Book (s)/ Book Chapters Published

2025

S. No:	Title	Authors
1.	**Biopolymer composites** Comprehensive Polymer Science 2nd Edition, Chapter 60024, Copyright © 2025 Elsevier Inc.	P. K. Dutta, Santosh Kumar, Ruchi Chawla, Pal Manisha D.

2024

S. No:	Title	Authors
1.	**Perspectives for polymer-based antimicrobial films in food packaging applications** Nanobiotechnology for Food Processing and Packaging First Edition - May 7, 2024 Editors: Jay Singh, Ravindra Pratap Singh, Ajeet Kumar Kaushik, Charles Oluwaseun Adetunji, Kshitij Rb Singh Paperback ISBN: 9780323917490 eBook ISBN: 9780323958578	Ashish Tiwari, Anurag Tiwari, Santosh Kumar, Shalinee Singh and P.K.Dutta
2.	**"Moisture-Absorbent Food Packaging Systems and the Role of Chitosan"** Smart Food Packaging Systems: Innovations and Technology Applications Book Editor(s):Avik Mukherjee, Santosh Kumar, Manjusri Misra, Amar K. Mohanty published:1 October 2024 Print ISBN:9781394189564 |Online ISBN:9781394189595 |DOI:10.1002/9781394189595 © 2025 John Wiley & Sons Ltd.	Srasti Yadav, Pradip Kumar Dutta

2023

S. No:	Title	Authors
1.	**Role of nanotechnology in the field of phytopharmaceuticals for the delivery of herbal drugs** Phytopharmaceuticals and Biotechnology of Herbal Plants Edited By Sachidanand Singh, Rahul Datta, Parul Johri, Mala Trivedi, First Edition, Copyright 2023 ISBN 9781032277769 386 Pages 50 B/W Illustrations Published by CRC Press	Tanvi Jain, Kavita Srivastava, Rajnish Singh, M.J. Ansari, Sachidanand Singh, and P.K. Dutta

2022

S. No:	Title	Authors
1. .	**"Chitin–A Natural Bio-feedstock and Its Derivatives: Chemistry and Properties for Biomedical Applications"** Pages: 207-233 High-Performance Materials from Bio-based Feedstocks Editors**:** Andrew J. Hunt,Nontipa Supanchaiyamat,Kaewta Jetsrisuparb,Jesper T.N. Knijnenburg John Wiley & Sons, Ltd 1st April, 2022	Anu Singh, Shefali Jaiswal, Santosh Kumar, Pradip K Dutta
2.	i) **Role of chitosan and chitosan-based nanoparticles in antioxidant regulation of plants**	Anu Singh, Hridyesh Kumar, Santosh Kumar and P. K. Dutta
	ii) **Role of chitosan and chitosan-based nanoparticles in pesticide delivery: avenues and applications**	Sushma and P. K. Dutta
	iii) **Current and future prospects of chitosan-based nanomaterialsin plant protection and growth** Role of Chitosan and Chitosan based Nanomaterials in Plant Science ISBN:9780323853927, 0323853927 Page count:552 Published:6 August 2022 Format:ebook Publisher:Elsevier Science Editors:Santosh Kumar, Sundararajan V. Madihally	Tanvi Jain, Kavita Srivastava, Santosh Kumar and P. K. Dutta

2021

S. No:	Title	Authors
1.	**"Chitosan for Wound Healing in the Light of Skin Tissue Engineering and Stem Cell Research"** Engineering Materials for Stem Cell regeneration ISBN:9789811644207, 9811644209 Page count:706 Published:23 October 2021 Format:ebook Publisher: Springer Nature Singapore Editor: Faheem A. Sheikh	Ruchi Chawla and P.K.Dutta
2.	**"Modified Chitosan Films/Coatings for Active Food Packaging"** **Advances in Polymer Science 287** Chitosan for Biomaterials III: Structure-Property Relationships, 2021•Springer **Editors:**R. Jayakumar, M. Prabaharan	P. K. Dutta, Srasti Yadav, G. K. Mehrotra

