

G. S. Mandal's
Maharashtra Institute of Technology, Chhatrapati Sambhajinagar (Aurangabad)
Plastic and Polymer Engineering Department.

Book Chapters Published

2024

Sr. No.	Name of the faculty member as author	Title of the book chapter	Title of the book	Author/co-author	Year	Publisher/ISBN
1	Dr Suranjana Mandal, Dr Saurabh Tayde	Clay Polymer Composites for Biomedical Applications	Fiber and Ceramic Filler-Based Polymer Composites for Biomedical Engineering	Dr Suranjana Mandal, Dr Saurabh Tayde	2024-25 11/8/24	Springer Nature Singapore ISBN: 978-981-97-3909-7 https://doi.org/10.1007/978-981-97-3909-7
2	Aastha Dutta	Carbon Nanotubes	Biological, Chemical and Physical approach to materials and its applications	Aastha Dutta	July 2024 24-25	National Press Associates, New Delhi. ISBN: 978-81-19674-31-2
3	Aastha Dutta	General Characteristics of packaging materials and their modifications	Nanostructured materials for food packaging applications	Aastha Dutta	January 2024 23-24	Elsevier Publications, ISBN: 978-0-323-99525-2, Pp-49-68
4	Aastha Dutta	An outlook of fully green nanoscale food packaging	Nanostructured materials for food packaging applications	Aastha Dutta	January 2024 23-24	Elsevier Publications, ISBN: 978-0-323-99525-2, Pp-83-99
5	Dr. Saurabh Tayde, Aniruddha Chatterjee, Ajinkya Satdive	Application of Genetically Modified Microorganisms for the Reduction of the Toxicity of Hazardous Compounds	Genetically Engineered Organisms in Bioremediation	Bhagwan Toksha, Saurabh Tayde, Ajinkya Satdive, Shyam Tonde, Aniruddha Chatterjee	2024	CRC Press eISBN: 9781003188568 pp. 151-167

Sr. No.	Name of the faculty member as author	Title of the book chapter	Title of the book	Author/ co-author	Year	Publisher
1	Aastha Dutta	Applications of Polymeric Green Composites in the Biomedical Field: A Review	Advances in Diverse Applications of Polymer Composites: Synthesis, Application, and Characterization	Aastha Dutta	March 2023 22-23	Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis) Hard ISBN: 9781774910962 E-Book ISBN: 9781003300526 pp-1-28
2	P. Gupta Bhargav Patel	Sustainable Biodegradable and Bio-based Polymers.	Handbook of Sustainable Materials: Modelling, Characterization, and Optimization	Patel B., Toksha B., & Gupta P.	March 2023 22-23	CRC Press ISBN 9781032286327 pp. 19-38
3	P. Gupta, Yash Rushiya	Processing of Recycled and Bio-based Plastics	Handbook of Sustainable Materials: Modelling, Characterization, and Optimization	Rushiya, Y., Toksha, B. & Gupta, P.	March 2023 22-23	CRC Press ISBN 9781032286327 pp. 39-54
4	P. Gupta Dutta Aastha	Miscellaneous Materials for Chemical Sensing	Materials for Chemical Sensors	Gupta, Prashant; Dutta, Aastha; Rahaman, Mostafizur;	2023 22-23	CRC Press ISBN: 9780367484354 Published on 27/04/2023 pp. 207
5	P. Gupta	Graphene Based Chemical Sensors	Materials for Chemical Sensors	Toksha, B; Gupta, P; Shirsath S. E.	2023 22-23	CRC Press ISBN: 9780367484354 Published on 27/04/2023 pp. 56
6	Dr. Saurabh Tayde, Aniruddha Chatterjee, Ajinkya Satdive	Insights and Applications of Double Positive Medium Metamaterials	Electromagnetic Metamaterials : Properties and Applications	Anupras Manwar, Tanmay Bhongade, Prasad Kulkarni, Ajinkya Satdive, Saurabh Tayde, Bhagwan Toksha, Aniruddha Chatterjee, Shravanti Joshi	2023 16/11/23	John Wiley & Sons, Inc Published on 16/11/2023 pp. 85-99

