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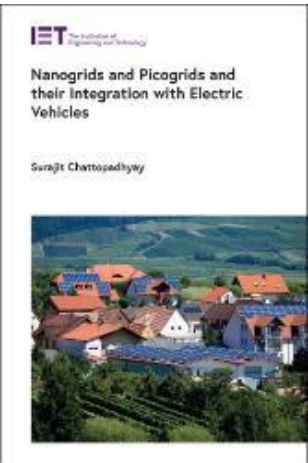
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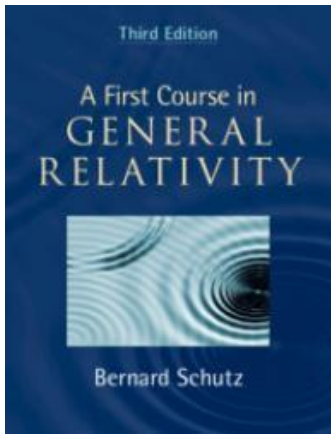
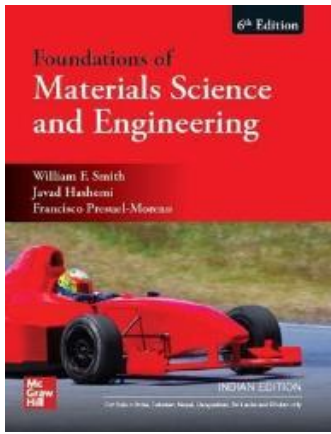
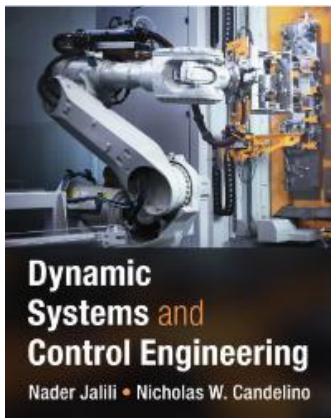
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| <b>1</b> |  | <p>Fractional vibrations with applications to Euler-Bernoulli beams by Ming Li, Boca Raton: CRC Press, 2024. xxvii, 530 p.,<br/>ISBN: 9781032603605</p> <p>Subject Terms: Harmonic vibrations; Time signal; Aperiodic forces; Fractional Vibration; Mass</p> |
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| <b>2</b> |  | <p>Fundamentals of computational fluid dynamics: the finite volume method by Clovis R. Maliska, Cham: Springer, 2023. xviii, 431 p.,<br/>ISBN: 9783031182372</p> <p>Subject Terms: Fluid mechanics; Heat transfer; Finite volume method; Numerical validation; Finite difference method</p> |
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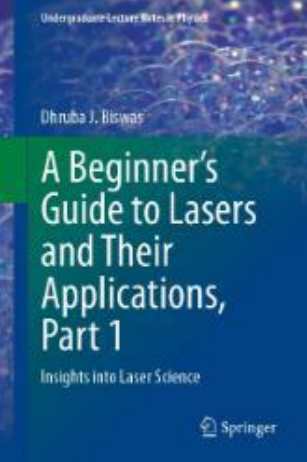
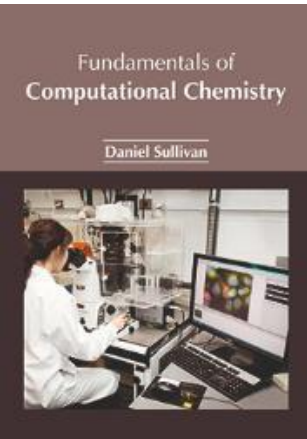
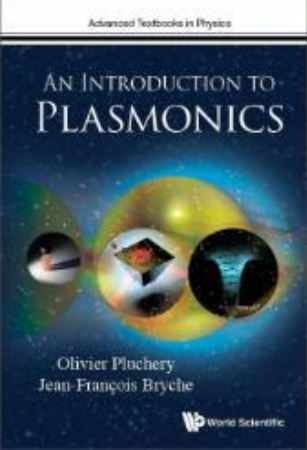
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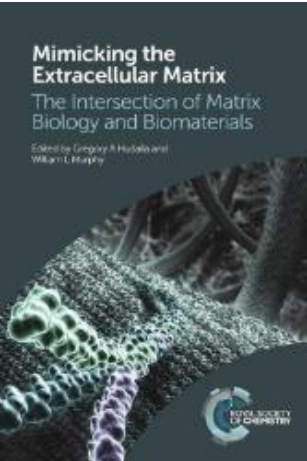
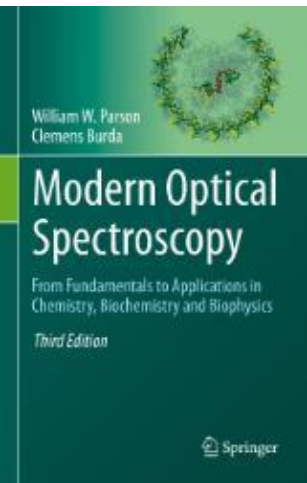
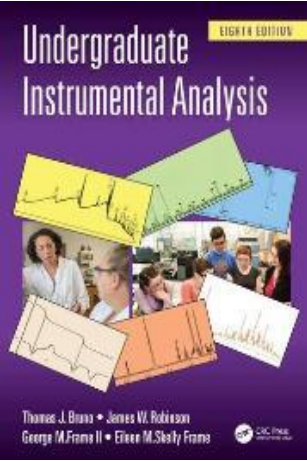
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| <b>3</b> |  | <p>Nanogrids and picogrids and their integration with electric vehicles by Surajit Chattopadhyay, London: IET, 2022. xxii, 337 p.,<br/>ISBN: 9781839534829</p> <p>Subject Terms: Battery powered vehicles; Battery charging stations; Battery storage plants; Electric vehicles; Power grids</p> |
|          |   | 629.064.5:621.311 CHA-N  |
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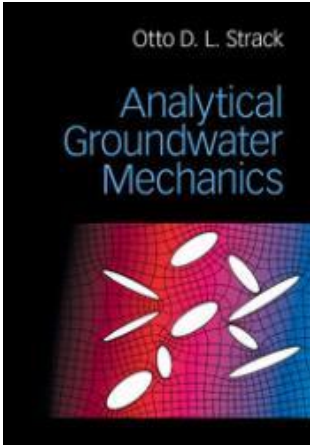
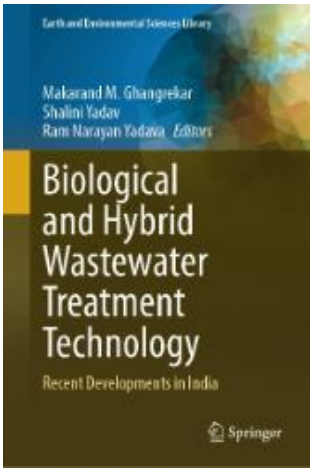
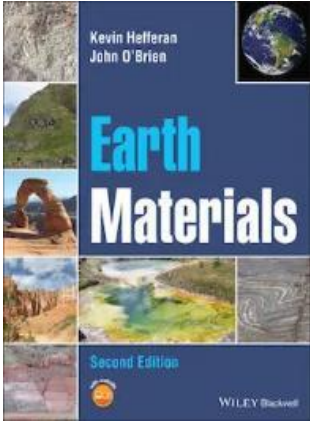
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| 4   |    | <p>First course in general relativity by Bernard Schutz, 3rd ed. New York: Cambridge University Press, 2022. xv, 497 p.,</p> <p>ISBN: 9781108492676</p> <p>Subject Terms: Astrophysics; Linear functional; Physics general theory of relativity; Special relativity; Static spherically symmetric perfect fluid</p>                       |
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| 6   |  | <p>Dynamic systems and control engineering by Nader Jalili and Nicholas W. Candelino, Cambridge: Cambridge University Press, 2023. xxv, 920 p.,</p> <p>ISBN: 9781108831055</p> <p>Subject Terms: Control theory; Dynamic system response; System transfer function analysis; Root locus techniques; Frequency domain methods</p>          |
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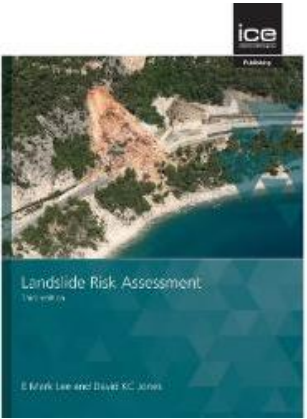
# Chemistry

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| 7 |    | <p>Beginners guide to lasers and their applications, Part 1: Insights into laser science by Dhruba J. Biswas, Cham: Springer, 2023. xvi, 321 p.,<br/>ISBN: 9783031243295</p> <p>Subject Terms: Biology - Technique; Biophysical methods; Lasers; Optical materials; Spectroscopy</p> <p>537.533 BIS-B</p> <p>Barcode: 180138; CL</p> <p><a href="#">Click here for more details.</a></p> |
|   |   |  |
| 8 |   | <p>Fundamentals of computational chemistry edited by Daniel Sullivan, New York: NY Research Press, 2018. viii, 202 p.,<br/>ISBN: 9781632385857</p> <p>Subject Terms: Computer programs; Molecular dynamics; Density functional methods; Analytical chemistry; Chemical engineering</p> <p>543.08 -FUN</p> <p>Barcode: 180139; CL</p> <p><a href="#">Click here for more details.</a></p> |
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| 9 |  | <p>Introduction to plasmonics by Olivier Pluchery and Jean-François Bryche, London: World Scientific, 2023. xxix, 325 p.,<br/>ISBN: 9781800613393</p> <p>Subject Terms: Electromagnetism; Optical properties; Wave propagation; Surface plasmon; Biosensing</p> <p>533.95 PLU-I</p> <p>Barcode: 180210; CL</p> <p><a href="#">Click here for more details.</a></p>                       |
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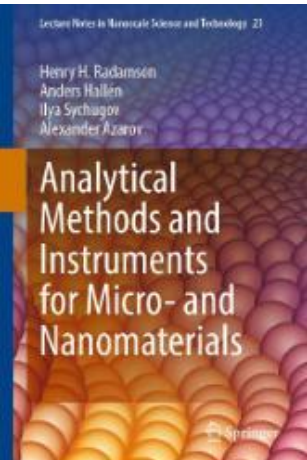
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| 10 |    | <p>Mimicking the extracellular matrix: the intersection of matrix biology and biomaterials, England: Royal Society of Chemistry, 2020. xv, 405 p.,<br/>ISBN: 9781839161483</p> <p>Subject Terms: Extracellular matrix; Biomaterial; Bioengineering; Matrix; Matrix biology</p>  |
|    |   | 615.4 -MIM  |
|    |   | Barcode: 180191; CL   |
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| 11 |   | <p>Modern optical spectroscopy: from fundamentals to applications in chemistry, biochemistry and biophysics by William W. Parson and Clemens Burda, 3rd ed. Switzerland: Springer, 2023. xii, 650 p.,<br/>ISBN: 9783031172243</p> <p>Subject Terms: Fluorescence; Raman scattering; Photoexcitation; Laser spectroscopy; Crystal symmetry</p> |
|    |   | 543.42 PAR-M  |
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| 12 |  | <p>Undergraduate instrumental analysis by Thomas J. Bruno...( et al. ), 8th ed. Boca Raton: CRC Press, 2024. xxx, 995 p.,<br/>ISBN: 9781032036915</p> <p>Subject Terms: Spectroscopy; Electromagnetic radiation; Electroanalytical methods; Chemical apparatus; Atomic fluorescence spectroscopy</p>  |
|    |   | 543.08 -UND   |
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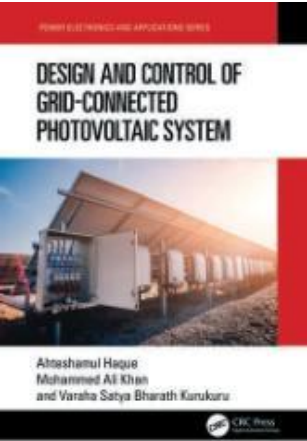
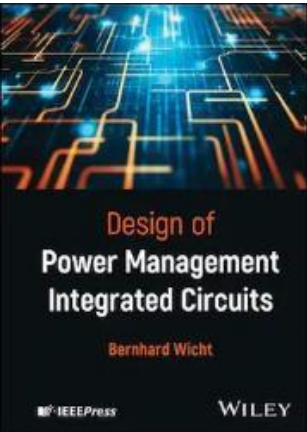
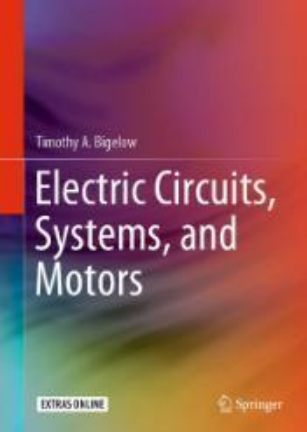
## Civil Engineering

