

Himansu Sekhar Nanda, Ph.D.



Himansu Sekhar Nanda, Ph.D.

Assistant Professor (Grade-1), Discipline of Mechanical Engineering, Indian Institute of Information Technology, Design and Manufacturing (IIITDM) Jabalpur

Dumna Airport Road, Jabalpur-482005, MP, India

Faculty-in-Charge, International Center for Sustainable and Net Zero Technologies, IIITDM Jabalpur, India

Principal Investigator, Biomedical Engineering and Technology Laboratory, IIITDM Jabalpur, India

Email: himansu@iiitdmj.ac.in (Office), betlab@iiitdmj.ac.in (Lab),

binodinitifr@gmail.com (Personal)

Tel: +91-761-279-4429 (Office), 4447(Lab), +91-9993543986 (Mobile and WhatsApp)

URL: <http://faculty.iiitdmj.ac.in/faculty/himansu>

LinkedIn: <https://www.linkedin.com/in/himansu-sekhar-nanda-5b5a67210/>

Facebook: [Biomedical Engineering and Technology Laboratory | Facebook](#) (Lab)

<https://www.facebook.com/himansusekhar.nanda> (personal)

Brief Introduction

Himansu Sekhar Nanda received his Ph. D in Materials Science and Engineering (2011-2014), majoring in Biomaterials from Research Centre for Functional Materials (formerly Polymeric Biomaterials Unit, Tissue Regeneration Materials Unit), National Institute for Materials Science, Japan. He obtained his Masters of Technology (M-Tech) from Indian Institute of Technology (IIT) Roorkee, India. He was a post-doctoral research fellow (Feb 2016-Sept 2017) at School of Materials Science and Engineering (MSE), Nanyang Technological University (NTU) Singapore and post-doctoral fellow (Oct 2014- Jan 2016) at Department of Materials Science and Engineering (PSE division), King Abdullah University of Science and Technology (KAUST), Kingdom of Saudi Arabia. Since October 2017, he is working as an Assistant Professor at Indian Institute of Information Technology Design and Manufacturing (IIITDM), Jabalpur. He holds the adjunct appointment as an Assistant Professor at College of Materials Science and engineering, Beijing University of Chemical Technology and a visiting Scientist Sate Key Lab of Molecular Engineering of Polymers, Fudan University, China. He has edited for the special issue “Biomaterials: Future of Biomaterials 2021” in “Current Opinion in Biomedical Engineering” (COBME, Elsevier) and "Biodegradable Polymers for Biomedical Applications" in Journal “Frontier in Materials (Biomaterials) and Frontier in Bioengineering and Biotechnology”. Currently, he is editing a special issue on “Intelligent Biomaterials” in Journal COBME, Elsevier. Dr.

Himansu Sekhar Nanda, Ph.D.

Nanda is currently heading the Biomedical Engineering and Technology (BET) Laboratory at Discipline of Mechanical Engineering, IIITDM Jabalpur. In parallel, he is also serving as a member of Education and Publication committee and Awards committee of Society of Biomaterials and Artificial Organ, India (SBAOI). He is a young and well-known expert in the field of Biomaterials having effective research collaboration with the global leaders in the field.

Broad Areas of Interest

Biomaterials and Biomedical Engineering

Specific Areas of Interest

Biomaterials for tissue replacement, Polymer hydrogels and bioinks for 3D bioprinting, Orthopedic implants and implant mechanics, Blood compatible coatings for implants and medical devices, Biomaterials from renewable energy resources

Academic Background

Academic Degree	Institute/ University	Grade Point Average (GPA)	Academic Duration
Ph.D. (Materials Science and Engineering) Specialization: Biomaterials	National Institute for Materials Science, Tsukuba, Japan University of Tsukuba, Japan)	NA	2011-2014
M-Tech (Nanotechnology)	Indian Institute of Technology Roorkee, Uttarakhand, India	8.09/10	2008-2010
B-Tech (Biotechnology)	Biju Patnaik University of Technology, Odisha, India	7.59/10	2004-2008

Doctoral Thesis Title:

Preparation of porous scaffolds with controlled drug release for tissue engineering

Doctoral Thesis Advisor:

Professor Guoping Chen, Ph. D. (Kyoto University, Japan)

Principal Investigator and Unit Director, Tissue Regeneration Materials Unit, Research Center for Functional Materials, National Institute for Materials Science, Tsukuba, Ibaraki, Japan

Professor, Department of Material Sciences and Engineering, Graduate School of Pure and Applied Sciences, University of Tsukuba, Japan

Associate Editor: Journal of Materials Chemistry B, Editorial Board: Tissue Engineering Part A, Part B and Part C

Professional Experiences

Designation	Organization	From	To
Assistant Professor	Discipline of Mechanical Engineering, Indian Institute of Information Technology,	OCT-19	TILL

Himansu Sekhar Nanda, Ph.D.