7	Dr. Saurabh Tayde, Aniruddha Chatterjee, Ajinkya Satdive	Polyester-Based Biocomposites for Building and Construction Applications	Polyester-Based Biocomposites	Saurabh Tayde, Ajinkya Satdive, Bhagwan Toksha, Aniruddha Chatterjee, Shravanti Joshi	2023 29/09/23	CRC Press Published on 29/09/2023 pp. 253-267
8	Dr. Saurabh Tayde, Aniruddha Chatterjee, Ajinkya Satdive	Polyester Resins and Their Use as Matrix Material in Polymer Composites: An Overview	Polyester-Based Biocomposites	Saurabh Tayde, Ajinkya Satdive, Bhagwan Toksha, Aniruddha Chatterjee	2023 29/09/23	CRC Press Published on 29/09/2023 pp. 1-23

2022

Sr. No.	Name of the faculty member as author	Title of the book chapter	Title of the book	Author/ co-author	Year	Publisher
1	Prashant Gupta	The Increasing Inevitability of IoT in Remote Disaster Monitoring Applications https://doi.org/10.1007/978-981-16-7373-3_11	Geospatial Technology for Landscape and Environmental Management: Sustainable Assessment and Planning	Vishal Barot, Srishti Sharma, Prashant Gupta	2022 21-22	Woodhead Publishing, Elsevier ISBN: 978-981-16-7372-6 Published on 11/01/2022 pp-227-246
2	Ajinkya Satdive, Saurabh Tayde, Aniruddha Chatterjee	Flammability Properties of the Bionanocomposites Reinforced with Fire Retardant Filler https://doi.org/10.1007/978-981-16-8578-1_4	Polymer Based Bio-nanocomposite: Properties, Durability and Applications	Ajinkya Satdive, Saurabh Tayde, Aniruddha Chatterjee	2022 21-22	Springer, Singapore ISBN: 978-981-16-8577-4 Published on 29/03/2022 pp- 69-86
3	Ajinkya Satdive, Saurabh Tayde, Aniruddha Chatterjee	Bionanocomposites in the Construction and Building Applications https://doi.org/10.1007/978-981-16-8578-1_16	Polymer Based Bio-nanocomposite: Properties, Durability and Applications	Ajinkya Satdive, Saurabh Tayde, ShyamTonde, Chinmay Hazra, Debasree Kundu, Aniruddha Chatterjee	2022 21-22	Springer, Singapore ISBN: 978-981-16-8577-4 Published on 29/03/2022 pp- 293-310
4	Ajinkya Satdive, Saurabh Tayde, Aniruddha Chatterjee	Bioaugmentation in the Bioremediation of the Heavy Metals and Radionuclides	Bioaugmentation Techniques and Applications in Remediation DOI: https://doi.org/1	BhagwanToksha, Saurabh Tayde, Ajinkya Satdive,	2022 29/6/22	CRC Press ISBN: 9781003187622

			0.1201/9781003187622	ShyamTonde, Aniruddha Chatterjee		
5	Prashant Gupta	Impact of AI on Teaching Pedagogy and its Integration for Enhancing Teaching-Learning	Artificial Intelligence in Higher Education DOI: https://doi.org/10.1201/9781003184157	BhagwanToksha, Trishul Kulkarni, Prashant Gupta	2022 22-23	CRC Press ISBN: 9781003184157 Published on 29/08/2022 pp. 137-152
6	Prashant Gupta	AI-Based Predictive Models for Adaptive Learning Systems	Artificial Intelligence in Higher Education DOI: https://doi.org/10.1201/9781003184157	Prashant Gupta, Trishul Kulkarni, BhagwanToksha	2022 22-23	CRC Press ISBN: 9781003184157 Published on 29/08/2022 pp. 113-136
7	Prashant Gupta	Applications of Artificial Intelligence in Learning Assessment	Artificial Intelligence in Higher Education DOI: https://doi.org/10.1201/9781003184157	Trishul Kulkarni, BhagwanToksha, Prashant Gupta	2022 22-23	CRC Press ISBN: 9781003184157 Published on 29/08/2022 pp. 95-111
8.	Prashant Gupta	A Review of the Tribological and Thermal Effectiveness of Graphene-Based Nano-Lubricants	Novel Applications of Carbon Based Nano-materials DOI: https://doi.org/10.1201/9781003183549	Kulkarni, TP; Toksha, BG; Gupta, Prashant; Shirsath, SE; Autee, AT;	2022 22-23	CRC Press ISBN: 9781003183549 Published on 03/11/2022 pp. 26

2021

Sr. No .	Name of the faculty member as author	Title of the book chapter	Title of the book	Author/ co-author	Year	Publisher
1	Subhendu Bhandari	Electrical conductivity of polymer-graphene composites DOI: https://doi.org/10.1016/B978-0-12-821639-2.00025-2	Polymer Nanocomposites Containing Graphene: Preparation, Properties, and Applications	Mostafizur Rahaman, Rajesh Theravalappil, Subhendu Bhandari, Lalatendu Nayak, PurabiBhagabati	2021 21-22	Woodhead Publishing, Elsevier ISBN: 978-0-12-821640-8 Published on 01/09/2021 pp-107-140