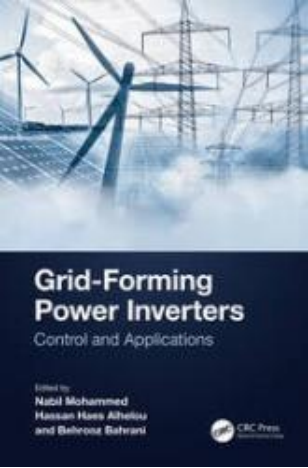

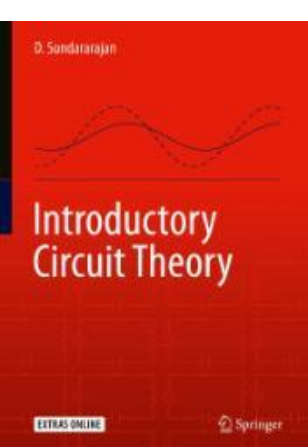
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| <b>13</b> |    | <p>Analytical groundwater mechanics by Otto D. L. Strack, Cambridge: Cambridge University Press, 2017. x, 435 p.,<br/>ISBN: 9781107148833</p> <p>Subject Terms: Groundwater flow; Vertically integrated flow; Discharge potentials; Anisotropy; Cylindrical analytic elements</p>  |
|           |   | 556.3 STR-A  |
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| <b>14</b> |   | <p>Biological and hybrid wastewater treatment technology: recent developments in India edited by Makarand M. Ghangrekar, Shalini Yadav and Ram Narayan Yadava, Switzerland: Springer, 2024. vii, 526 p.,<br/>ISBN: 9783031630453</p> <p>Subject Terms: Wastewater; Circular economy; Constructed wetlands and algal-mediated technologies; Emerging membrane technologies; Bio-Electrochemical systems (BES)</p> |
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| <b>15</b> |  | <p>Earth materials by Kevin Hefferan and John O' Brien, 2nd ed. Hoboken: Wiley, 2022. v, 680 p.,<br/>ISBN: 9781119512172</p> <p>Subject Terms: Earth sciences; Geochemistry; Geology; Mineralogy; Petrology</p>  |
|           |   | 624.13 HEF-E   |
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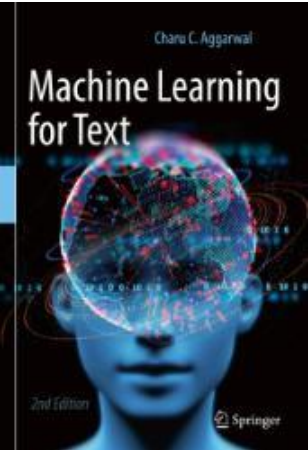
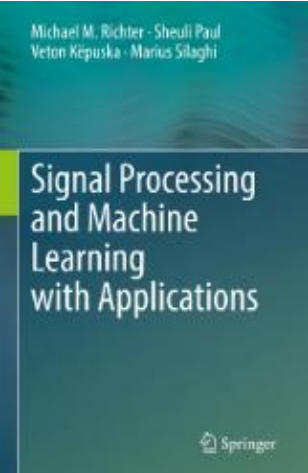
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| 16 |    | <p>Earthquake science and engineering by Omer Aydan, Leiden: CRC Press, 2024. xvi, 499 p.,<br/>ISBN: 9780367758783</p> <p>Subject Terms: Earthquake damage; Earthquake engineering; Earth sciences; Seismology; Environmental and geotechnical engineering</p> <p>624.159.14 AYD-E</p> <p>Barcode: 180150; CL</p> <p><a href="#">Click here for more details.</a></p>                       |
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| 17 |   | <p>Fundamentals of foundation engineering by Chang-Yu Ou...(et al. ), Oxon: CRC Press, 2024. xiv, 421 p.,<br/>ISBN: 9781032394978</p> <p>Subject Terms: Civil engineering; Environmental and geotechnical engineering; Structural engineering; Soil mechanics; Foundations and piling</p> <p>624.15 -FUN</p> <p>Barcode: 180143; CL</p> <p><a href="#">Click here for more details.</a></p> |
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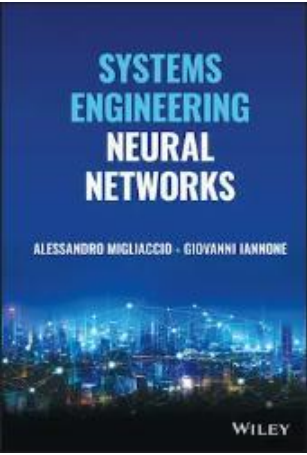
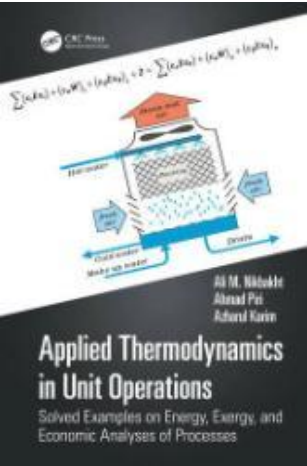
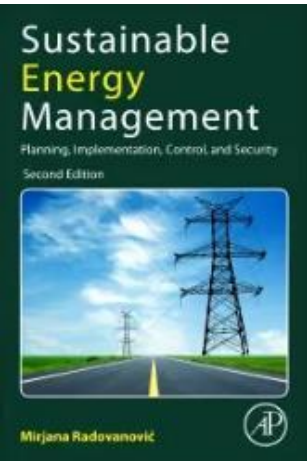


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| 19  |  <p>Springer Texts in Civil Engineering<br/>Isabella Giorgia Colombo - Matteo Colombo - Marco di Prisco - Anna Magri - Paolo Martinelli - Letizia Mazzoleni - Guido Zani<br/><b>Structural Analysis of Plane Frames</b><br/>Solved Examples with Force and Displacement Methods<br/>Springer</p> | <p>Structural analysis of plane frames: solved examples with force and displacement methods by Isabella Giorgia Colombo... ( et al.), Cham: Springer, 2024. x, 344 p.,<br/>ISBN: 9783031352690</p> <p>Subject Terms: Displacement method; Structural design; Force method; Frame structures; Structural mechanics</p> <p>624.04 -STR</p> <p>Barcode: 180141; CL</p> <p><a href="#">Click here for more details.</a></p>              |
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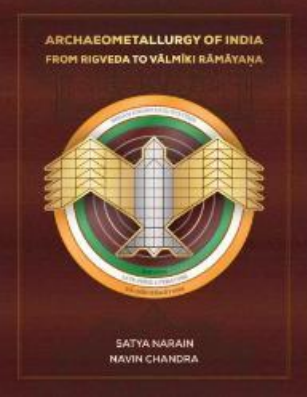
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| 22 |    | <p>Design and control of grid connected photovoltaic system by Ahteshamul Haque, Mohammed Ali Khan, V S Kurukuru, Boca Raton: CRC Press, 2023. xiv, 228 p.,</p> <p>ISBN: 9781032189741</p> <p>Subject Terms: Clean tech; Renewable energy; Power electronics; Power and energy; Stochastic time series</p> <p>621.311.1 HAQ-D</p> <p>Barcode: 180201; CL</p> <p><a href="#">Click here for more details.</a></p> |
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| 23 |   | <p>Design of power management integrated circuits by Bernhard Wicht, Hoboken: Wiley, 2024. xviii, 457 p.,</p> <p>ISBN: 9781119123064</p> <p>Subject Terms: Power management IC; Soft-switching; Capacitors; Inductors; On-resistance and dropout</p> <p>621.311 WIC-D</p> <p>Barcode: 180120; CL</p> <p><a href="#">Click here for more details.</a></p>   |
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| 25 |    | <p>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.,<br/>ISBN: 9781032298887</p> <p>Subject Terms: Grid-Forming; Grid standards; Converters; Small-Signal modeling; Generators</p> <p>621.311 -GRI</p> <p>Barcode: 180190; CL</p> <p><a href="#">Click here for more details.</a></p>  |
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| 27 |  | <p>Introductory circuit theory by D. Sundararajan, Switzerland: Springer, 2020. xi, 297 p.,<br/>ISBN: 9783030319847</p> <p>Subject Terms: Electrical circuit theory; Simulation of the circuits; Matlab; Program scripts and circuit simulations; Magnetically coupled circuits</p> <p>621.3.049 SUN-I</p> <p>Barcode: 180205; TB</p> <p><a href="#">Click here for more details.</a></p>  |
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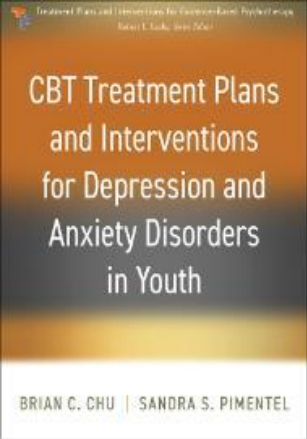
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| 31  |    | <p>Systems engineering neural networks by Alessandro Migliaccio and Giovanni Iannone, Hoboken: Wiley, 2023. xvi, 217 p.,<br/>ISBN: 9781119901990</p> <p>Subject Terms: Complex systems; Fuzzy thinking; Deep learning; Systems engineering and forecasting; Artificial intelligence</p> <p>62:004.89 MIG-S</p> <p>Barcode: 180121; CL</p> <p><a href="#">Click here for more details.</a></p>  |
| <h2 style="color: red;">Energy Science and Engineering</h2> |   |  |
| 32  |   | <p>Applied thermodynamics in unit operations: solved examples on energy, exergy, and economic analyses of processes by Ali M. Nikbakht, Ahmad Piri and Azharul Karim, Boca Raton: CRC Press, 2024. xii, 301 p.,<br/>ISBN: 9781032543956</p> <p>Subject Terms: Energy consumption; Power generation; Thermal calculations; Energy and Exergy analyses; Entropy transfer</p> <p>536.7 NIK-A</p> <p>Barcode: 180203; CL</p> <p><a href="#">Click here for more details.</a></p> |
| 33  |  | <p>Sustainable energy management: planning, implementation, control and security by Mirjana Radovanovic, 2nd ed. London: Elsevier, 2023. vii, 310 p.,<br/>ISBN: 9780128210864</p> <p>Subject Terms: Energy development; Renewable energy sources; Sustainable engineering; Energy efficiency; Risk management</p> <p>620.9:502.13 RAD-S</p> <p>Barcode: 180145; CL</p> <p><a href="#">Click here for more details.</a></p>   |