Grade-I	Design and Manufacturing Jabalpur, India		
Assistant Professor Grade-II	Discipline of Mechanical Engineering, Indian Institute of Information Technology, Design and Manufacturing Jabalpur, India	OCT-17	OCT-19
Research Fellow	School of Materials Science and Engineering, Nanyang Technological University and Singapore General Hospital, Singapore	FEB-16	SEP-17
Post-Doctoral Fellow	Department of Materials Engineering, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia	OCT-14	JAN-16
Junior Research Fellow	Department of Biological Sciences, Tata Institute of Fundamental Research, Mumbai, India	FEB-08	JUL-08

Publications

Citation Analysis (till 16-05-2022):

Total Citations: 371, H-Index: 14, i10-index: 17, Citation Source: Google Scholar

Journal Papers:

(* Corresponding author, IF: Impact factor)

Manuscripts published in peer reviewed international journals:

2022

1. Ansari, Aftab Alam, Aleksandra Golebiowska, Madhusmita Dash, Prasoon Kumar*, Prashant Kumar Jain*, Syam Nukavarapu, Seeram Ramakrishna, and Himansu Sekhar Nanda*. "Engineering Biomaterials to 3D-Print Scaffolds for Bone Regeneration: Practical and Theoretical Consideration." *Biomaterials Science* (2022). (Royal Society of Chemistry, IF: 6.85)
2. Lv, Yarong, Yulong Xu, Xinyu Sang, Chenxi Li, Yong Liu*, Quanyi Guo, Seeram Ramakrishna, Ce Wang, Ping Hu, and Himansu Sekhar Nanda*. "PLLA-gelatin composite fiber membranes incorporated with functionalized CeNPs as a sustainable wound dressing substitute promoting skin regeneration and scar remodelling." *Journal of Materials Chemistry B* (2022). (Royal Society of Chemistry, IF: 6.3)

2021

3. Ahirwar, Harbhajan, Ankit Sahu, Vijay Kumar Gupta, Prasoon Kumar, and Himansu Sekhar Nanda*. "Design and finite element analysis of femoral stem

Himansu Sekhar Nanda, Ph.D.

- prosthesis using functional graded materials." *Computer Methods in Biomechanics and Biomedical Engineering* (2021): 1-14. (Taylor and Francis, IF: 2.03, Cite Score: 2.5).
4. Chen, Huizhi, Liyan Wang, Xinling Zeng, Herbert Schwarz, Himansu Sekhar Nanda*, Xinsheng Peng*, and YUBIN ZHOU*. "Exosomes, a new star for targeted delivery." *Frontiers in Cell and Developmental Biology*: 2827. (Frontiers, IF: 6.68, Cite Score: 2.7)
 5. Nanda, Himansu Sekhar*, Vinoy Thomas, Syam P. Nukavarapu, and Aldo R. Boccaccini*. "Biomaterials 2021: Future of biomaterials." *Current Opinion in Biomedical Engineering* 2021, 18:100304 (Editorial for special issue Biomaterials 2021) (Elsevier, IF: Pending, Cite Score: 7.6).
 6. Ahirwar, Harbhajan, Vijay Kumar Gupta, and Himansu Sekhar Nanda*. "Finite element analysis of fixed bone plates over fractured femur model." *Computer Methods in Biomechanics and Biomedical Engineering* (2021): 1-10 (Taylor and Francis, IF: 2.03, Cite Score: 2.5).
 7. Ahirwar, Harbhajan and Himansu Sekhar Nanda*, "Design, 3D Development and Finite Element Analysis of Cylindrical Mesh Cage Bioimplants from Biometals", *Adv. Mater. Lett.*, 2021, 12 (6), 21061641 (VBRI-IAAM, IF: Pending).
 8. Zhu, Xiaoxian, Huizhi Chen, Yanfang Zhou, Jin Wu, Seeram Ramakrishna, Xinsheng Peng, Himansu Sekhar Nanda* and Yubin Zhou*. "Recent advances in biosensors for detection of exosomes." *Current Opinion in Biomedical Engineering* (2021): 100280 (Elsevier, IF: Pending, Cite Score: 7.6).
 9. Telang, Vicky Subhash, Rakesh Pemmada, Vinoy Thomas, Seeram Ramakrishna, Puneet Tandon*, and Himansu Sekhar Nanda*. "Harnessing Additive Manufacturing for Magnesium Based Metallic Bioimplants: Recent Advances and Future Perspectives." *Current Opinion in Biomedical Engineering* (2021): 100264. (Elsevier, IF: Pending, Cite Score: 7.6).
- 2020
10. Singh, Manisha, Himansu Sekhar Nanda, Justin Yin Hao Lee, Jun Kit Wang, Nguan Soon Tan, and Terry WJ Steele*. "Photocurable platelet rich plasma bioadhesives". *Acta Biomaterialia* 117 (2020): 133-141. (Elsevier, IF: 8.95, Cite Score: 14)
 11. Pemmada, Rakesh, Xiaoxian Zhu, Madhusmita Dash, Yubin Zhou*, Seeram Ramakrishna*, Xinsheng Peng, Vinoy Thomas, Sanjeev Jain, and Himansu Sekhar Nanda*. "Science-Based Strategies of Antiviral Coatings with Viricidal Properties for the COVID-19 Like Pandemics". *Materials* 13, no. 18 (2020): 4041. (MDPI, IF: 3.6, Cite Score: 3.5)

Himansu Sekhar Nanda, Ph.D.