2	Subhendu Bhandari	Thermal properties of polymer-graphene composites DOI: https://doi.org/10.1016/B978-0-12-821639-2.00014-8	Polymer Nanocomposites Containing Graphene: Preparation, Properties, and Applications	Subhendu Bhandari, Mostafizur Rahaman	2021 21-22	Woodhead Publishing, Elsevier ISBN: 978-0-12-821640-8 Published on 01/09/2021 <i>pp-163-182</i>
3	Subhendu Bhandari, Prashant Gupta	Dispersion of graphene in polymer matrices DOI: https://doi.org/10.1016/B978-0-12-821639-2.00020-3	Polymer Nanocomposites Containing Graphene: Preparation, Properties, and Applications	Subhendu Bhandari, Prashant Gupta	2021 21-22	Woodhead Publishing, Elsevier ISBN: 978-0-12-821640-8 Published on 01/09/2021 <i>pp-275-298</i>
4	Prashant Gupta	Polymer-graphene composites as sensing materials DOI: https://doi.org/10.1016/B978-0-12-821639-2.00017-3	Polymer Nanocomposites Containing Graphene: Preparation, Properties, and Applications	Prashant Gupta	2021 21-22	Woodhead Publishing, Elsevier ISBN: 978-0-12-821640-8 Published on 01/09/2021 <i>pp-401-424</i>
5	Prashant Gupta	Packaging applications of polymer-graphene composites DOI: https://doi.org/10.1016/B978-0-12-821639-2.00023-9	Polymer Nanocomposites Containing Graphene: Preparation, Properties, and Applications	Prashant Gupta, B.G. Toksha	2021 21-22	Woodhead Publishing, Elsevier ISBN: 978-0-12-821640-8 Published on 01/09/2021 <i>pp-713-742</i>
6	Prashant Gupta, Subhendu Bhandari	Polymer-graphene composites as flame and fire retardant materials DOI: https://doi.org/10.1016/B978-0-12-821639-2.00010-0	Polymer Nanocomposites Containing Graphene: Preparation, Properties, and Applications	Prashant Gupta, Subhendu Bhandari	2021 21-22	Woodhead Publishing, Elsevier ISBN: 978-0-12-821640-8 Published on 01/09/2021 <i>pp-743-776</i>
7	Prashant Gupta	Virtual Experimentation: An Advanced Tool for Educational Technology	Technology and Tools in Engineering Education: Research and	Prashant Gupta, Bhagwan Toksha, Trishul Kulkarni, B. Rajaguru, Abhilasha Mishra	2021 21-22	CRC Press, Taylor & Francis ISBN: 978-0-367-60774-6

		DOI: 10.1201/9781003102298-1	Innovations			Published on 28/10/2021 <i>pp-1-28</i>
8	Prashant Gupta	Applications of ICT: Pathway to Outcome-Based Education in Engineering and Technology Curriculum DOI: 10.1201/9781003102298-7	Technology and Tools in Engineering Education: Research and Innovations	Prashant Gupta, Trishul Kulkarni, Vishal Barot, Bhagwan Toksha	2021 21-22	CRC Press, Taylor & Francis ISBN: 978-0-367-60774-6 Published on 28/10/2021 <i>pp-109-142</i>
9	Prashant Gupta	Tools and Technology Assisting Accreditation in Engineering Education DOI: 10.1201/9781003102298-9	Technology and Tools in Engineering Education: Research and Innovations	Prashant Gupta, Trishul Kulkarni, Bhagwan Toksha	2021 21-22	CRC Press, Taylor & Francis ISBN: 978-0-367-60774-6 Published on 28/10/2021 <i>pp-159-184</i>
10	Prashant Gupta, Subhendu Bhandari	Classification and sources of nanowastes DOI: https://doi.org/10.1016/B978-0-323-90982-2.00003-2	Nanomaterials Recycling	Prashant Gupta, Subhendu Bhandari	2021 21-22	Elsevier ISBN: 978-0-323-90982-2 Published on 31/10/2021 <i>pp-37-60</i>
11	Aastha Dutta	An Overview of Electromagnetic Interference Shielding DOI: 10.1201/9781003217312-1	Nanostructured Materials for Electromagnetic Interference Shielding	Aastha Dutta	2021 21-22	CRC Press, Taylor & Francis ISBN: 978-1-032-10836-0 Published on 02/11/2021 <i>pp-1-8</i>
12	Prashant Gupta	Challenges and Futuristic Approach of Blended Learning in Higher Education DOI: 10.1201/9781003143796-8	Innovative Education Technologies for 21 st Century Teaching and Learning	Prashant Gupta, Trishul Kulkarni, Bhagwan Toksha	2021 21-22	CRC Press, Taylor & Francis ISBN: 978-1-003-14379-6 Published on 05/11/2021 <i>pp-113-130</i>
13	Prashant Gupta	Amphiphilic Hyperbranched Polymers DOI:	Functionalized Polymers: Synthesis, Characterization and Applications	Srijoni Sengupta, Prashant Gupta, Priyanka Sengupta, Ayan Dey	2021 20-21	CRC Press, Taylor & Francis ISBN: 9780367821913 Published on