## Gratis

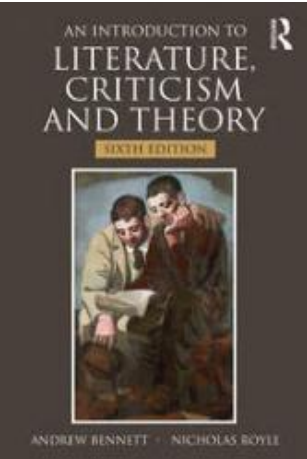
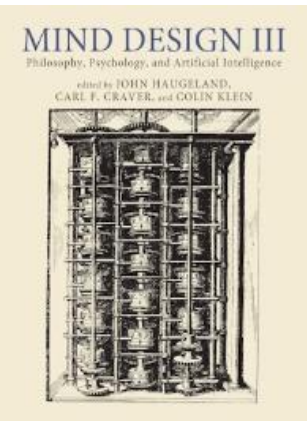

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| <b>34</b> |  | <p>Archaeometallurgy of India from Rigveda to Valmiki Ramayana / by Satya Narain and Navin Chandra, Roorkee: AG Tech Publishing, 2023. 583 p.,<br/>ISBN: 9788196549138</p> <p>Subject Terms: Archaeometallurgy study; Antiquities; Metal-work; Metal artifacts</p> |
|           |   | 903.05(540) NAR-A  |
|           |   | Barcode: G24057; CL  |
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| <b>35</b> |  | <p>Jindgi sau bata sau (ज़िन्दगी सौ बटा सौ ) by Jyoti Rana, Delhi: Amrit Prakashan, 2024. 104 p.,<br/>ISBN: 9789394387294</p> <p>Subject Terms: Hindi literature; Hindi book; Hindi- literature collection</p> |
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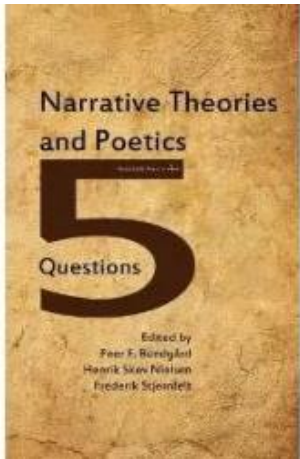
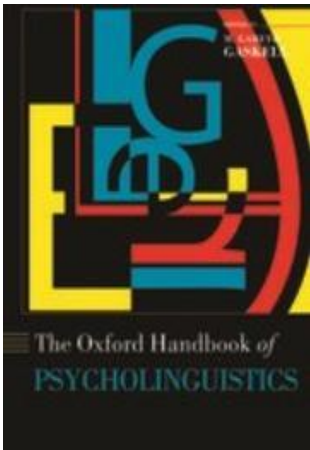
## Humanities & Social Sciences

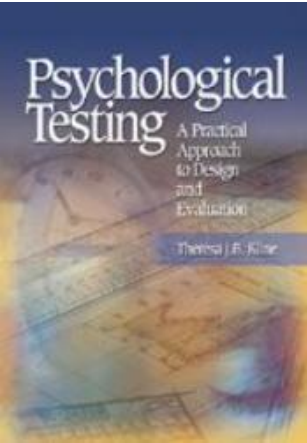

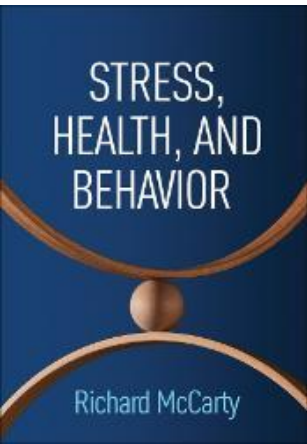
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| <b>36</b> |  | <p>CBT treatment plans and interventions for depression and anxiety disorders in youth by Brian C. Chu and Sandra S. Pimentel, New York: Guilford Press, 2023. xxi, 426 p.,<br/>ISBN: 9781462551149</p> <p>Subject Terms: Anxiety in adolescence - Treatment; Depression in adolescence - Treatment.; Cognitive therapy for teenagers; Psychology;Psychotherapy - Child and adolescent</p> |
|           |   | 616.89 CHU-C   |
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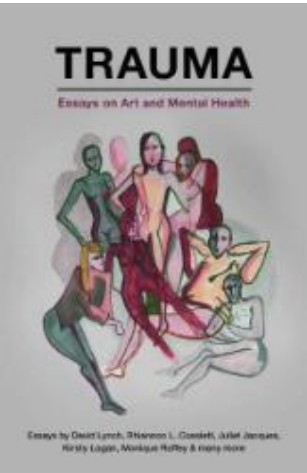
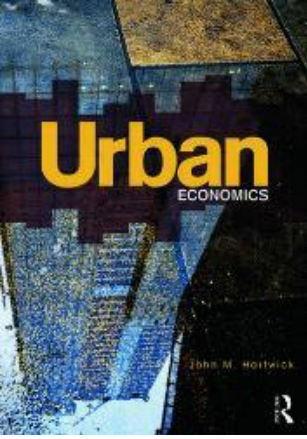
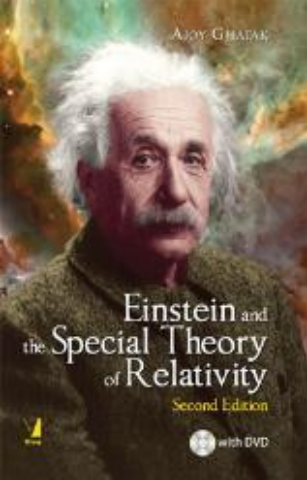
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| 37 |    | <p>Changing urban school by Robert Thornbury, Oxon: CRC Press, 2011. ix 245 p., ISBN: 9780415675697</p> <p>Subject Terms: Education- Comparative; Philosophy and social aspects; Education - Urban; Urban schools - Great Britain; Education policy and politics</p> <p>373.091 THO-C</p> <p>Barcode: 180155; 180208; CL; HSS</p> <p><a href="#">Click here for more details.</a></p> |
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| 38 |   | <p>Foundations of sensation and perception by George Mather, 4th ed. London: Routledge, 2022. viii, 430 p., ISBN: 9781032371375</p> <p>Subject Terms: Cognitive psychology; Speech perception and production; Perception; Visual perception; Auditory perception</p> <p>159.93 MAT-F</p> <p>Barcode: 180186-180187; CL; HSS</p> <p><a href="#">Click here for more details.</a></p>   |
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| 39 |  | <p>Freud's footnotes by Darian Leader, London: Faber &amp; Faber, 2000. iv, 253 p., ISBN: 9780571195855</p> <p>Subject Terms: Philosophy; Footnotes; Internal world; Gender question; Psychoanalysis</p> <p>159.9.018.4 LEA-F</p> <p>Barcode: 180160; CL</p> <p><a href="#">Click here for more details.</a></p>  |
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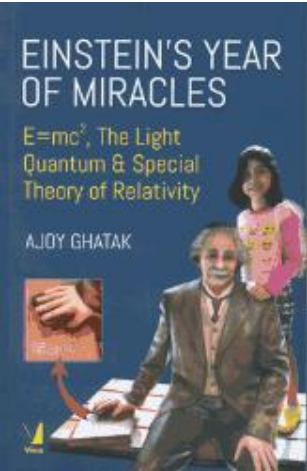
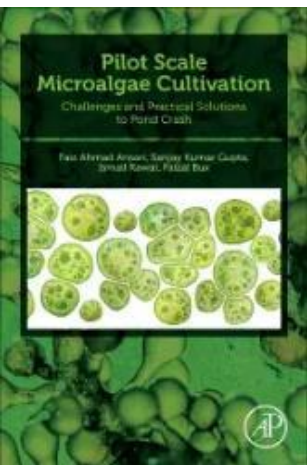
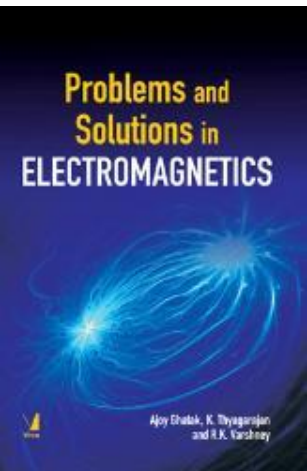
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| 40 |    | <p>Introduction to literature, criticism and theory by Andrew Bennett and Nicholas Royle, 6th ed. Abingdom: CRC Press, 2023. xv, 523 p.,<br/>ISBN: 9781032158846</p> <p>Subject Terms: Literature - History and criticism; Literature - Study and teaching; Literature history and criticism theory; Critical concepts; Language and literature</p> <p>82.09 BEN-I</p> <p>Barcode: 180130-180131; CL; HSS</p> <p><a href="#">Click here for more details.</a></p> |
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| 41 |   | <p>Mind design III: philosophy, psychology, and artificial intelligence edited by John Haugeland, Carl F. Craver and Colin Klein, Cambridge: MIT Press, 2023. ix, 540 p.,<br/>ISBN: 9780262546577</p> <p>Subject Terms: Artificial intelligence; Cognitive psychology; Vision; Computing machinery and intelligence; Rationality and Intelligence</p> <p>159.91:004.85 -MIN</p> <p>Barcode: 180156; CL</p> <p><a href="#">Click here for more details.</a></p>    |
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| 42 |  | <p>Mindmelding: consciousness, neuroscience, and the mind's privacy by William Hirstein, New York: Oxford University Press, 2012. x, 282 p.,<br/>ISBN: 9780199231904</p> <p>Subject Terms: Mindtalk; Bare consciousness; Psychological self; Folk psychology; Metaphysician</p> <p>159.91 HIR-M</p> <p>Barcode: 180170; CL</p> <p><a href="#">Click here for more details.</a></p>  |
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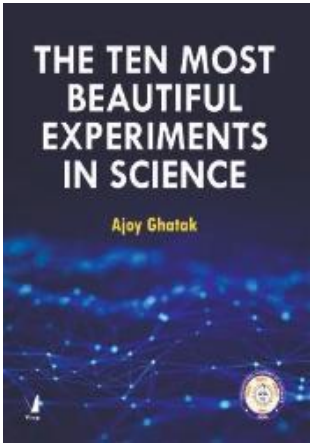
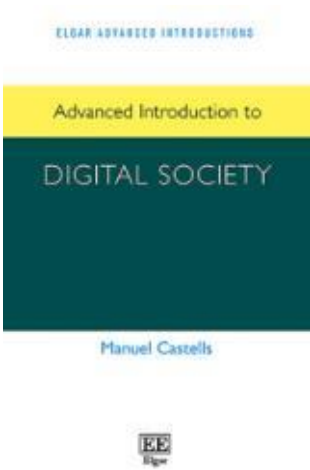
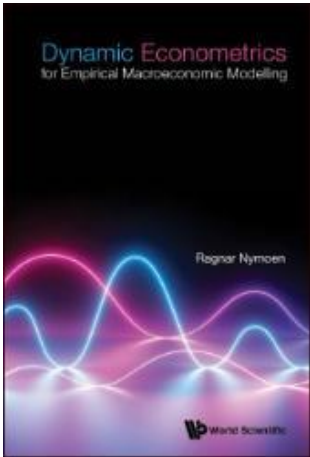