12. Xu, Zhiyang, Yulong Xu, Papia Basuthakur, Chitta Ranjan Patra, Seeram Ramakrishna, Yong Liu*, Vinoy Thomas, and Himansu Sekhar Nanda*. "Fibro-porous PLLA/Gelatin composite membrane doped with cerium oxide nanoparticles as bioactive scaffolds for future angiogenesis." *Journal of Materials Chemistry B* 8, no. 39 (2020): 9110-9120. (Royal Society of Chemistry, IF: 6.3)
 13. Djordjevic, Ivan, Oleksandr Pokholenko, Ankur Harish Shah, Gautama Wicaksono, Lluís Blancafort, John V. Hanna, Samuel J. Page, Himansu Sekhar Nanda, et al. "CaproGlu: Multifunctional tissue adhesive platform". *Biomaterials* 260, (2020): 120215. (Elsevier, IF: 12.48, Cite Score: 20.1)
 14. AHIRWAR, Harbhajan, Yubin Zhou*, Chinmaya Mahapatra, Seeram Ramakrishna, Praseon Kumar*, and Himansu Sekhar Nanda*. "Materials for Orthopedic bioimplants: Modulating degradation and surface modification using integrated nanomaterials". *Coatings* 10, no. 3 (2020): 264. (MDPI, IF: 3.04, Cite Score: 3.0)
 15. Zhou, Yubin, Chinmaya Mahapatra, Huizhi Chen, Xinsheng Peng, Seeram Ramakrishna, and Himansu Sekhar Nanda*. "Recent developments in fluorescent aptasensors for detection of antibiotics". *Current Opinion in Biomedical Engineering* 13 (2020): 16-24. (Elsevier, IF: Pending, Cite Score: 7.6)
- 2019
16. Shah, Ankur Harish, Oleksander Pokholenko, Himansu Sekhar Nanda, and Terry WJ Steele*. "Non-aqueous, tissue compliant carbene-crosslinking bioadhesives". *Materials Science and Engineering C* 100 (2019): 215-225. (Elsevier, IF: 7.32, Cite Score: 11.5)
- 2018
17. Singh, Manisha, Himansu Sekhar Nanda, Richard D. O'rorke, Adam E. Jakus, Ankur Harish Shah, Ramille N. Shah, Richard D. Webster, and Terry WJ Steele*. "Voltaglue Bioadhesives Energized with Interdigitated 3D- Graphene Electrodes". *Advanced Healthcare Materials* 7, no. 21 (2018): 1800538. (Wiley, IF: 9.93)
 18. Nanda, Himansu Sekhar, Ankur Harish Shah, Gautama Wicaksono, Oleksandr Pokholenko, Feng Gao, Ivan Djordjevic, and Terry WJ Steele*. "Non-thrombogenic hydrogel coatings with carbene-cross-linking bioadhesives". *Biomacromolecules* 19, no. 5 (2018): 1425-1434. (ACS, IF: 6.99)
- 2017

Himansu Sekhar Nanda, Ph.D.

19. Nethi, Susheel Kumar, Himansu Sekhar Nanda*, Terry WJ Steele, and Chitta Ranjan Patra*. "Functionalized nanoceria exhibit improved angiogenic properties". *Journal of Materials Chemistry B* 5, no. 47 (2017): 9371-9383. (Royal Society of Chemistry, IF: 6.3)
20. Nanda, Himansu Sekhar, Manisha Singh, and Terry WJ Steele*. "Thrombogenic responses from electrocured tissue adhesives". *ECS Transactions* 77, no. 11 (2017): 547-555. (IOP Science, IF: Pending)

2016

21. Nanda, Himansu Sekhar*. "Surface modification of promising cerium oxide nanoparticles for nanomedicine applications". *RSC Advances* 6, no. 113 (2016): 111889-111894. (RSC, IF: 3.36)
22. Nanda, Himansu Sekhar*. "Preparation and Biocompatible Surface Modification of Redox Altered Cerium Oxide Nanoparticle Promising for Nanobiology and Medicine". *Bioengineering* 3, no. 4 (2016): 28. (MDPI, IF: pending, Cite Score: 6.1)
23. Nanda, Himansu Sekhar, Naoki Kawazoe, and Guoping Chen*. "Ionic salt induced morphology and drug release control of insulin incorporated biodegradable PLGA microsphere". *Advanced Material Letters* 7 (2016): 866-871. (VBRI, IF: pending)

2014

24. Nanda, Himansu Sekhar, Tomoko Nakamoto, Shangwu Chen, Rong Cai, Naoki Kawazoe, and Guoping Chen*. "Collagen microgel-assisted dexamethasone release from PLLA-collagen hybrid scaffolds of controlled pore structure for osteogenic differentiation of mesenchymal stem cells". *Journal of Biomaterials Science, Polymer Edition* 25, no. 13 (2014): 1374-1386. (Taylor and Francis, IF: 3.52, Cite Score: 4.9)
25. Nanda, Himansu Sekhar, Naoki Kawazoe, Qin Zhang, Shangwu Chen, and Guoping Chen*. "Preparation of collagen porous scaffolds with controlled and sustained release of bioactive insulin". *Journal of Bioactive and Compatible Polymers* 29, no. 2 (2014): 95-109. (SAGE, IF: 2.5)
26. Nanda, Himansu Sekhar, Shangwu Chen, Qin Zhang, Naoki Kawazoe, and Guoping Chen*. "Collagen scaffolds with controlled insulin release and controlled pore structure for cartilage tissue engineering". *BioMed Research International* 2014 (2014). (Hindwai, IF: 3.4, Cite Score: 4.1)

2011

27. Sekhar Nanda, Himansu, and Narayan Chandra Mishra*. "Amphotericin B" Loaded Natural Biodegradable Nanofibers as a Potential Drug Delivery System against Leishmaniasis". *Current Nanoscience* 7, no. 6 (2011): 943-949. (Bentham Science, IF: 1.9)

Himansu Sekhar Nanda, Ph.D.

