by Kshitij Kumar Pandey
Department	Department of Mathematics, IITD
Year	2023
Supervisor	Viswanathan, P. (Assoc. Prof.) - MA
Physical description	xxviii, 213 p.
Subject terms	Iterated function system, Fractal interpolation functions, Function spaces, Operator theory, Zipper fractal operator α-fractal functions
Barcode	TH7383
Call No.	TH 517.98 PAN-I
Title	Hot carrier reliability characterization of RF CMOS circuits and devices
Researcher	by Aarti Rathi
Department	Department of Electrical Engineering, IITD
Year	2023
Supervisor	Dixit, Abhisek (Prof.) – EE
Physical description	xxvii, 174 p.

Subject terms	Reliability issues, DC characterization, Power amplifiers, RF CMOS Technology, Hot carrier degradation (HCD)
Barcode	TH7384
Call No.	TH 621.382 RAT-H
Title	Electroplated bistable MEMS actuator using BEOL compatible process and tunning of residual stress
Researcher	by Vasudha Agrawal
Department	Department of Electrical Engineering, IITD
Year	2023
Supervisor	Mitra, Bhaskar (Asst. Prof.) - EE
Physical description	xvi, 114 p.
Subject terms	UV LIGA, Bistability, Latching, Lorentz force actuation, Hollow beam
Barcode	TH7385
Call No.	TH 681.587 AGR-E
Title	Numerical methods and data-driven approach for stochastic integro-differential/differential equations containing non-local operators
Researcher	by Abhishek Kumar Singh
Department	Department of Mathematics, IITD
Year	2023
Supervisor	Mehra, Mani (Prof.) – MA
Physical description	xxvii, 181 p.
Subject terms	Fractional calculus, Stochastic calculus, Spectral collocation method, Operational matrices, Multi resolution analysis
Barcode	TH7386
Call No.	TH 519.62 SIN-N
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Title	Experimental and numerical studies of the regenerator for a miniature stirling cryocooler
Researcher	by Shital Kumar Garg
Department	Department of Mechanical Engineering, IITD
Year	2023
Supervisor	Premachandran B. (Prof.) - ME
Physical description	xvii, 96 p.

Subject terms	Local thermal equilibrium, Local thermal nonequilibrium, Regenerator, High-endurance system, Cooling IR detectors
Barcode	TH7387
Call No.	TH 621.56/.59 GAR-E
Title	3D printing of dairy sweetmeats
Researcher	by M. A. Bareen
Department	University of Queensland and IIT Delhi
Year	2023
Supervisor	Sahu, Jatindra K (Prof.) - CRDT Naik, S K (Prof.) - CRDT Prakash, Sangeeta - University of Queensland Bhandari, Bhesh - University of Queensland
Physical description	xxi, 230 p.
Subject terms	Heat acid coagulated milk products, Gel strength, Texture, Image analysis, Finite element analysis, Multi objective optimization, Thermo mechanical simulation, Neophobia
Barcode	TH7388
Call No.	TH 637.1:641.51 BAR-T
Title	Design, development and performance analysis of pico-capacity hydrokinetic turbine
Researcher	by Mahendra Kumar Gupta
Department	Department of Mechanical Engineering, IITD
Year	2023
Supervisor	Subbarao, P.M.V. (Prof.) - ME
Physical description	xix, 136 p.
Subject terms	Rotor blade design, Hydrodynamic theory, CFD analysis - turbine performance, BEM theory, XFOIL
Barcode	TH7389
Call No.	TH 621.224 GUP-D
Title	Colloidally synthesized heterostructures based on 2D layered semiconductors
Researcher	by Ajeet Singh
Department	Department of Chemistry, IITD
Year	2023
Supervisor	Sapra, Sameer (Prof.) - CHY
Physical description	xxviii, 164 p.

Subject terms	Molybdenum diselenide, Optical characterization, Layered halide perovskites, Transmission electron microscopy, Optical microscopy
Barcode	TH7390
Call No.	TH 546.77:621.315.5 SIN-C
Title	Integrated processing for value chain development of Indian trans Himalayan sea buckthorn (Hippophae sp.)
Researcher	by Nikita Sanwal
Department	Department of Centre for Rural Development & Technology, IITD
Year	2023
Supervisor	Sahu, Jatindra K (Prof.) - CRDT Naik, S N (Prof.) - CRDT
Physical description	xix, 176 p.
Subject terms	Novel processing technologies, Process optimization, Metabolomics, Process dynamics, Bioactive potentials, Functional foods, Principal component analysis
Barcode	TH7391
Call No.	TH 582.724.1(292.536) SAN-I
Title	Investigation of carrier trapping effects from electrical and thermal stress in III-N HEMTs for RF applications
Researcher	by Jayjit Mukherjee
Department	Department of Physics, IITD
Year	2023
Supervisor	Rawal, Dipendra S.(Scientist H) - SSPL, DRDO New Delhi Dhaka, Rajendra (Assoc. Prof.) – PH
Physical description	xviii, 180 p.
Subject terms	Atomic force microscopy, Photovoltaics, High electron mobility transistors (HEMTS), Trap assisted tunneling, Drain current spectroscopy
Barcode	TH7392
Call No.	TH 621.382.3 MUK-I
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Title	Multiscale mechanics of intralamellar structures in annulus fibrosus
Researcher	by Shambo Bhattacharya
Department	Department of Mechanical Engineering, IITD
Year	2023
Supervisor	Dubey, Devendra (Assoc. Prof.) – ME
Physical description	xxxiii, 269 p.