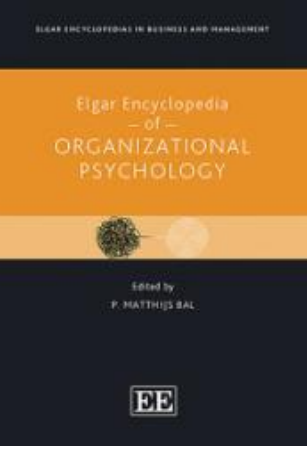


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| 43 |    | <p>Narrative theories and poetics: 5 questions edited by Peer F. Bundgaard, Henrik Skov Nielsen and Frederik Stjernfelt, Denmark: Automatic Press / VIP, 2012. viii, 306 p.,<br/>ISBN: 9788792130426</p> <p>Subject Terms: Short interviews; Poetics; Philosophy; Narrative theory; Human thinking</p> <p>398.2:82-1 -NAR</p> <p>Barcode: 180159; CL</p> <p><a href="#">Click here for more details.</a></p> |
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| 44 |   | <p>Next generation of distance education: unconstrained learning edited by Leslie Moller and Jason B. Huett, New York: Springer, 2012. xxv, 266 p.,<br/>ISBN: 9781461417842</p> <p>Subject Terms: CyGames; E-Learning scenarios; Web 2.0; Distance education; Instructional delivery methods</p> <p>37.018.432 -NEX</p> <p>Barcode: 180154; HSS</p> <p><a href="#">Click here for more details.</a></p>      |
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| 45 |  | <p>Oxford handbook of psycholinguistics edited by M. Gareth Gaskell, New York: Oxford University Press, 2009. xiii, 859 p.,<br/>ISBN: 9780199561797</p> <p>Subject Terms: Brain imaging; Computational modelling; Psycholinguistics; Memory; Cognitive neuroscience</p> <p>RL-HB 159.9:81 -OXF</p> <p>Barcode: 180171-180172; CL; HSS</p> <p><a href="#">Click here for more details.</a></p>                |
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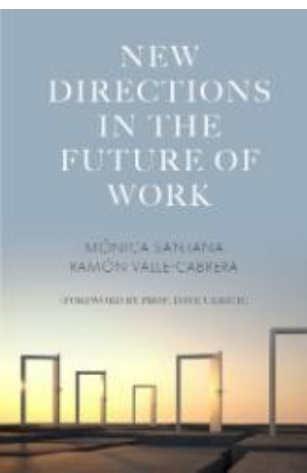
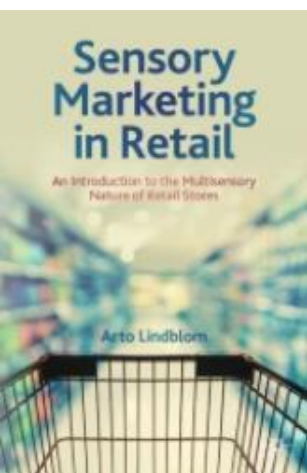
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| 46 |    | <p>Psychological testing: a practical approach by Leslie A. Miller, Robert L. Lovler and Sandra A. McIntire, 4th ed. New Delhi: Sage Publications, 2024. v.p., ISBN: 9789351502838</p> <p>Subject Terms: Psychological assessments; Psychological test and measurements; Psychological test and surveys; Certification and licensure; Computerized testing</p> <p>159.9.072 MIL-P</p> <p>Barcode: 180125; CL</p> <p><a href="#">Click here for more details.</a></p> |
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| 47 |   | <p>Reading philosophy: selected texts with a method for beginners by Samuel Guttenplan... (et al.), 2nd ed. Hoboken: Wiley, 2021. xiv, 364 p., ISBN: 9781119094678</p> <p>Subject Terms: Philosophy; Consciousness; Causality; Friendship; Equality</p> <p>101.1 -REA</p> <p>Barcode: 180161-180162; CL; HSS</p> <p><a href="#">Click here for more details.</a></p>   |
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| 48 |  | <p>Stress, health and behavior by Richard McCarty, New York: Guilford Press, 2023. xii, 339 p., ISBN: 9781462552603</p> <p>Subject Terms: Psychophysiology; Stress- Physiology; Biological measures of stress; Social psychology; Stress and diabetes</p> <p>159.944.4 MCC-S</p> <p>Barcode: 180122-180123; CL; HSS</p> <p><a href="#">Click here for more details.</a></p>  |
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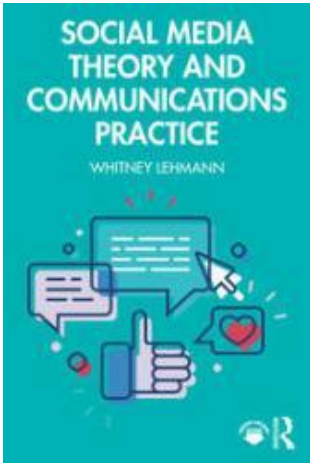
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| 49   |    | <p>Trauma: essays on art and mental health edited by Sam Mills and Thom Cuell, England: Dodo Ink, 2021. iii, 415 p.,<br/>ISBN: 9780993575877</p> <p>Subject Terms: Mental health; Art; Inheritance; Psychology; Essays</p>                            |
|  |   | 159.91:7 -TRA   |
|  |   | Barcode: 180158; CL   |
|  |   | <a href="#">Click here for more details.</a>  |
| 50   |   | <p>Urban economics by John M. Hartwick, Oxon: CRC Press, 2023. xvii, 342 p.,<br/>ISBN: 9780367239282</p> <p>Subject Terms: Economic geography; Economics - Finance and accounting; Urban studies; Transportation; Public sector</p>                   |
|  |   | 332 HAR-U   |
|  |   | Barcode: 180128-180129; CL; HSS   |
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| <b>IITD Faculty &amp; Staff Authored Books</b> |   |   |
| 51   |  | <p>Einstein and the special theory of relativity by Ajoy Ghatak, 2nd ed. New Delhi: Viva Books, 2014. xxi, 141 p.,<br/>ISBN: 9788130928463</p> <p>Subject Terms: Time dilation; Length contraction; Lorentz transformations; Mass energy relation</p> |
|  |   | 530.12 GHA-E  |
|  |   | Barcode: 180151; CL   |
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| 52 |    | <p>Einstein's year of miracles: <math>E=mc^2</math>, the light quantum and special theory of relativity by Ajoy Ghatak, New Delhi: Viva Books, 2020. xlvii, 140 p.,<br/>ISBN: 9789389662009</p> <p>Subject Terms: Mass energy relation; Fusion and fission; Einstein's light quantum; Time dilation and length contraction</p> |
|    |   | 535.1:530.12 GHA-E   |
|    |   | Barcode: 180117; CL  |
|    |   | <a href="#">Click here for more details.</a>   |
| 53 |   | <p>Pilot scale microalgae cultivation: challenges and practical solutions to pond crash by Faiz Ahmad Ansari... (et al.), London: Elsevier, 2024. ix, 210 p.,<br/>ISBN: 9780323959629</p> <p>Subject Terms: Pilot study; Cultivation strategies; Pond crash; Abiotic factors; Algae</p>  |
|    |   | 639.64 -PIL  |
|    |   | Barcode: 180135; CL  |
|    |   | <a href="#">Click here for more details.</a>   |
| 54 |  | <p>Problems and solutions in electromagnetics by Ajoy Ghatak, K. Thyagarajan and R. K. Varshney, New Delhi: Viva Books, 2020. viii, 324 p.,<br/>ISBN: 9788130930633</p> <p>Subject Terms: Vector algebra; Maxwell's equations; Electromagnetic waves; Metal waveguides; Electrostatics</p>                                     |
|    |   | 621.37 GHA-P   |
|    |   | Barcode: 180152; CL  |
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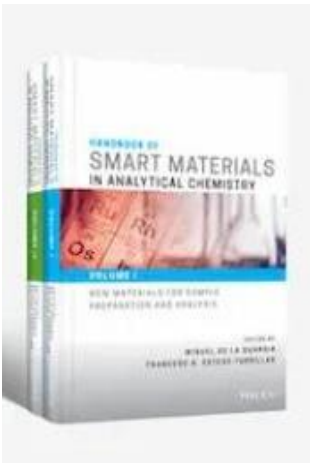
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| 55                                  |    | <p>Ten most beautiful experiments in science by Ajoy Ghatak, New Delhi: Viva Books, 2022. viii, 66 p.,<br/>ISBN: 9789392299186</p> <p>Subject Terms: Rotational motion of the Earth; History of science; Research - History; Science - Study and teaching; Scientific instruments</p> <p>5:001.891.5 GHA-T</p> <p>Barcode: 180118; CL</p> <p><a href="#">Click here for more details.</a></p> |
| <b>Management Studies</b>           |   |   |
| 56                                  |   | <p>Advanced introduction to digital society by Manuel Castells, Cheltenham: Edward Elgar Publishing, 2024. x, 152 p.,<br/>ISBN: 9781803921136</p> <p>Subject Terms: Empirical analysis; Digital transformation; Network society; Social media; Digital sociological aspects</p> <p>316.3:004.77 CAS-A</p> <p>Barcode: 180197; CL</p> <p><a href="#">Click here for more details.</a></p>      |
| 57                                  |  | <p>Dynamic econometrics for empirical macroeconomic modelling by Ragnar Nymoen, Singapore: World Scientific, 2020. xviii, 567 p.,<br/>ISBN: 9789811207518</p> <p>Subject Terms: Dynamic macro econometrics; Cointegration; VAR; Spectral analysis; Econometrics</p> <p>330.43 NYM-D</p> <p>Barcode: 180166-180167; CL; DMS</p> <p><a href="#">Click here for more details.</a></p>            |
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| 58 |    | <p>Elgar encyclopedia of organizational psychology edited by P. Matthijs Bal, Cheltenham: Edward Elgar Publishing, 2024. xvii, 764 p.,<br/>ISBN: 9781803921754</p> <p>Subject Terms: Psychology - Industrial encyclopedias; Career guidance; Cultural skills; Customer mistreatment; Economic stress</p> <p>RL-EN 658:316.6 -ELG</p> <p>Barcode: 180137; CL</p> <p><a href="#">Click here for more details.</a></p> |
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| 59 |   | <p>Export and import management: text and cases by Ram Singh, 2nd ed. New Delhi: Wiley, 2023. xxx, 552 p.,<br/>ISBN: 9789357461825</p> <p>Subject Terms: Export–Import operations; Management; Foreign trade; E-Commerce; Special economic zones</p> <p>339.56:658 SIN-E</p> <p>Barcode: 180164-180165; CL; DMS</p> <p><a href="#">Click here for more details.</a></p>   |
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| 60 |  | <p>Facilitating simulations by Elysebeth E. Leigh and Laurie L. Levesque, Cheltenham: Edward Elgar, 2024. xiv, 184 p.,<br/>ISBN: 9781802204643</p> <p>Subject Terms: Business education-Simulations method; Management; Teaching methods; Knowledge frameworks; Theoretical frame</p> <p>37.091.3 LEI-F</p> <p>Barcode: 180194; DMS</p> <p><a href="#">Click here for more details.</a></p>                         |
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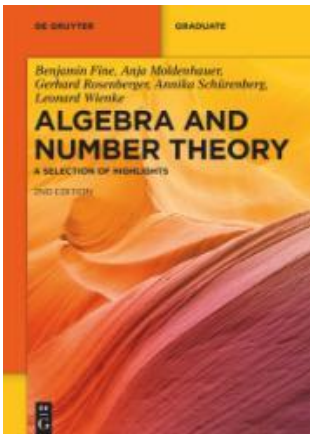
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| 61 |    | <p>Group and team work by Ricardo Flores and Antonina Bauman, Cheltenham: Edward Elgar, 2024. viii, 192 p.,<br/>ISBN: 9781800371101</p> <p>Subject Terms: Team work; Business education; Business course; Cooperative learning; Problem based learning</p>  |
|    |   | 37.005.64 FLO-G   |
|    |   | Barcode: 180195; DMS  |
|    |   | <a href="#">Click here for more details.</a>  |
| 62 |   | <p>New directions in the future of work edited by Monica Santana and Ramon Valle-Cabrera, Leeds: Emerald Publishing, 2024. xiii, 209 p.,<br/>ISBN: 9781800713017</p> <p>Subject Terms: Leadership; Talent management; AI and digitalisation; Digital skills; Well-being</p>                               |
|    |   | 658:005.5 -NEW  |
|    |   | Barcode: 180198; CL   |
|    |   | <a href="#">Click here for more details.</a>  |
| 63 |  | <p>Sensory marketing in retail: an introduction to the multisensory nature of retail stores by Arto Lindblom, Switzerland: Palgrave Macmillan, 2023. xv, 237 p.,<br/>ISBN: 9783031475146</p> <p>Subject Terms: Retailing setting; Sensory cues; Store design; Consumer behaviour; Consumer psychology</p> |
|    |   | 658.87 LIN-S  |
|    |   | Barcode: 180199; CL   |
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| 64 |  | <p>Social media theory and communications practice by Whitney Lehmann, New York: Routledge, 2024. xiii, 205 p.,</p> <p>ISBN: 9781032185873</p> <p>Subject Terms: Mass communication; Computers - Social aspects; Public relations; Writing and composition; Economics - Finance</p> |
|    |   | 316.774 LEH-S   |
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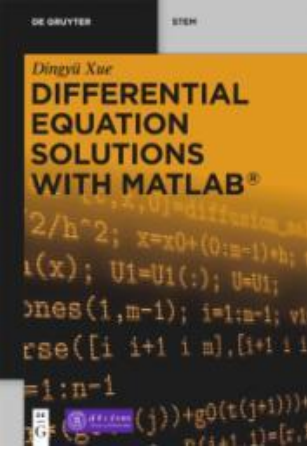
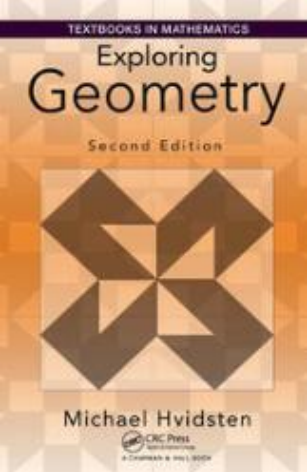
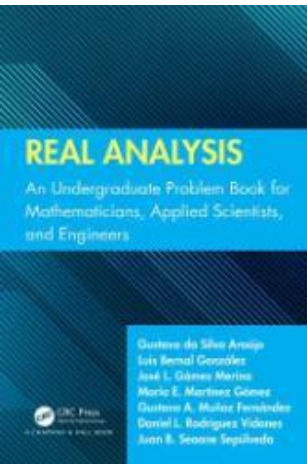
## Materials Science & Engineering