2020

S. No:	Title	Authors
2.	**Nanoconjugates from chitosan hydrogel: a novel drug delivery tool** Versatile Solicitations of Materials Science in Diverse Science Fields Editors: Arti Srivastava, Kalpana Awasthi, Mridula Tripathi Series: Materials Science and Technologies Nova Science Publishers, 2021 ISBN: 978-1-53619-763-1	Tanvi Jain and P.K.Dutta

Papers (Journal SCIE, Scopus) Published

2025

S. No:	Title	Authors	Volume	Page	Q1/Q2/Q3
1	Synthesis and characterization of Zn(II) metalated chitosan based nano-hybrid: Antioxidant and antibacterial activity	Puspendra Singh, Shiva Arun , Shahid Suhail Narvi , Ruby Kumari and Pradip Kumar Dutta	Main Group Chemistry 24(1) Pages 37-46		
2	Designing a β-nitrostyrene derived chitosan Schiff base with potent antimicrobial and antioxidant activities and drug delivery applications	Suryambika Arya, Ruchi Chawla, P.K.Dutta	Journal of the Indian Chemical Society, 102: 101650		

2024

S. No:	Title	Authors	Volume	Page	Q1/Q2/Q3
1	Synthesis and characterization of injectable chitosan, hyaluronic acid, and hydroxyapatite blend hydrogel aimed at bone tissue engineering application	Sarita, , Pal Manisha Dayaram, Ambak K Rai, Ravi Prakash Tewari Ppradip Kumar Dutta	Indian Academy of Sciences, 47: 246		
2	Aminosilane@mesoporoussilica/chitosan*salicylaldehyde nanohybrid: synthesis, characterization and applications	Ruby Kumari , S.S.	Journal of Drug Delivery		

		Narvi, P.K. Dutta	Science and Technology, 101: 106304		
3	Physicochemical and biological evaluation of 'click' synthesized vinyl epoxide-chitosan film for active food packaging	Pal Manisha D., Ruchi Chawla, Pradip Kumar Dutta	International Journal of Biological Macromolecules, 282: 136816		
4	Synthesis of the oleylamine coated mesoporous Fe3O4 nanospheres and their application towards the efficient chemical fixation of carbon dioxide	Bhim Sen Yadav, Nazrul Hsan, Anand Kumar Vishwakarma, Anchal Kishore Singh, Sarvesh Kumar, Joonseok Koh, Pradeep K. Dutta, Naresh Kumar	Solid State Sciences 150 (2024) 107500		
5	Arylazo sulfones: multifaceted photochemical reagents and beyond	Ruchi Chawla, Atul K Singh , P.K.Dutta	Organic & Biomolecular Chemistry, 22 (5): 869-893		

2023

S. No:	Title	Authors	Volume	Page	Q1/Q2/Q3
1	Chitosan modified multi-walled carbon nanotubes and arginine aerogel for enhanced carbon capture	Nazrul Hsan, Santosh Kumar, Joonseok Koh and P.K. Dutta	International Journal of Biological Macromolecules, 252: 126523		
2	An injectable blend hydrogel for bone tissue engineering application: synthesis and	Sarita, Pal Manisha D., Bharat Singh, Ambak K. Rai, Ravi Prakash Tewari, and	Journal of Macromolecular Science, Part A Pure and Applied Chemistry,		

	characterization	Pradip Kumar Dutta	61:1		
3	Cu (II)-coordinated silica based mesoporous inorganic-organic hybrid material: synthesis, characterization and evaluation for drug delivery, antibacterial, antioxidant and anticancer activities	AmreenNaz, Ruby Kumari, Shiva Arun, Shahid Suhail Narvi, M. Siraj Alam and P.K. Dutta	Journal of Polymer Research, 30:76		
4	Bioactivity of Nanohybrid: Comprising of Metallosalen Incorporated into Lacunary Polyoxometalate and Encapsulated with Chitosan Bioplymer	Shiva Arun, Vinay K.Singh, Prabha Bhartiya and P.K. Dutta	Journal of Polymer Materials, 40 (1)		
5	Synthesis of chitosan succinate-g-amine functionalized mesoporous silica: Inorganic-organic nanohybrid for antibacterial assessment, antioxidant activity and pH-controlled drug delivery	Ruby Kumari, S.S. Narvi, P.K. Dutta	International Journal of Biological Macromolecules, 234:123763		
6	'Click' synthesized calcium-chitosan-triazole nanocomplex from CaC_2 as an efficient drug carrier,	Pal Manisha D., Ruchi Chawla, Pradip Kumar Dutta	International Journal of Biological Macromolecules, 240:124290		