Subject terms	Intervertebral disc, Treatment of IVD, Biochemistry, Hyaluronan segment, Collagen fiber bundles
Barcode	TH7393
Call No.	TH 539.216:611.711 BHA-M
Title	Metal and metal-oxide thin films for IR sensor applications
Researcher	by Isha Yadav
Department	Department of Physics, IITD
Year	2023
Supervisor	Chatterjee, Ratnamala (Prof.) - PH Dutta, Shankar - Solid state physics laboratory, DRDO
Physical description	xviii,153 p.
Subject terms	Photon detector, Sputter deposition system, Non stoichiometric titanium oxide, X ray diffraction, Atomic force microscopy
Barcode	TH7394
Call No.	TH 539.216:681.586 YAD-M
Title	Design and performance analysis of savonius type ultra micro hydrokinetic turbine
Researcher	by Thochi Seb Rengma
Department	Department of Mechanical Engineering, IITD
Year	2023
Supervisor	Subbarao, P. M. V. (Prof.) - ME
Physical description	xxi, 186 p.
Subject terms	Electricity generation, Artificial neural network, Semicircular blade, Novel blade geometry, Optimized bezier curve
Barcode	TH7395
Call No.	TH 621.224 REN-D
Title	Development of novel bore aerodynamic journal bearings for sustainable industrial technologies
Researcher	by Manas Ranjan Pattnayak
Department	Department of Mechanical Engineering, IITD
Year	2023
Supervisor	Pandey, Raj Kumar (Prof.) - ME Dutt, Jayanta Kumar (Prof.) - ME
Physical description	xxxiv, 297 p.

Subject terms	Tribological performance, Dynamic performance, Cavitation model, Rotordynamics, Micro turbomachines
Barcode	TH7396
Call No.	TH 621.82 PAT-D
Title	High resolution multilevel inverter for solar PV application
Researcher	by Neha Tak
Department	Department of Energy Science and Engineering, IITD
Year	2023
Supervisor	Chattopadhyay, Sumit K (Prof.) – ESE
Physical description	xxviii, 273 p.
Subject terms	Inverter topologies, Multilevel converter setup, Asymmetric multilevel inverter, Photovoltaic inverter, Grid connected systems, Transformerless inverter
Barcode	TH7397
Call No.	TH 621.311.243 TAK-H
Title	Studies on natural inhibitory phytometabolites targeting acetylcholinesterase for alzheimer's treatment
Researcher	by Gaurav Choudhir
Department	Centre for Rural Development and Technology, IITD
Year	2023
Supervisor	P., Hariprasad (Assoc. Prof) - CRDT Sharma, Satyawati (Prof.) - CRDT
Physical description	220 p.
Subject terms	Alzheimer's disease – Treatment, Acetylcholinesterase, Alzheimer's therapy, Plant metabolites, C rotundus
Barcode	TH7398
Call No.	TH 615.32:616.89 CHO-S
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Title	Machine learning based forecasting in power system
Researcher	by Parul
Department	Department of Electrical Engineering,IITD
Year	2023
Supervisor	Panigrahi, B.K. (Prof.) - EE Suganthan, P.N. (Prof.) - Qatar University
Physical description	167 p.

Subject terms	Neural networks, Wind power forecasting, Innovation state space models (ISSM), Time series regression model, Deep probabilistic forecasting model
Barcode	TH7399
Call No.	TH 621.311:681.3 PAR-M
Title	Linear stability of non-newtonian fluid flows
Researcher	by Subham Pal
Department	Department of Applied Mechanics, IITD
Year	2023
Supervisor	Samanta, Arghya (Assoc. Prof) – AM
Physical description	204 p.
Subject terms	Hydrodynamic stability, Viscoelastic liquid flow, Reynold number regime, Channel fluid flows, Viscoelastic coefficient
Barcode	TH7400
Call No.	TH 532.5 PAL-L
Title	Study on the performance characterization of outer layer of fire protective clothing
Researcher	by Rochak Rathour
Department	Department of Textile and Fibre Engineering, IITD
Year	2023
Supervisor	Das, Apurba (Prof.) - TT Alagirusamy, Ramasamy (Prof.) - TT
Physical description	201 p.
Subject terms	Thermal hazards, Box-Behnken Model, Radiative protective perfomance, Flame, Protective performance, Box-Behnken DOE
Barcode	TH7401
Call No.	TH 677.027.625.16 RAT-S

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Title	Agri-entrepreneurial innovations for livelihood security in indogangetic plains: an analytical study
Researcher	by Sumati Sharma
Department	Centre for Rural Development and Technology, IITD
Year	2023
Supervisor	Sharma, Satyawati (Prof.) – CRDT
Physical description	175 p.

Subject terms	Entrepreneurship development – India, Agri-Innovation, Livelihood security, Livelihood index, Non-agri-entrepreneurs
Barcode	TH7402
Call No.	TH 631:658.1(292.561) SHA-A
Title	Asymptotic modeling of magnetostrictive material based structure with application to energy harvesting device design
Researcher	by Sajan Kumar Wahi
Department	Department of Applied Mechanics, IITD
Year	2023
Supervisor	Santapuri, S (Assoc. Prof.) - AM
Physical description	xxvii, 125 p.
Subject terms	Structural dynamics, Electromagnetic problem, Finite element implementation, Energy minimization, Nonlinear anhysteretic, Unimorph beam harvester
Barcode	TH7403
Call No.	TH 681.586.785 WAH-A

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