Contributed Book Chapters and Books

Book Chapters:

1. Pemmada, Rakesh, Vicky Subhash Telang, Madhusmita Dash, John Lalith Charles Richard, Puneet Tandon, Seeram Ramakrishna, and Himansu Sekhar Nanda*. "3D printing for functional tissue engineering." *Tissue Engineering*, pp. 415-430. Academic Press, 2022.
2. Zhou, Yubin, Huizhi Chen, Lianxian Guo, Jianqiang Liu, Hui Zhou, Liyan Wang, Himansu Sekhar Nanda*, and Xinsheng Peng. "Biosensors in tissue engineering." *Tissue Engineering*, pp. 431-448. Academic Press, 2022.
3. Telang, Vicky Subhash, Rakesh Pemmada, Seeram Ramakrishna, Puneet Tandon, and Himansu Sekhar Nanda*. "Overview of Current Additive Manufacturing Technologies for Titanium Bioimplants." *Nanoscale Engineering of Biomaterials: Properties and Applications* (2022): 117-130.

Conference Presentations (Invited/Oral/Poster)

2022

1. Mohammad Aftab Alam Ansari, Prashant Kumar Jain* and Himansu Sekhar Nanda*, "Design and Fabrication of Osteoconductive Hybrid Scaffolds for Bone Augmentation through Fuse Filament Fabrication", *Tsukuba Biomedical Engineering Forum 2022* at National Institute for Materials Science, Tsukuba, Japan, 21st Jan 2022 (Oral).
2. Rishi Kumar, Mohd. Zahid Ansari*, Himansu Sekhar Nanda*, "Comparative analysis of degradation behaviour of synthetic porous scaffolds using computer methods of biomedical engineering", *Tsukuba Biomedical Engineering Forum 2022* at National Institute for Materials Science, Tsukuba, Japan, 21st Jan 2022 (Oral).
3. Vicky Subhash Telang, Puneet Tandon* and Himansu Sekhar Nanda*, "Stent Deformation Analysis of Magnesium and its Alloys using Finite Element Method", *Tsukuba Biomedical Engineering Forum 2022* at National Institute for Materials Science, Tsukuba, Japan, 21st Jan 2022 (Oral).

2021

4. Mohammad Aftab Alam Ansari, Prashant Kumar Jain* and Himansu Sekhar Nanda*, "Preparation and characterization of biphasic Poly- (Lactic Acid) bone scaffold using fused filament fabrication", *Indian Chemical Engineering Congress & 74th Annual Session of Indian Institute of Chemical Engineers (CHEMCON) 2021* at Bhubaneswar, India, 27th-30th December 2022. [**CHEMCON 2021 Best Poster Presentation Award (Petroleum and Polymer)**]

Himansu Sekhar Nanda, Ph.D.

5. Rishi Kumar, Mohd. Zahid Ansari* and Himansu Sekhar Nanda*, “Porous scaffold degradation using computational fluid dynamics”, [Indian Chemical Engineering Congress & 74th Annual Session of Indian Institute of Chemical Engineers \(CHEMCON\) 2021](#) at Bhubaneswar, India, 27th-30th December 2022.
6. Vicky Subhash Telang, Puneet Tandon* and Himansu Sekhar Nanda*, “Numerical Simulation of Biodegradable Mg-alloy Stent under Micro Stress Environment”, [Indian Chemical Engineering Congress & 74th Annual Session of Indian Institute of Chemical Engineers \(CHEMCON\) 2021](#) at Bhubaneswar, India, 27th-30th December 2022.
7. Himansu Sekhar Nanda*, Vijay Kumar Gupta, Harbhajan Ahirwar, Rahul Verma and Kaushalesh Kumar Pandey, “Comparative Evaluation of Orthopedic Bioimplant Designs using Computer Methods of Biomedical Engineering”, [Advanced Materials for Biomedical Engineering of CLUSTER \(Biomaterials and Soft materials\), Materials Research Meeting \(MRM\) 2021](#) at Pacifico Yokohama, Japan, 13th- 17th December 2021 (Invited).
8. Mohammad Aftab Alam Ansari, Prashant Kumar Jain* and Himansu Sekhar Nanda*, “Fabrication and characterization Poly- (Lactic Acid) based radial gradient porous scaffold for bone augmentation using fused filament fabrication”, [International Virtual Conference on Biomaterial-Based Therapeutics, Engineering and Medicine \(BIOTEM-2021\)](#) at Manipal Academy of Higher Education (MAHE), Manipal, India, 17th-20th December 2021
9. Rishi Kumar, Mohd. Zahid Ansari* and Himansu Sekhar Nanda*, “Degradation behaviour of porous scaffolds under simulated *in vivo* conditions using computational approach”, [International Virtual Conference on Biomaterial-Based Therapeutics, Engineering and Medicine \(BIOTEM-2021\)](#) at Manipal Academy of Higher Education (MAHE), Manipal, India, 17th-20th December 2021
10. Vicky Subhash Telang, Puneet Tandon* and Himansu Sekhar Nanda*, “Stress Evolution in Coronary Stent using Finite Element Method”, [International Virtual Conference on Biomaterial-Based Therapeutics, Engineering and Medicine \(BIOTEM-2021\)](#) at Manipal Academy of Higher Education (MAHE), Manipal, India, 17th-20th December 2021
11. Himansu Sekhar Nanda*, “Carbene cross-linked tissue adhesives for Biomedical Applications”, [2021 International Conference on Scientific Research Transformation and Technological Innovation \(ICTRI-HEE 2021\)](#) at Chengdu University, China, 27th - 28th October 2021 (Invited).
12. Himansu Sekhar Nanda*, “Soft Tissue Polymer Bioadhesives: Bridging the