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| 65 |  | <p>Handbook of smart materials in analytical chemistry edited by Miguel de la Guardia and Francesc A. Esteve-Turrillas, Hoboken: Wiley, 2019. xxii, 502 p.,</p> <p>ISBN: 9781119422624</p> <p>Subject Terms: Smart materials – Handbooks, manuals etc.; Analytical chemistry – Handbooks, manuals etc.; Polymer inclusion – Handbooks, manuals etc.; Nanomaterials – Handbooks, manuals etc.; Surfactant-based materials – Handbooks, manuals etc.</p> |
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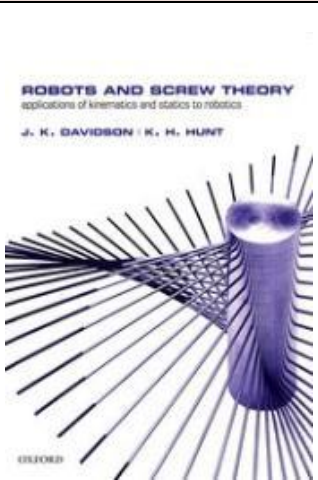
## Mathematics

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|----|---|---|
| 66 |  | <p>Algebra and number theory: a selection of highlights by Benjamin Fine... (et al.), 2nd ed. Berlin: De Gruyter, 2023. x, 380 p.,</p> <p>ISBN: 9783110789980</p> <p>Subject Terms: Mathematics; Arithmetic; Real numbers; Vector spaces; Algebra</p> |
|    |   | 512:511 -ALG  |
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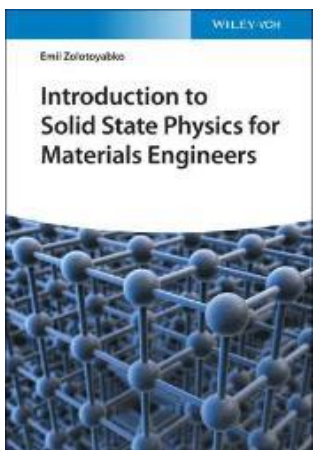
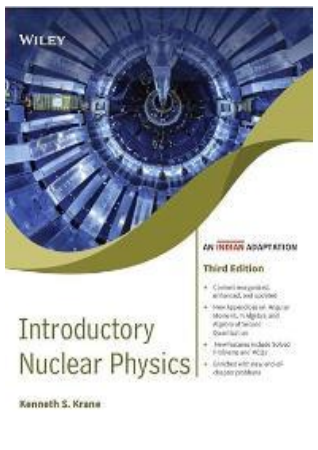


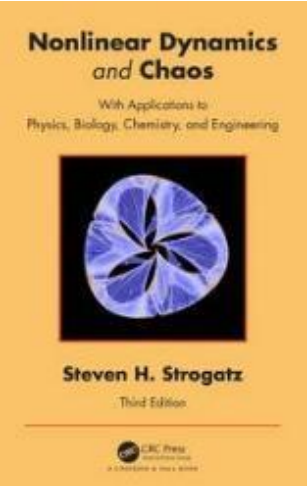

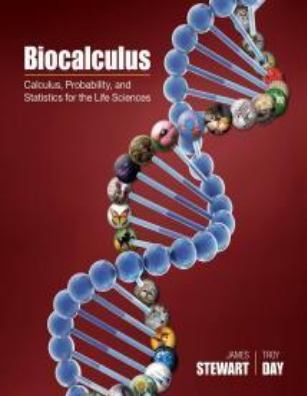
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|----|---|--|
| 67 |    | <p>Differential equation solutions with MATLAB® by Dingyü Xue, Berlin: De Gruyter, 2020. xiii, 438 p.,<br/>ISBN: 9783110675245</p> <p>Subject Terms: Differential equations; Special differential equations; Block diagram; MATLAB function; Mathematics</p> <p>517.9:004.43M DIN-D</p> <p>Barcode: 180185; CL</p> <p><a href="#">Click here for more details.</a></p>   |
|    |   |  |
| 68 |   | <p>Exploring geometry by Michael Hvidsten, 2nd ed. Boca Raton: CRC Press, 2017. xx, 537 p.,<br/>ISBN: 9781032940281</p> <p>Subject Terms: Geometry foundations; Axiomatic systems; Analytic geometry; Hyperbolic geometry; Elliptic geometry</p> <p>514 HVI-E</p> <p>Barcode: 180178; CL</p> <p><a href="#">Click here for more details.</a></p>   |
|    |   |  |
| 69 |  | <p>Real analysis: an undergraduate problem book for mathematicians, applied scientists, and engineers by Gustavo Da Silva Araujo...(et al.), Boca Raton: CRC Press, 2024. x, 519 p.,<br/>ISBN: 9781032510262</p> <p>Subject Terms: Computational numerical analysis; Real functions; Advanced mathematics; Calculus; Combinatorics</p> <p>517.13 -REA</p> <p>Barcode: 180179; CL</p> <p><a href="#">Click here for more details.</a></p> |

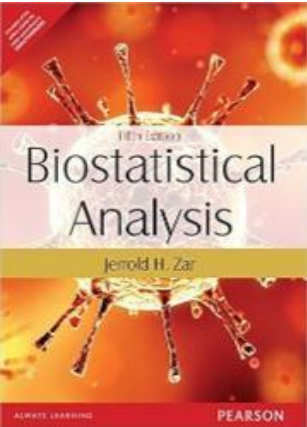
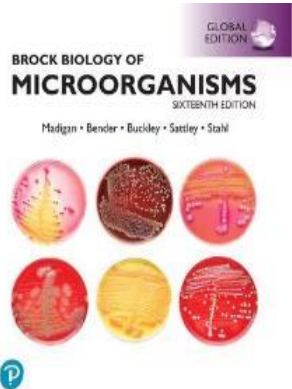
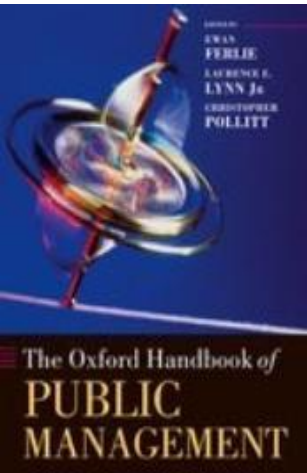
## Mechanical Engineering


|    |   |   |
|----|---|---|
| 70 |  | <p>Robots and screw theory: applications of kinematics and statics to robotics by Joseph K. Davidson and Kenneth H. Hunt, Oxford: Oxford University Press, 2004. xii, 458 p.,</p> <p>ISBN: 9780198562450</p> <p>Subject Terms: Mathematical foundations; Motions and force-transfers; Progresses to robots; Robot design and development; Robotics theory</p> |
|    |   | 681.3 DAV-R   |
|    |   | Barcode: 180207; CL   |
|    |   | <a href="#">Click here for more details.</a>  |