	antimicrobial and antioxidant polymer				
7	One-pot synthesis of sulfone-based chitosan derivatives from alkene: characterization, antimicrobial, antioxidant and anti-cancer activity	Rajesh Kumar Saroj, Ruchi Chawla, Pradip Kumar Dutta	Journal of Macromolecular Science, Part A: Pure and Applied Chemistry, 60 (5), 367-373		

2022

S. No:	Title	Authors	Volume	Page	Q1/Q2/Q3
1	pH-Responsive Charge-Convertible *N*-Succinyl Chitosan-Quercetin Coordination Polymer Nanoparticles for Effective NIR Photothermal Cancer Therapy	Prabha Bhartiya, Ruchi Chawla, Pradip K. Dutta	Macromolecular Chemistry & Physics, 223 (19) No.2200140		
2	Folate receptor targeted chitosan and polydopamine coated mesoporous silica nanoparticles for photothermal therapy and drug delivery	Prabha Bhartiya, Ruchi Chawla, Pradip Kumar Dutta	Journal of Macromolecular Science, Part A, 59:810-817		
3	Arginine containing chitosan-	Nazrul Hsan, Pradip K. Dutta, Santosh Kumar, Joonseok Koh	Journal of CO2 Utilization Volume 59,		

	graphene oxide aerogels for highly efficient carbon capture and fixation		101958		

2021

S. No:	Title	Authors	Volume	Page	Q1/Q2/Q3
1	Chitosan modified by organo-functionalities as an efficient nanoplatform for anti-cancer drug delivery.	Shefali Jaiswal, P.K. Dutta, Santosh Kumar and Ruchi Chawla	Journal of Drug Delivery Science and Technology, 62, 102407		
2	Chitosan based ZnO nanoparticles loaded gallic-acid films for active food packaging	Srasti Yadav, G.K.Mehrotra & P.K.Dutta	Food Chemistry 334, 127605		
3	Preparation of Dextran Aldehyde and BSA Conjugates from Ligno-cellulosic Biowaste for Antioxidant and Anti-cancer	Sudheer Rai, Shiva Arun, Amit Kumar Kureel, P. K. Dutta, and G. K. Mehrotra	Waste and Biomass Valorization, 12: 1327-39		

2020

S. No:	Title	Authors	Volume	Page	Q1/Q2/Q3
1	Photocatalyst-	Ruchi Chawla,	Tetrahedron		

	free visible light driven synthesis of (E)-vinyl sulfones from cinnamic acids and arylazo sulfones	Shefali Jaiswal, P.K. Dutta, and L.D.S. Yadav	Letters 61 (2020)		
2	Thioglycolic acid modified chitosan: a template for *in-situ* synthesis of CdSe QDs for cell imaging	Hridyesh Kumar, P.K.Dutta and Sushma	Journal of Macromolecular Science, Part A, 57 (10): 711-24		
3	Preparation, Physicochemical and Biological Evaluation of Quercetin based Chitosan-gelatin Film for Food Packaging	Srasti Yadav, G. K. Mehrotra, Prabha Bhartiya, Anu Singh, and P. K. Dutta	Carbohydrate Polymers, 227		
4	Capture and chemical fixation of carbon dioxide by chitosan grafted multiwalled carbon nanotubes	Nazrul Hsan, Pradip K. Dutta, Santosh Kumar, Neeladri Das, Joonseok Koh	Journal of CO_2 Utilization, 101237		
5	Design of polymer based Inorganic-organic hybrid materials for drug delivery application.	Ruby Kumari, S. S. Narvi and P. K. Dutta	J. Indian Chem. Soc. 97 (12)		