Himansu Sekhar Nanda, Ph.D.

gap in regenerative medicine”, [Advanced Nanomaterials Congress \(AMC-Nano\)](#) at Gammalkilsvägen, Ulrika, Sweden, 24th- 27th October 2021 (Invited).

13. Himansu Sekhar Nanda*, Manisha Singh and Terry W J Steele, “Cerium Oxide-Bioadhesive Nanocomposites for Biomedical Applications”, [International e-conference APA Bioforum](#) (India), 27th- 28th August 2021 (Oral).

2020

14. Himansu Sekhar Nanda*, Guoping Chen and Terry W J Steele, “Design Strategies in Development of Biomaterials and Bioadhesives for future Clinic”, [International Conference on Functional Materials \(ICFM 2020\)](#) at IIT Kharagpur, India, 6th-9th January 2020 (Invited).

2019

15. Himansu Sekhar Nanda*, Guoping Chen and Terry W J Steele, “Design and development of Biomaterials and Bioadhesives for Future Clinic”, [17th NAMIS Workshop on Nano and Microsystems for fundamental, medical and industrial applications](#) at Indian Institute of Technology Bombay, India, 25th-27th November 2019 (Invited).
16. Himansu Sekhar Nanda*, Guoping Chen and Terry W J Steele, “Design based Challenges in Development of Biomaterials and Bioadhesives for future Clinic”, [13th World Congress of Regenerative Medicine and Stem Cells](#) at Dalian, China, 1st -3rd November 2019 (Invited).
17. Himansu Sekhar Nanda*, Guoping Chen and Terry W J Steele, “Design and Development of Biomaterials and Bioadhesives for future Clinic”, [International Conference on Advances in Polymeric Materials and Human Healthcare \(APA-STERMI\)](#) at Panjim, India, 16th-18th October 2019 (Oral).

2018

18. Himansu Sekhar Nanda* and C. Mohapatra, “Porous scaffolds for nanomedicine screening”, [The 17th International Conference of Asia Pacific Association of Surgical Tissue Banks \(APASTB2018\)](#) at Kuala Lumpur, Malaysia, 27th-31st August 2018 (Oral).
19. Himansu Sekhar Nanda* and C. Mohapatra, “An engineered tumour model via sequential functionalization of nanoceria, Organosilane, biopolymer and porous scaffold”, [International symposium on Functional Materials \(ISFM 2018\): Energy and Biomedical Applications](#) at Chandigarh, India, 13th-15th April 2018 (Invited).

2017

20. Himansu Sekhar Nanda, Manisha Singh, Ramille N Shah and Terry W. J. Steele*, “Carbene- based Tuneable on- demand Adhesives as Medical Glue for Fixation of Implantable Biomaterials”, [4th International Conference on](#)

Himansu Sekhar Nanda, Ph.D.

Advanced Nanomaterial and Nanotechnology (ICANN) 2017 at Indian Institute of Technology Guwahati, India, 18th – 21st December 2017 (Invited).

21. Himansu Sekhar Nanda, Manisha Singh, Ankur Harish Shah, Ramile N Shah and Terry W. J. Steele*, “PAMAM Bioadhesives: A quest for blood compatible formulations”, 6th Asian Biomaterials Congress (6th ABMC) at Thiruvananthapuram, India, 23rd -27th October 2017 (Oral).
22. Himansu Sekhar Nanda and Terry W. J. Steele*, “On demand Tissue Adhesives for Emerging Medical Applications”, International Conference on Physics and Mechanics of New Materials and Their Applications (PHENMA 2017) at PDPM-IIITDM Jabalpur, India, 14th -16th October 2017 (Invited).
23. Himansu Sekhar Nanda, Gao Feng, Ivan Djordjevic and Terry W. J. Steele*, “Surface Modified PAMAM-g-diazirine Bioadhesives for Blood Contacting Applications”, 9th International Conference on Materials for Advanced Technologies 2017 (ICMAT 2017) at Suntec, Singapore, 18th-23rd June 2017 (Oral).
24. Himansu Sekhar Nanda, Gao Feng, Ivan Djordjevic and Terry W. J. Steele*, “Preparation of platelet resistant PAMAM-g-diazirine bioadhesives for blood contacting applications” The International conference on Surfaces, Coatings and Interfaces 2017 (Surf Coat Korea 2017) at Incheon, South Korea, 29th-31st March 2017 (Oral).