		http://dx.doi.org/10.1201/9780367821913-3				14/05/2021pp-33-63
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2020

Sr. No.	Name of the faculty member as author	Title of the book chapter	Title of the book	Author/ co-author	Year	Publisher
1	Ayan Dey, Suranjana Mandal, Subhendu Bhandari	Characterization methods	Fiber-Reinforced Nanocomposites: Fundamentals and Applications	Ayan Dey, Suranjana Mandal, Subhendu Bhandari, Chandrika Pal, Jonathan Tersur Orasugh, Dipankar Chattopadhyay	2020 19-20	Elsevier ISBN: 978-0-12-819904-6 Published on 16/03/2020 pp-7-68

2018

Sr. No.	Name of the faculty member as author	Title of the book chapter	Title of the book	Author/ co-author	Year	Publisher
1	Aastha Dutta	Recent Progress in Electromagnetic Absorbing Materials DOI: https://doi.org/10.1002/9781119128625.ch7	Advanced Materials for Electromagnetic Shielding: Fundamentals, Properties, and Applications	Raghvendra Kumar Mishra, Aastha Dutta, Priyanka Mishra, and Sabu Thomas	2018 18-19	Wiley ISBN: 978-1-119-12861-8 Published on 11/2018 pp-147-166
2	Subhendu Bhandari	Polymer/Carbon Composites for Sensor Application DOI: https://doi.org/10.1007/978-981-13-2688-2_14	Carbon-Containing Polymer Composites	Subhendu Bhandari	2018 18-19	Springer, Singapore ISBN: 978-981-13-2688-2 Published on 06/10/2018 pp-503-531

3	Subhendu Bhandari, Ayan Dey, Prashant Gupta, Aastha Dutta M. A. Ansari	Synthesis/Preparation of Carbon Materials DOI: https://doi.org/10.1007/978-981-13-2688-2_1	Carbon-Containing Polymer Composites	PurabiBhagabati, MostafizurRahaman*, Subhendu Bhandari*, Indranil Roy, Ayan Dey, Prashant Gupta, M. A. Ansari, Astha Dutta, Dipankar Chattopadhyay	2018 18-19	Springer, Singapore ISBN: 978-981-13-2688-2 Published on 06/10/2018 <i>pp-1-16</i>
4	Aniruddha Chatterjee	The Use of Polymer–Carbon Composites in Fuel Cell and Solar Energy Applications DOI: https://doi.org/10.1007/978-981-13-2688-2_15	Carbon-Containing Polymer Composites	Aniruddha Chatterjee, D. P. Hansora, PurabiBhagabati, MostafizurRahaman	2018 18-19	Springer, Singapore ISBN: 978-981-13-2688-2 Published on 06/10/2018 <i>pp-533-544</i>
5	Prashant Gupta, Subhendu Bhandari	Chemical Depolymerization Of PET Bottles Via Ammonolysis And Aminolysis DOI: https://doi.org/10.1016/B978-0-12-811361-5.00006-7	Recycling of Polyethylene Terephthalate Bottles	Prashant Gupta, Subhendu Bhandari	2018 18-19	Elsevier ISBN: 9780128113615 Published on 31/10/2018
6	Suranjana Datta Chaudhuri (Mandal), Ayan Dey	PET Chemistry DOI: https://doi.org/10.1016/B978-0-12-811361-5.00001-8	Recycling of Polyethylene Terephthalate Bottles	Suranjana Datta Chaudhuri (Mandal), Ayan Dey	2018 18-19	Elsevier ISBN: 9780128113615 Published on 31/10/2018
7	Aniruddha Chatterjee	Stimuli-responsive nanocomposites for drug delivery DOI: https://doi.org/10.1016/B978-0-12-813741-3.00036-4	Applications of Nanocomposite Materials in Drug Delivery	Chinmay Hazra, Debasree Kundu	2018 17-18	Elsevier ISBN: 9780128137581 Published on 20/06/2018 <i>pp-823-841</i>
8	Subhendu Bhandari, Prashant Gupta	Chemical Depolymerization of Polyurethane Foam via Ammonolysis and Aminolysis DOI: https://doi.org/10.1016/B978-0-323-51133-9.00007-3	Recycling of Polyurethane Foams	Subhendu Bhandari, Prashant Gupta	2018 17-18	Elsevier ISBN: 978-0-323-51133-9 Published on 07/06/2018 <i>pp-77-88</i>
9	Ms.A.S.Dutta	Polyurethane Foam Chemistry	Recycling of Polyurethane Foams	Ms. A. S. Dutta	2018 17-18	Elsevier ISBN: 978-0-323-