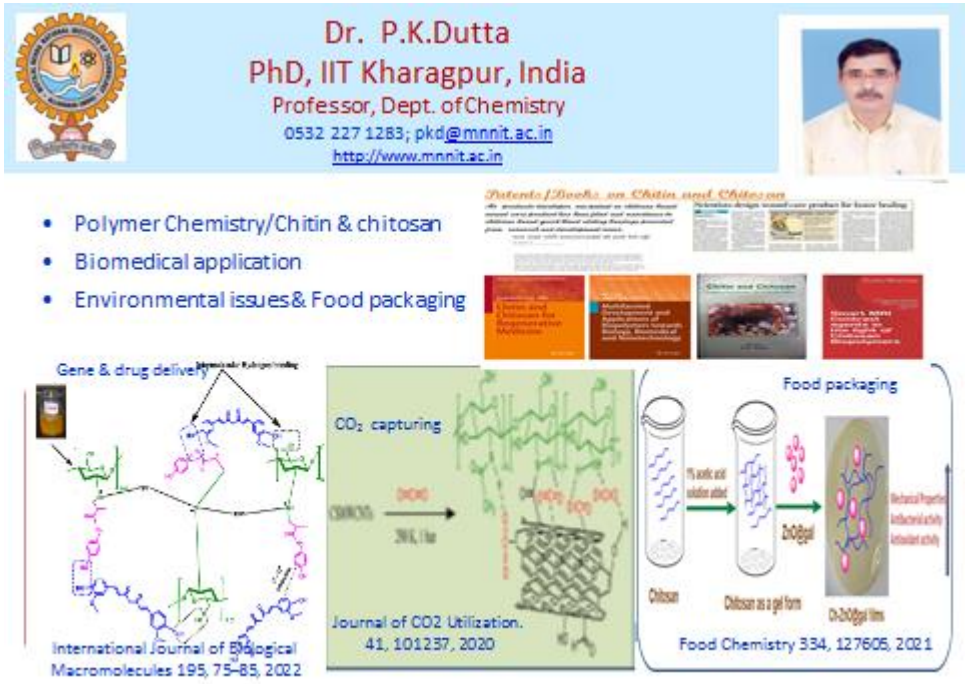
Patents Granted

2021

S. No:	Title	Authors
1.	A wound care product (Date of Grant: 01/03/2021)	P.K.Dutta, D.Archana and Joydeep Dutta

Any Outreach Activities (Foreign Visits, National and International Collaboration, Invited Lecture in International Conferences):

Life time achievement award December 2024 for more than 3 decades research contribution to biopolymers/chitin & chitosan



Dr.P.K.Dutta is Professor [HAG] & Former Head, Department of Chemistry, Motilal Nehru National Institute of Technology, Allahabad, India and founder editor of Asian Chitin Journal, An International Journal since 2005. He obtained his M.Sc. (1987) and Ph.D. (1993) from IIT Kharagpur. His specialisation in Physical/Polymer Chemistry and research interests include modification, physical, chemical and biological properties of engineering polymers: chitosans, scaffolds for biomedical applications, nanocomposites preparation and application to tissue engineering, drug delivery, food prevention and wound management. He has more than 200 research publications and supervised 21 Ph.D.students and mentor of DST-WoS and DST-WISE-PDF, 20 M.Tech./M.Phil./M.Pharm dissertation, 16 M.Sc. dissertation and 2 patents (one granted & one applied). At present 3 Ph.D. students are working under him. He is the author/editor of many books/chapters/course materials under continuing education programme (AICTE) and reviewer of many national & international journals. He has handled about a dozen of research projects as principal investigator. He has intensively visited many foreign countries like USA, UK, China, Japan, S.Korea, Switzerland, Turkey for academic purposes. He has vast experience in academic/research/administration. He has also act as Guest Editor for an International Journal: Journal of Polymer Materials (A Scopus/SCI journal, published by Prints Publication, New Delhi, India). He is the recipient of many national/international fellowship. He was honoured by Royal Society of Chemistry, UK as fellow (FRSC) in

2007. In 2018, he received Best Faculty Researcher Marshal Award by Indian Chitin Society. Recently he has received Life Time Achievement Award 2024 for his more than 3 decades contribution in Chitin & Chitosan Research by HBTU-Kanpur & Galgotias University-Greater Noida.

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Dr.Pal Manisha D.

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Dr.Brijesh K. Singh

Mentor for Dr.Ruchi Chawla, Women Scientist (A DST Project, 2018-21) & DST-WISE -PDF (2025 to present)