2016

25. Himansu Sekhar Nanda*, Naoki Kawazoe and Guoping Chen*, “Micro-and nano-therapeutics impregnated designer scaffolds for tissue engineering and nanomedicine screening”, 3rd Indo-Austrian Symposium on Advances in Materials Engineering (AME 2016) at Indian Institute of Technology Bombay, India, 19th-20th December 2016 (Invited).
26. Himansu Sekhar Nanda* and Enrico Traversa, “Cerium oxide nanoparticle impregnated-(PLGA-collagen) porous scaffold as an in vitro platform for nanomedicine screening”, International Conference on Functional Materials (ICFM-2016) at Indian Institute of Technology Kharagpur, India, 12th-14th December 2016 (Oral).
27. Himansu Sekhar Nanda*, Naoki Kawazoe and Guoping Chen*, “Modulation of protein release behaviour of PLGA microspheres using ionic salt”, International Symposium on Polymer Analysis and Characterization (ISPAC) 2016 at Nanyang Technological University Singapore, Singapore, 12th-15th June 2016 (Oral).

2015

28. Himansu Sekhar Nanda, Nokamoto Tomoko, Shangwu Chen, Naoki Kawazoe and Guoping Chen*, “Preparation of PLLA-collagen porous scaffold with

Himansu Sekhar Nanda, Ph.D.

controlled pore structure for bone tissue engineering therapeutics”, 4th International Conference on Advanced Nanomaterial and Nanotechnology (ICANN) 2015 at Indian Institute of Technology Guwahati, India, 8th-11th December 2015 (Oral).

2014

29. Himansu Sekhar Nanda, Naoki Kawazoe, Qin Zhang, Shangwu Chen and Guoping Chen*, “Preparation of a long-term insulin releasing porous collagen scaffold for skin tissue regeneration”, 2nd Hoffman family symposium: International Symposium on Smart Biomaterials at National Institute for Materials Science Tsukuba, Japan, 24th-25th March 2014 (Poster).

2012

30. Himansu Sekhar Nanda, Naoki Kawazoe and Guoping Chen*, “Preparation of protein incorporated biodegradable microbeads with controllable release profile”, International symposium on Biocompatibility and Applications of Nanocarbons jointly with 6th annual meeting of Nano-Biomedical society at National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, 9th-10th July 2012 (Poster).
31. Himansu Sekhar Nanda, Naoki Kawazoe and Guoping Chen*, “Preparation of PLGA microbeads for controlled delivery of insulin”, 9th World Biomaterials Congress at Chengdu, China, 1st-5th June 2012 (Poster).

2011

32. Himansu Sekhar Nanda, R Jayaganthan, and Narayan Chandra Mishra*, “Nanofibers—A potential drug delivery system for leishmaniasis”, International Conference on Nanomaterials and Nanotechnology 2011 (ICNANO) at New Delhi, India, 18th -21st December 2011 (Poster).
33. Himansu Sekhar Nanda*, Lelin Patel, Poonam Suthar, Nidhi Gaur, and Rajanikantha Nahak, “Molecular modelling and Ligand-protein interaction of N-protein of Chandipura virus”, International Conference & Exhibition on Proteomics and Bioinformatics at Hyderabad, India, 6th -8th June 2011 (Poster).
34. Himansu Sekhar Nanda*, Lelin Patel, Nidhi Gaur, and Rajanikantha Nahak, “CHKGVAcPredB: A database of peptide vaccine design, functions & mutations for Chikugunya virus”, International Conference & Exhibition on Proteomics and Bioinformatics at Hyderabad, India, 6th -8th June 2011 (Poster).
35. Himansu Sekhar Nanda, R Jayaganthan, Narayan Chandra Mishra*, “A Novel Process Optimization Strategy for Successful Encapsulation of ‘Amphotericin B’ in Gelatin based Nanofiber: A new Direction to Drug Delivery against Sever Fungal Infections”, 4th Winter School on Nanotechnology in Advanced Drug

Himansu Sekhar Nanda, Ph.D.

Delivery at National Institute of Pharmaceutical Education and Research Mohali, India, 28th march to 4th February 2011 (Oral). (Nominated for Budding Nanotechnologist Award competition).

2010

36. Himansu Sekhar Nanda, R Jayaganthan and Narayan Chandra Mishra*, “Amphotericin B loaded natural nanofiber as a potential drug delivery system against Leishmaniasis”, **International Symposium of Materials on Regenerative Medicine (ISOMRM)** at National Health Research Institute, Taiwan, November 3rd-5th 2010 (Oral). (**Nominated for Young Investigator Award Competition in Materials and Regenerative Medicine**)