		DOI: https://doi.org/10.1016/B978-0-323-51133-9.00002-4				51133-9 Published on 07/06/2018 <i>pp-17-28</i>
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2017

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1	Subhendu Bhandari	Polyaniline: Structure and Properties Relationship DOI: https://doi.org/10.1016/B978-0-12-809551-5.00002-3	Polyaniline Blends, Composites, and Nanocomposites	Subhendu Bhandari	2017 17-18	Elsevier <i>ISBN: 978-0-128-09551-5</i> <i>Published on 31/10/2017, pp-23-60</i>
2	Aniruddha Chatterjee	Fuel Cells: Construction, Design, and Materials DOI: https://doi.org/10.1007/978-3-319-52739-0_16	Organic–Inorganic Composite Polymer Electrolyte Membranes: Preparation, Properties, and Fuel Cell Applications	D. P. Hansora, Aniruddha Chatterjee	2017 16-17	Springer <i>ISBN: 978-3-319-52738-3</i> <i>Published on 08/06/2017, pp-399-420</i>
3	Aniruddha Chatterjee	Fabrication Techniques for the Polymer Electrolyte Membranes for Fuel Cells DOI: https://doi.org/10.1007/978-3-319-52739-0_14	Organic–Inorganic Composite Polymer Electrolyte Membranes: Preparation, Properties, and Fuel Cell Applications	Aniruddha Chatterjee, D.P. Hansora	2017 16-17	Springer <i>ISBN: 978-3-319-52738-3</i> <i>Published on 08/06/2017, pp-359-380</i>
4	Aastha Dutta	Fourier Transform Infrared Spectroscopy DOI: https://doi.org/10.1016/B978-0-323-46140-5.00004-2	Spectroscopic Methods for Nanomaterials Characterization (Vol. 2)	Aastha Dutta	2017 16-17	Elsevier <i>ISBN: 978-0-323-46140-5</i> <i>Published on 06/06/2017, pp-73-93</i>

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1	Aniruddha Chatterjee	Styrene-Butadiene Rubber Based Nanoblends (SBR-nB): Preparation, Characterization Application DOI: https://doi.org/10.1007/978-3-319-48720-5_7	Rubber Nanoblends: Preparation, Characterization and Application	Aniruddha Chatterjee, Dharmesh P. Hansora	2016 16-17	Springer <i>ISBN: 978-3-319-48718-2</i> <i>Published on 11/2016, pp-209-248</i>
2 *	Aniruddha Chatterjee	Green Polymer Nanocomposites: Preparation, Properties and Biomedical Applications DOI: https://doi.org/10.1201/9781315371184	Green Polymer Composites Technology: Properties & Applications	Aniruddha Chatterjee, Dharmesh P. Hansora	2016 16-17	CRC Press and Taylor & Francis <i>ISBN: 978-1-49871-546-1</i> <i>Published on 07/11/2016, pp-291</i>
3 *	Aniruddha Chatterjee	Graphene Based Functional Hybrid Nanostructures: Preparation, Properties and Applications DOI: https://doi.org/10.4028/www.scientific.net/MSF.842.53	Advanced Functional Materials: Properties and Applications	Aniruddha Chatterjee, Dharmesh P. Hansora	2016 15-16	Trans Tech Publications Ltd. Laubisrutistr. 24, CH-8712 Stafa-Zuerich, Switzerland <i>ISBN: 13: 978-3-03835-574-8</i> <i>Published Online 18/02/2016, Vol. 842, pp 53-75</i>