## Physics

|    |   |  |
|----|---|--|
| 71 |   | <p>Introduction to solid state physics for materials engineers by Emil Zolotoyabko, Weinheim: Wiley, 2021. xiv, 280 p.,</p> <p>ISBN: 9783527348848</p> <p>Subject Terms: Solar cells; Semiconductors; Electron systems; Superconductivity; Magnetic structures</p> |
|    |   | 538.9:620 ZOL-I  |
|    |   | Barcode: 180180; CL  |
|    |   | <a href="#">Click here for more details.</a>   |
| 72 |  | <p>Introductory nuclear physics: an Indian adaptation by Kenneth Krane, 3rd ed. New Delhi: Wiley India, 2022. xxiii, 845 p.,</p> <p>ISBN: 9789354640834</p> <p>Subject Terms: Nuclear physics; Quantum mechanics; Nucleons; Alpha decay; Radioactive decay</p>     |
|    |   | 539.1 KRA-I  |
|    |   | Barcode: 180181-180182; CL; PH   |
|    |   | <a href="#">Click here for more details.</a>   |

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| 73   |    | <p>Nonlinear dynamics and chaos: with applications to physics, biology, chemistry, and engineering Steven H. Strogatz, 3rd ed. Boca Raton: CRC Press, 2024. xiv, 601 p.,</p> <p>ISBN: 9781032791654</p> <p>Subject Terms: Bifurcations; Linear systems; Phase plane; Lorenz equations; Fractals</p> <p>531.3:517.93 STR-N</p> <p>Barcode: 180183; CL</p> <p><a href="#">Click here for more details.</a></p> |
|  |   |  |
| 74   |   | <p>Quantum mechanics by Claude Cohen-Tannoudji, Bernard Diu and Franck Laloe, 2nd ed. Weinheim: Wiley, 2020. xxi, 921p.,</p> <p>ISBN: 9783527345533</p> <p>Subject Terms: Quantum mechanics; Material particles; Heisenberg relation; Gaussian wave; Wave packet</p> <p>530.145 COH-Q</p> <p>Barcode: 180177; PH</p> <p><a href="#">Click here for more details.</a></p>                                     |
| <h2 style="color: red;">School of Biological Sciences</h2> |   |  |
| 75   |  | <p>Biocalculus: calculus, probability, and statistics for the life sciences by James Stewart and Troy Day, Boston: Cengage Learning, 2016. xlvii, 973 p.,</p> <p>ISBN: 9781305114036</p> <p>Subject Terms: Life sciences; Mathematical material; Pharmacology; Biomechanics; Medicine</p> <p>57:517.4 STE-B</p> <p>Barcode: 180209; CL</p> <p><a href="#">Click here for more details.</a></p>               |
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| 76   |    | <p>Biostatistical analysis by Jerrold H. Zar, 5th ed. Noida: Pearson, 2014. 756 p., ISBN: 9789332536678</p> <p>Subject Terms: Polynomial regression; Circular distributions; Morphology; Genetics; Multiway factorial analysis</p> <p>574:519.2 ZAR-B</p> <p>Barcode: 180188-180189; CL; SBS</p> <p><a href="#">Click here for more details.</a></p>  |
|  |   |   |
| 77   |   | <p>Brock biology of microorganisms by Michael Madigan...(et al.), 16th ed. (Global). Harlow: Pearson, 2022. 1127 p., ISBN: 9781292404790</p> <p>Subject Terms: Microorganisms; Microbial world; Genetics; Microbial ecosystems; Innate immunity</p> <p>576.8 -BRO</p> <p>Barcode: 180173-180174; CL; SBS</p> <p><a href="#">Click here for more details.</a></p>  |
| <h2 style="color: red;">School of Public Policy</h2> |   |   |
| 78   |  | <p>Oxford handbook of public management edited by Ewan Ferlie, Laurence E. Lynn and Christopher Pollitt, Oxford: Oxford University Press, 2005. xiii, 789 p., ISBN: 9780199226443</p> <p>Subject Terms: Public sector management - Handbooks, manual, etc.; Management consulting - Handbooks, manual, etc.; Evaluation - Handbooks, manual, etc.; Public administration - Handbooks, manual, etc.; Approaches - Handbooks, manual, etc.</p> <p>351(021) -OXF</p> <p>Barcode: 180127; SPP</p> <p><a href="#">Click here for more details.</a></p> |
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| <b>79</b> |  | <p>Sustainable digital city by Avi Friedman, Cham: Springer, 2023. xiv, 196 p., ISBN: 9783031254901</p> <p>Subject Terms: Urban planning; Big data; Smart city; Sustainability; Sustainable cities</p> |
|           |   | 711.4:004.5 FRI-S  |
|           |   | Barcode: 180175; CL  |
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## Theses Collections

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| Title                | : Fabrication of micro/nano dimensional semiconductor structures for optoelectronic device applications                   |
| Researcher           | : Dhaka, Rangeeta   |
| Department           | : Department of Physics, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Shukla, A. K. ( Prof.) - PH (Guide); Dutta, Shankar (Scientist F) - DRDO (Guide)  |
| Physical description | : 168 p.  |
| Subject terms        | : Neural networks; Ultra wide band semiconductor; Morphological analysis; Multi-wavelength detection; Electroluminescence |
| Barcode              | : TH7900  |
| Call No.             | : TH 537.533:621.382 DHA-F  |

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|----------------------|---|
| Title                | : Functional characterization of HOPS complex in leishmania   |
| Researcher           | : Dubey, Vikas Dhar   |
| Department           | : Kusuma School of Biological Science, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Mukhopadhyay, Amitabha (Prof.)-SBS (Guide)  |
| Physical description | : xv, 170 p.  |
| Subject terms        | : Life cycle of leishmania - treatment and control; Phagocytosis; Macropinocytosis; SNAREs in intracellular trafficking; HOPS complex in vesicle fusion |
| Barcode              | : TH7901  |
| Call No.             | : TH 616.993.161 DUB-F  |

|                      |  |
|----------------------|--|
| Title                | : Assessing the impact of air pollution on solar energy resources in India in present and future climate |
| Researcher           | : Ghosh, Sushovan  |
| Department           | : Centre for Atmospheric Sciences, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Ganguly, Dilip (Assoc. Prof.)-CAS (Guide); Dey, Sagnik (Prof.)-CAS (Guide)                             |
| Physical description | : xxxiv, 175 p.  |
| Subject terms        | : Renewable energy; Solar power in India; Solar radiation; Atmospheric aerosol; Indian power grid        |
| Barcode              | : TH7902   |
| Call No.             | : TH 621.311.243:614.71 GHO-A  |

|                      |  |
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| Title                | : Performance analysis of wireless networks with spectrally-efficient uplink non-orthogonal multiple access signalling                     |
| Researcher           | : Gupta, Mayank  |
| Department           | : Department of Electrical Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Prakriya, Shankar (Prof. ) - EE (Guide)  |
| Physical description | : xxii, 190 p.   |
| Subject terms        | : Wireless channel models; Wireless communication technologies; Machine-type devices; Non-orthogonal multiple access; Superposition coding |
| Barcode              | : TH7903   |
| Call No.             | : TH 621.3.011.7:004.77 GUP-P  |

|                      |   |
|----------------------|---|
| Title                | : Investigation of intramolecular aggregation induced fluorescence in different molecular scaffolds                                     |
| Researcher           | : Juneja, Shreya  |
| Department           | : Department of Chemistry, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Pandey, Siddharth (Prof.) - CHY (Guide)   |
| Physical description | : xxxvi, 263 p.   |
| Subject terms        | : Aggregation induced emission; Aggregation caused quenching; Deep eutectic solvents; Dynamics of excimer formation; Proton recognition |
| Barcode              | : TH7904  |
| Call No.             | : TH 543.426 JUN-I  |

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|----------------------|---|
| Title                | : Engineering the metal oxide and metal sulfide nanostructures for photoelectrochemical and photocatalytic water splitting application                  |
| Researcher           | : Jyoti   |
| Department           | : Department of Chemistry, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Ingole, Pravin P. (Prof.) - CHY (Guide); Hsu, Yung Jung (Prof.) - NYCU, Taiwan (Guide)  |
| Physical description | : xxiii, 151 p.   |
| Subject terms        | : Renewable energy resources; Fossil fuels; Photoelectrochemical and photocatalytic; Energy dispersive x-ray spectroscopy; Scanning electron microscopy |

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| Barcode  | : TH7905                |
| Call No. | : TH 544.52:620.3 JYO-E |

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| Title                | : Spectroscopic characterization and proton-coupled electron transfer reactivity studies of late 3D-transition metal complexes                    |
| Researcher           | : Kaur, Simarjeet   |
| Department           | : Department of Chemistry, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Paria, Sayantan (Assoc. Prof.)-CHY (Guide)  |
| Physical description | : xxi, 292 p.   |
| Subject terms        | : Metals in biological system; Hydrogen atom transfer; Oxygen atom transfer reactivity; X-ray absorption spectroscopy methods; Reactivity studies |
| Barcode              | : TH7906  |
| Call No.             | : TH 544.146 KAU-S  |

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| Title                | : Intelligent fault diagnosis strategies on rotating machines for industry 4.0  |
| Researcher           | : Mian, Tauheed   |
| Department           | : Centre for Automotive Research and Tribology, IITD  |
| Year                 | : 2024  |
| Supervisor           | : Fatima, S. ( Assoc. Prof. ) - CART (Guide)  |
| Physical description | : xix, 203 p.   |
| Subject terms        | : Micro electro mechanical system; Sensor modalities; Sensor fusion; Rotating machine setups; Fault diagnosis using sensor fusion |
| Barcode              | : TH7907  |
| Call No.             | : TH 67.019:004.8 MIA-I   |

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| Title                | : Adaptive identification and control of switched linear systems: a memory augmentation approach  |
| Researcher           | : Patel, Pritesh  |
| Department           | : Department of Electrical Engineering, IITD  |
| Year                 | : 2024  |
| Supervisor           | : Bhasin, Shubhendu (Assoc. Prof. )-EE (Guide)  |
| Physical description | : xi, 122 p.  |
| Subject terms        | : Hybrid systems; Fault tolerant control; Switched linear systems with memory; Switched system parameters; Adaptive fault-tolerant control design |



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| Barcode  | : TH7908            |
| Call No. | : TH 621.3.06 PAT-A |

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| Title                | : Experiments and Simulations of scratch on bare and 2D material-protected silica glass                                   |
| Researcher           | : Sahoo, Sourav   |
| Department           | : Department of Materials Science and Engineering, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Gosvami, Nitya Nand (Assoc. Prof. ) - MSE (Guide); Krishnan, N. M. Anoop (Assoc. Prof. ) - MSE (Guide)                  |
| Physical description | : 217 P.  |
| Subject terms        | : Atomistic modeling and simulations; Glass preparation simulations; Atomic force microscopy; Nanoindentation; Tribometry |
| Barcode              | : TH7909  |
| Call No.             | : TH 666.1:620.1 SAH-E  |