Invited Lectures and Seminars

1. Delivered an invited lecture on “**Design and development of porous scaffolds from biocompatible materials**” in AICTE sponsored Short Term Course on “Near Net Shape Processes for Metallic and Biocompatible Materials-the Smart Manufacturing Approach” held at IIITDM Jabalpur (05-03-2020, Chair: Prof. Puneet Tandon, Mechanical Engineering, IIITDM Jabalpur).
2. Delivered an invited lecture on “**Design and Development of Tissue Adhesives from Biocompatible Materials**” in AICTE sponsored Short Term Course on “Biomedical Applications of Additive Manufacturing using Medical Image Processing” held at IIITDM Jabalpur. (12.03.2020, Chair: Prof. Prashant Kumar Jain and Dr. Himansu Sekhar Nanda, IIITDM Jabalpur)
3. Delivered a lecture on “**Design and Development of Porous Scaffolds for Tissue Engineering**” in AICTE sponsored Short Term Course on “Biomedical Applications of Additive Manufacturing using Medical Image Processing” held at IIITDM Jabalpur. (12.03.2020, Chair: Prof. Prashant Kumar Jain and Dr. Himansu Sekhar Nanda, IIITDM Jabalpur)
4. Delivered a seminar on “**Clinical Grade Bioadhesives**” at Department of Macromolecular Engineering, State Key Laboratory of Molecular Engineering of Polymers, Fudan University, China. (06.06.2019, Host: Prof. Jiandong Ding, Director, State Key Laboratory of Molecular Engineering of Polymers)
5. Delivered an invited seminar on “**Design and development of Biomaterials and Bioadhesives for Future Clinic**” at Department of Chemical Engineering, Indian Institute of Technology Bombay, Mumbai. (13.03.2019, Host: Faculty Search Committee, Department of Chemical Engineering, IIT Bombay)
6. Delivered a public lecture on “**Design and development of clinically important biomaterials and bioadhesives for future medicine**” at Beijing University of

Himansu Sekhar Nanda, Ph.D.

- Chemical Technology China. (09.07.2018, Host: Prof. Young Liu, College of Materials Science and Engineering, BUCT, Beijing)
7. Delivered a talk on “[Design and development of mechanically robust biomaterials and bioadhesives for Clinical Applications](#)” at Indian Institute of Technology-Goa, India. (11.06.2018, Host: Prof. Dharendra Bahadur, IIT Goa)
 8. Delivered a seminar on “[Designer scaffolds of controlled pore structure and controlled drug delivery for regenerative medicine](#)” at Department of Bioscience and Bioengineering, Indian Institute of Technology Guwahati, India. (25.08.2016, Host: Prof. Kannan Pakshirajan, IIT Guwahati)
 9. Delivered a seminar on “[Controlled drug release from porous scaffolds of controlled pore structure for tissue engineering](#)” at Centre of Excellence for Sustainable Polymers (COE-SUSPOL), Indian Institute of Technology Guwahati, India. (14.12.2015: Host: Prof. V K Katiyar and Prof. Ravi Shankar, IIT Guwahati)
 10. Delivered an invited seminar on “[Controlled insulin delivery from collagen porous scaffolds of controlled pore structure for skin tissue engineering application](#)” at Department of Biological Science, Birla Institute of Technology and Science, Pilani (K. K. Birla Goa Campus), Goa, India (04.12.2015, Host: Prof. Meenal Kowshik, Head, Department of Biological Science, BITS Pilani, K. K. Birla GOA Campus)
 11. Delivered an invited seminar on “[Drug releasing porous scaffolds of controlled pore structure for tissue regeneration and directed stem cell differentiation](#)” at Center of Nanotechnology, Indian Institute of Technology Roorkee (10.09.2014, Host: Prof. R. Jayaganthan, IIT Roorkee)
 12. Delivered an invited seminar on “[Preparation of controlled release porous collagen scaffolds of controlled pore structure for long term delivery of bioactive human insulin](#)” at Nanoscale Materials and Bio-analytical chemistry lab, Institute of Atomic and Molecular Sciences, Academia Sinica (27.12.2013, Host: Prof. Y. T. Chen, IAMS, Academia Sinica, Taiwan)
 13. Delivered an invited seminar on “[Multifunctional porous 3D scaffolds for controlled delivery of insulin and tissue regeneration](#)” at Center of Nanotechnology, Indian Institute of Technology–Roorkee (09.01.2013, Host: Prof. R. Jayaganthan, IIT Roorkee)
 14. Delivered an invited public lecture on “[Natural biodegradable nanofibers as a potential drug delivery system](#)” at Indian scientist association at Japan-Tsukuba chapter, Tsukuba, Japan (18.06.2011, Host: Prof. Sunil Kaul, AIST-Japan)

Specialized Training

Himansu Sekhar Nanda, Ph.D.

- 1 “Surface modification technologies for 3D printed biomaterial scaffolds” at State Key Laboratory of Molecular Engineering of Polymers, Fudan University, China (2019).
- 2 “The Belt and Road” Visiting Scholar program (Electrospun composite nanofibrous scaffolds for skin tissue engineering) at Beijing University of Chemical Technology (BUCT) (2018).
- 3 “Responsible care and use of laboratory animals” at Agency of Science, Technology and Research (A* STAR), Biological Resource Centre, Singapore (2017).
- 4 “Next Generation Confocal Microscope for Advanced Bio-imaging” at Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore (2017).
- 5 “Research Integrity Course Module in Biomedical Sciences Track” at School of Materials Science and Engineering, Nanyang Technological University Singapore (2016)
- 6 “Modern Biotechnological Techniques” at Manipal Life Science Center, Manipal University (2011).
- 7 “Bioinformatics tools for Computational Biology” at Rajendra Memorial Institute for Medical Sciences, Patna (Indian Council of Medical Research, New Delhi) (2009)
- 8 “Protein crystallization and Biocomputing” at Centre of excellence in structural Biology and Biocomputing, Indian Institute of Science, Bangalore, India (2009)
- 9 “Bioprocess Engineering” at Department of Biotechnology, Birla Institute of Technology (BIT)-Mesra, India (2007)
- 10 "Modern instrumental method for pharmaceutical analysis" at Center of Environment, IST, JNTU, Hyderabad (Analysis of pharmaceutical samples by HPLC, GC, GC-MS, FTIR, UV-Vis spectrophotometer) (2007)