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| Title                | : Unravelling loss mechanisms in non-fullerene organic solar cells: integrating data-driven machine learning experimental approaches   |
| Researcher           | : Suthar, Rakesh   |
| Department           | : Department of Energy Science and Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Karak, Supravat ( Assoc. Prof.) - ESE (Guide)  |
| Physical description | : xxiv, 126 p.   |
| Subject terms        | : Data-driven machine learning framework; Frontier molecular orbital descriptors; Solar cell characteristics; Plasmonic solar cell; Finite -difference time domain simulations |
| Barcode              | : TH7910   |
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| Title                | : Design and analysis of interface circuits and systems for hybrid Vibrational energy harvesters                |
| Researcher           | : Verma, Pratibha   |
| Department           | : Department of Electrical Engineering, IITD  |
| Year                 | : 2024  |
| Supervisor           | : Jain, Ankesh (Asst. Prof.) - EE (Guide); Mallick, Dhiman (Asst. Prof.) - EE (Guide)                           |
| Physical description | : xviii, 108 p.   |
| Subject terms        | : Interface circuits; Triboelectric generators; Hybrid generators; Hybrid IC; Electromagnetic interface circuit |

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| Researcher           | : | Wong, Wing-Kwong  |
| Department           | : | Department of Humanities and Social Sciences, IITD                        |
| Year                 | : | 2024  |
| Supervisor           | : | Wakankar, Milind (Assoc. Prof.)-HSS (Guide)                               |
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| Subject terms        | : | Human life; Culture; Human culture and society; World history; Philosophy |
| Barcode              | : | TH7912  |
| Call No.             | : | TH 316.334.55(510) WON-H  |

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| Title                | : | Functionalization of C(sp <sup>2</sup> )-H bonds for the synthesis of value-added molecules  |
| Researcher           | : | Dagar, Neha  |
| Department           | : | Department of Chemistry, IITD  |
| Year                 | : | 2024   |
| Supervisor           | : | Roy, Sudipta Raha ( Assoc. Prof. - CHY (Guide)   |
| Physical description | : | xxv, 250 p.  |
| Subject terms        | : | Visible-light mediated photoredox catalysis; Electro-organic synthesis allows; Organo-photocatalyzed carboacylation; Procedure and setup for scale-up reaction; In-situ FTIR studies |
| Barcode              | : | TH7913   |
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| Title                | : | Design and development of novel medium entropy alloy using machine learning for rapid manufacturing of implants                               |
| Researcher           | : | Das, Priyabrata   |
| Department           | : | Department of Mechanical Engineering, IITD  |
| Year                 | : | 2024  |
| Supervisor           | : | Pandey, Pulak Mohan (Prof.)-ME (Guide)  |
| Physical description | : | xxxi, 268 p.  |
| Subject terms        | : | Complex concentrated alloys; Thermal stability of medium energy alloy powder; Cytocompatibility; n vitro cytotoxicity; Hydrogen gas evolution |

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| Title                | : Tailoring the exchange bias in ion beam sputtered Ni <sub>81</sub> Fe <sub>19</sub> /Ir <sub>7</sub> Mn <sub>93</sub> and Co <sub>2</sub> FeAl/ Ir <sub>7</sub> Mn <sub>93</sub> heterostructures by altering the grain-size of the Ir <sub>7</sub> MN <sub>93</sub> layer and ion-beam irradiation |
| Researcher           | : Kedia, Sanjay Kumar   |
| Department           | : Department of Physics, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Chaudhary, Sujeet ( Prof. ) - PH (Guide)  |
| Physical description | : xxvi, 165 p.  |
| Subject terms        | : Magnetic anisotropy; Giant magnetic resistance; Tunnel magneto resistance; Thermal relaxation model; Magnetic measurements  |
| Barcode              | : TH7915  |
| Call No.             | : TH 539.12-18 KED-T  |

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| Title                | : Dielectric relaxation and impedance spectroscopy of NASICON type Na <sub>3+x</sub> Zr <sub>2-x</sub> M <sub>x</sub> Si <sub>2</sub> PO <sub>12</sub> ( M = divalent, trivalent, tetravalent elements ) oxides and ion-irradiation effects |
| Researcher           | : Meena, Ramcharan  |
| Department           | : Department of Physics, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Dhaka, Rajendra Singh (Assoc. Prof. ) - PH (Guide)  |
| Physical description | : xxii, 213 p.  |
| Subject terms        | : Gas sensors; Transmission electron microscopy; X-ray diffraction; Solar cells; Dielectric mechanisms  |
| Barcode              | : TH7916  |
| Call No.             | : TH 543.51MEE-D  |

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| Title                | : Post-stroke rehabilitation of distal upper limb using virtual reality based technology                      |
| Researcher           | : Nath, Debasish  |
| Department           | : Centre for Biomedical Engineering, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Mehndiratta, Amit ( Assoc. Prof.) - CBME (Guide)  |
| Physical description | : xxii, 176 p.  |
| Subject terms        | : Stroke Statistics; Neuro-rehabilitation; Distal upper extremities; Neuroplasticity; Task performance metric |

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| Barcode  | : TH7917                        |
| Call No. | : TH 616.831-005.1:611.97 NAT-P |

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| Title                | : Studies on processability and physico-mechanical properties of biodegradable polyester-based blends for scaffold substrates |
| Researcher           | : Peshne, Harshal Vinod   |
| Department           | : Department of Materials Science and Engineering, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Satapathy, Bhabani K. (Prof.) - MSE (Guide)   |
| Physical description | : xxv, 213 p.   |
| Subject terms        | : Thermo-mechanical; Morphological; Rheological properties; Differential scanning calorimetry; Bone tissue engineering        |
| Barcode              | : TH7918  |
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| Title                | : Preparation and characterisation of PP/TiO <sub>2</sub> /graphene hybrid nanocomposites and their foams for EMI shielding applications |
| Researcher           | : Prakash, Mayank  |
| Department           | : Department of Materials Science and Engineering, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Ghosh, Anup K. (Prof.) - MSE (Guide); Satapathy, Bhabani K. (Prof.)- MSE (Guide)   |
| Physical description | : xxii, 192 p.   |
| Subject terms        | : Polymer nanocomposites; Carbon nanoparticles; Polymer foams; Electron microscopy; X-ray diffraction spectroscopy                       |
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| Title                | : Reliability of fiber-reinforced polymer composite structures in extreme loading conditions   |
| Researcher           | : Saini, Kusum   |
| Department           | : Department of Civil Engineering. IITD  |
| Year                 | : 2024   |
| Supervisor           | : Matsagar, Vasant A. ( Prof.) - CE (Guide)  |
| Physical description | : xlvi, 351 p.   |
| Subject terms        | : Lightweight structures; Fiber-reinforced polymer; Foamed sandwich; Ultra-highperformance concrete; Natural fiber-reinforced concrete |
| Barcode              | : TH7920   |

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| Call No.             | : TH 678.86 SAI-R  |
| Title                | : Studies on vapour phase polymerisation of pyrrole and electroconductive textiles prepared therefrom for sensing application                |
| Researcher           | : Shukla, Ankur  |
| Department           | : Department of Textile and Fiber Engineering, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Sen, Kushal (Prof.)-TFE (Guide); Das, Dipayan (Prof.) - TFE (Guide)  |
| Physical description | : xxxii, 214 p.  |
| Subject terms        | : Electroconductive textiles; Electrothermal generators; Electrochemical polymerisation; Textile based sensors; Vapours phase polymerisation |
| Barcode              | : TH7921   |
| Call No.             | : TH 677-48:681.586 SHU-S  |

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| Title                | : Stretch flangeability of aluminium alloys in circular and square hole flanging processes     |
| Researcher           | : Vinay Kumar  |
| Department           | : Department of Mechanical Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : D. Ravi Kumar ( Prof. ) - ME (Guide)   |
| Physical description | : xix, 156 p.  |
| Subject terms        | : Sheet metal forming; Water jet cutting; Laser cutting; Metal forming process; Lightweighting |
| Barcode              | : TH7922   |
| Call No.             | : TH 669.715 VIN-S   |

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| Title                | : Development of wear and corrosion - resistant coating for steels using the HVOF thermal spray process                         |
| Researcher           | : Pattnayak, Abhijit  |
| Department           | : Centre For Automotive Research and Tribology, IITD  |
| Year                 | : 2024  |
| Supervisor           | : Deepak Kumar (Prof.) - CART (Guide); Jain, Jayant (Prof.) - MSE (Guide); Chaudhry, Vijay (Sci. Officer) - DAE, Mumbai (Guide) |
| Physical description | : xxi, 152 p.   |
| Subject terms        | : Corrosion- resistant; Thermal spray coating; Steel; Tribological response of coating; Spray process                           |
| Barcode              | : TH7923  |

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| Call No.             | : TH 667.637.2 PAT-D  |
| Title                | : Digital technologies and role transformation: insights from the Indian market research industry |
| Researcher           | : Chanda, Abhishek Chander  |
| Department           | : Department of Management Studies, IITD  |
| Year                 | : 2024  |
| Supervisor           | : Ilavarasan, P. Vigneswara (Prof ) -MS (Guide)   |
| Physical description | : xiv, 433 p.   |
| Subject terms        | : Ground theory method; In-depth interviews; Responsibilities; Transformation; Technology         |
| Barcode              | : TH7924  |
| Call No.             | : TH 004:658.8 CHA-D  |

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| Title                | : Pricing based strategies for charging of energy constrained devices and vehicles   |
| Researcher           | : Gupta, Ajay Kumar  |
| Department           | : Bharti School of telecommunication Technology and Management, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Bhatnagar, Manav (Prof . ) - EE (Guide)  |
| Physical description | : xii, 136 p.  |
| Subject terms        | : Energy constrained devices; Wireless sensor network; Electric vehicle charging system; Charging; Unmanned aerial vehicle |
| Barcode              | : TH7925   |
| Call No.             | : TH 629.01:338 GUP-P  |

|                      |   |
|----------------------|---|
| Title                | : Performance evaluation of silver impregnated biochar derived from paddy straw to make water potable along the Indo-Gangetic plain |
| Researcher           | : Sakhiya, Anil Kumar   |
| Department           | : Centre for Rural Development & Technology, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Kaushal, Priyanka ( Prof. ) -CRDT (Guide); Vijay, Virendra Kumar ( Prof. ) - CRDT (Guide)   |
| Physical description | : xxx, 178 p.   |
| Subject terms        | : Pyrolysis; Biochar; Ground water; Indo- Gangetic plain; Paddy straw   |
| Barcode              | : TH7926  |
| Call No.             | : TH 543.631:633.18 SAK - P   |

|                      |  |
|----------------------|--|
| Title                | : Incremental stability based design and analysis of nonlinear systems   |
| Researcher           | : Dey, Bhabani Shankar   |
| Department           | : Department of Electrical Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Kar, Indra Narayan ( Prof. ) - EE (Guide)  |
| Physical description | : xix, 225 p.  |
| Subject terms        | : Switched interconnected system; Singular particular parameter; Nonlinear system; Incremental stability; Contraction analysis |
| Barcode              | : TH7927   |
| Call No.             | : TH 621.3.011.72 DEY-I  |

|                      |   |
|----------------------|---|
| Title                | : Modulation from nanoparticles to single atom over crystalline porous frameworks for heterogeneous catalysis |
| Researcher           | : Mishra, Biswajit  |
| Department           | : Department of Materials Science and Engineering, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Tripathi, Bijay P. (Assoc. Prof.) - MSE (Guide)   |
| Physical description | : xxxi, 287 p.  |
| Subject terms        | : Nanoparticles; Catalysis; Heterogeneous catalysis; Synthesis; Electrocatalytic                              |
| Barcode              | : TH7928  |
| Call No.             | : TH 544.47 MIS-M   |

|                      |  |
|----------------------|--|
| Title                | : Security in free space optical communication systems   |
| Researcher           | : Chauhan, Isha  |
| Department           | : Department of Electrical Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Bhatnagar , Manav (Prof.) - EE (Guide)   |
| Physical description | : xvii, 150 p.   |
| Subject terms        | : Optical communication system; Free space optical; Optical channel model; Optical space shift keying; Jamming |
| Barcode              | : TH7929   |
| Call No.             | : TH 621.396.946 CHA-S   |

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|----------------------|--|
| Title                | : Study on the effect of constrained groove pressing on the microstructure, mechanical and formability characteristics of B-21S titanium alloy |
| Researcher           | : Katakam, Mahesh  |
| Department           | : Department of Materials Science and Engineering, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Neelakantan, Suresh (Assoc. Prof.) - ME (Guide); D. Ravi Kumar (Prof.) - ME (Guide)  |
| Physical description | : xxxii, 164 p.  |
| Subject terms        | : Constrained groove pressing cross route; Twins; Kink bands; Slip bands; Grain refinement   |
| Barcode              | : TH7930   |
| Call No.             | : TH 661.882:669.055 KAT-S   |

|                      |  |
|----------------------|--|
| Title                | : Optimization based framework for graph coarsening  |
| Researcher           | : Manoj Kumar  |
| Department           | : Department of Electrical Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Sandeep Kumar (Prof.) - EE (Guide)   |
| Physical description | : xviii, 138 p.  |
| Subject terms        | : Graph coarsening; Convex framework; Machine learning; Graph classification; Graph condensation |
| Barcode              | : TH7931   |
| Call No.             | : TH 004.925:005.591.1 MAN-A   |

|                      |  |
|----------------------|--|
| Title                | : Chemical characterization, source apportionment, and formation of secondary aerosols                   |
| Researcher           | : Faisal, Mohd   |
| Department           | : Department of Chemical Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Singh, Vikram ( Asst.Prof. ) - CHE (Guide); Mayank Kumar ( Assoc. Prof. ) - ME (Guide)                 |
| Physical description | : xiv, 262 p.  |
| Subject terms        | : Air quality; Atmospheric aerosol; Traffic emissions; Biomass-burning organic aerosol; Power plant dust |
| Barcode              | : TH7932   |
| Call No.             | : TH 544.772:628.53 FAI-C  |

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| Title                | : | Signature schemes and secret sharing schemes with their applications using blockchain technology                      |
| Researcher           | : | Arora, Neha   |
| Department           | : | Department of Mathematics, IITD   |
| Year                 | : | 2024  |
| Supervisor           | : | Sharma, R. K. (Prof. ) - MA (Guide)   |
| Physical description | : | xx, 253 p.  |
| Subject terms        | : | Cryptography; Verifier signature schemes; Smart contract construction; Security analysis; Multi secret sharing scheme |
| Barcode              | : | TH7933  |
| Call No.             | : | TH 007:003.26 ARO-S   |

|                      |   |  |
|----------------------|---|--|
| Title                | : | Understanding decision process in the treatment of cancer                  |
| Researcher           | : | Jain, Nishtha  |
| Department           | : | Department of Humanities and Social Sciences, IITD                         |
| Year                 | : | 2024   |
| Supervisor           | : | Singh, Purnima (Prof.)-HSS (Guide)   |
| Physical description | : | xiii, 333 p.   |
| Subject terms        | : | Critical decisions; Decision process; Patients; Family caregivers; Doctors |
| Barcode              | : | TH7934   |
| Call No.             | : | TH 616-006.6-08:005.311.6 JAI-U  |

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|----------------------|---|---|
| Title                | : | Reloading the confocal data matrix: quantitative characterization of organic and biological assemblies by optical sectioning of samples |
| Researcher           | : | Pragya  |
| Department           | : | Kusuma School of Biological Sciences, IITD  |
| Year                 | : | 2024  |
| Supervisor           | : | Mittal, Aditya (Prof.)-SBS (Guide)  |
| Physical description | : | xii, 198 p.   |
| Subject terms        | : | Confocal microscopy; Synchronization; Morphological heterogeneity; Cell morphology; Microscopy based cell cytometry                     |
| Barcode              | : | TH7935  |
| Call No.             | : | TH 577.34 PRA-R   |

|            |   |   |
|------------|---|---|
| Title      | : | Application of photoconductive antenna and capillary plasma to terahertz emission |
| Researcher | : | Sandeep   |

|                      |  |
|----------------------|--|
| Department           | : Department of Physics, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Malik, Hitendra Kumar (Prof.) - PH (Guide)   |
| Physical description | : xvii, 136 p.   |
| Subject terms        | : THz photoconductive antenna; Inhomogeneous antenna; Terahertz radiation generation; THz graphene plasmonics in graphene strip; Terahertz eigen modes of a semiconductor slab |
| Barcode              | : TH7936   |
| Call No.             | : TH 621.396.67:533.9 SAN-A  |

|                      |   |
|----------------------|---|
| Title                | : Exploring pricing strategies for variable annuities: assessing the cost and benefits of embedded guarantees for enhanced financial security         |
| Researcher           | : Singh, Shakti   |
| Department           | : Department of Mathematics, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Dharmaraja, S. (Prof.) - MA (Guide)   |
| Physical description | : xx, 167 p.  |
| Subject terms        | : Stochastic interest rate; Model description and risk neutral measures; Markovian health and GLVB; Fair fee analysis of ILVAs; Semi markovian health |
| Barcode              | : TH7937  |
| Call No.             | : TH 336.532.1 SIN-E  |

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|----------------------|--|
| Title                | : Electric rickshaws in Delhi: operations, charging infrastructure, and economy  |
| Researcher           | : Das, Sourav  |
| Department           | : Department of Civil Engineering, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Nezamuddin (Assoc. Prof.) - CE (Guide)   |
| Physical description | : xxii, 155 p.   |
| Subject terms        | : Paratransit in developing countries; E-rickshaw route networks; Modeling e-rickshaw charging operations; Designing e-rickshaw charging infrastructures; Sensitivity analysis |
| Barcode              | : TH7938   |
| Call No.             | : TH 62-83:629.3 DAS-E   |

|       |   |
|-------|---|
| Title | : Characterization and modeling of finfets at cryogenic temperatures for scalable semiconducting qubits |
|-------|---|

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|----------------------|---|
| Researcher           | : Singh, Sujit Kumar  |
| Department           | : Department of Electrical Engineering, IITD  |
| Year                 | : 2024  |
| Supervisor           | : Dixit, Abhisek (Prof.) - EE (Guide)   |
| Physical description | : xx, 291 p.  |
| Subject terms        | : Quantum computing; Threshold voltage and subthreshold swing model; Cryogenic operation; Cryogenic temperatures; Machine learning models |
| Barcode              | : TH7939  |
| Call No.             | : TH 621.3.049.774:004.31 SIN-C   |

|                      |  |
|----------------------|--|
| Title                | : 1D electrospun nanofibers supported metal oxide-based nanostructures for supercapacitor applications                               |
| Researcher           | : Tanwar, Vaishali   |
| Department           | : Department of Chemistry, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Ingole, Pravin P. (Prof.) - CHY (Guide)  |
| Physical description | : xxiv, 183 p.   |
| Subject terms        | : Supercapacitor electrode; Synthesis methodology; Electrochemical analysis; Carbon nanofibers; High rate capability supercapacitors |
| Barcode              | : TH7940   |
| Call No.             | : TH 620.3:621.319.4 TAN-E   |

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|----------------------|---|
| Title                | : Studies on characterization and additive manufacturing of thermoplastic elastomeric materials from thermoplastic polyurethane (TPU)/epichlorohydrin-ethylene oxide-allyl glycidyl ether (GECO) blends |
| Researcher           | : Awasthi, Pratiksha  |
| Department           | : Department of Materials Science and Engineering, IITD   |
| Year                 | : 2024  |
| Supervisor           | : Banerjee, Shib Shankar (Asst. Prof.) - MSE (Guide)  |
| Physical description | : xxiv, 157 p.  |
| Subject terms        | : Thermoplastic elastomers; Thermoplastic vulcanizates; Ethylene oxide- allyl glycidyl ether (GECO) blends; Epichlorohydrin; Optimization   |
| Barcode              | : TH7941  |
| Call No.             | : TH 678.073:67.02 AWA-S  |

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| Title                | : Antenna design for cubesat applications   |
| Researcher           | : De, Ratul   |
| Department           | : Centre for Applied Research in Electronics, IITD  |
| Year                 | : 2024  |
| Supervisor           | : Abegaonkar, Mahesh P. ( Assoc. Prof. ) - CARE (Guide); Basu, Ananjan ( Prof. ) - CARE (Guide)         |
| Physical description | : xxii, 131 p.  |
| Subject terms        | : Satellite industries; Space mission; Innovative antennas; THz applications; Spectroscopy applications |
| Barcode              | : TH7942  |
| Call No.             | : TH 621.396.67:629.78 DE-A   |

|                      |  |
|----------------------|--|
| Title                | : Development of bio-inspired formulations to modulate pancreatic microenvironment for the amelioration of type I and type II diabetes |
| Researcher           | : Singh, Anjali  |
| Department           | : Centre for Biomedical Engineering, IITD  |
| Year                 | : 2024   |
| Supervisor           | : Bhattacharyya, Jayanta ( Assoc. Prof.) - CBME (Guide)  |
| Physical description | : xvi, 118 p.  |
| Subject terms        | : Diabetes mellitus; Insulin; Glucose level; Health; Illness   |
| Barcode              | : TH7943   |
| Call No.             | : TH 616.379-008.64 SIN-D  |

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|----------------------|--|
| Title                | : Improving natural draught biomass cookstoves: parametric study for simple interventions  |
| Researcher           | : M., Thirumoorthy   |
| Department           | : Department of Mechanical Engineering, IITD   |
| Year                 | : 2024   |
| Supervisor           | : Ravi, M. R. (Prof.) - ME (Guide); Kohli, Sangeeta (Prof.) - ME (Guide)                   |
| Physical description | : xxvi, 243 p.   |
| Subject terms        | : Cooking devices; Combustion of fuel; Heat transfer; Cooking equipments; Domestic cooking |
| Barcode              | : TH7944   |
| Call No.             | : TH 662.981:339.13.025 THI-I  |

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