Conferences, Seminars and Lecture Series (Organized)

1. An International Symposium on “Emerging Materials for Biomedical Engineering” jointly organized by Biomedical Engineering and Technology Lab, IIITDM Jabalpur and Indian National Science Academy (INSA) New Delhi under the aegis of Society for Biomaterials & Artificial Organs India (SBAOI) & Society for Tissue Engineering and Regenerative Medicine India (STERMI). (30.01.2022-31.01.2022)
2. An institute level distinguished lecture on “Science & Higher Learning for Healthy Life & Planet” delivered by Prof. Seeram Ramakrishna from National

Himansu Sekhar Nanda, Ph.D.

University of Singapore as an inaugural lecture of Biomedical Engineering and Technology Lab, IIITDM Jabalpur. (10.04.2021)

You tube link: <https://www.youtube.com/watch?v=1pxeXMCeUXs>

3. AICTE sponsored Short Term Course on “Additive Biomedical Applications of Additive Manufacturing using Medical Image Processing” held at IIITDM Jabalpur. (07.03.2020-11.03.2020)

Editorial Activities (Special Issues, Books and Editorials)

Special Issues in Peer-Reviewed Journals:

1. Themed Issue: Biomaterials 2021: Future of Biomaterials, Journal: *Current Opinion in Biomedical Engineering*, Elsevier (IF: Pending, Cite Score: 7.6)
Ed(s): Aldo R. Boccaccini, Ph.D., Himansu Sekhar Nanda, Ph.D., Syam Nukavarapu, Ph.D., and Vinoy Thomas, Ph.D.
Article collections: <https://www.sciencedirect.com/journal/current-opinion-in-biomedical-engineering/special-issue/10SVZ7HP44Z>
2. Themed Issue: Biodegradable Polymers for Biomedical Applications, Journal: *Frontier in Materials (Biomaterials) and Frontier in Bioengineering and Biotechnology (Biomaterials)* (IF: 3.5)
Ed(s): Liqun Yang, Ph.D., Jianshe Hu, Ph.D., Shuai Jiang, Ph.D., Hongli Mao, Ph.D., Himansu Sekhar Nanda Ph.D.
Article collections: <https://www.frontiersin.org/research-topics/22710/biodegradable-polymers-for-biomedical-applications#articles>
3. Themed Issue: Biomaterials: Intelligent Materials for Biomedical Engineering, Journal: *Current Opinion in Biomedical Engineering*, Elsevier (in progress) (IF: Pending, Cite Score: 7.6)
Ed(s): Seeram Ramakrishna, Ph.D., Ravin Narain, Ph.D., Himansu Sekhar Nanda, Ph.D., Gulden Camci-Unal, Ph.D., Masoud Mozafari Ph. D

Awards and Honors

1. Best poster presentation award in Petroleum and Polymer from Indian Chemical Engineering Congress & 74th Annual Session of Indian Institute of Chemical Engineers (CHEMCON) 2021, IMMT, Bhubaneswar, India
2. Best Researcher Award (2021) from VGood Professional Association in International Scientist Awards on Engineering, Science and Medicine (ISAP2021 Awards) Pondicherry, India.
3. Senior visiting scholarship (2019) from State Key Laboratory of Molecular Engineering of Polymers, Fudan University, China

Himansu Sekhar Nanda, Ph.D.

4. “Belt and Road” visiting scholarship (2018) from Beijing University of Chemical Technology China.
5. National institute for Materials Science (NIMS) Graduate Fellowship Awardee for AY 2011 for doctoral studies at NIMS, Japan.
6. National institute for Materials Science travel award for AY-2012, 2010.
7. TIGP doctoral program award (2010) in Nanoscience and Nanotechnology for doctoral studies at Academia Sinica.
8. International intern award from TIGP summer internship program (Nanoscience and Technology)-2010 at Academia Sinica
9. Fellow of Summer Undergraduate Mentorship in Mechanical Engineering Research-2010 from Department of Mechanical Engineering, Indian Institute of Science Bangalore.
10. Ministry of Human Resource and Development, Government of India fellowship (through GATE) for master studies at Indian Institute of Technology.
11. Gitanjali memorial award (Best student) at junior school level.

Thesis Supervised

1. No of Ph.D. students: 1 (Completed)+ 6 (In progress)
2. No of Master students: 7 (Completed)
3. No of B-Tech students: 2 (Completed)

Sponsored Research Projects

1. “Bioactive Hybrid Scaffold Manufacturing via Surface Modification of 3D-printed Hydrophobic Scaffolds” as Start-up Research Grant from Science and Engineering Research Board, Department of Science and Technology (Project no. SRG/2019/001504, Grant amount: 23,25,000 INR) as Principal Investigator (Dec 2019-Mar 2022)
2. “Electrospun Nanofibers for Tissue Engineering and Regenerative” Medicine as Faculty Initiation Grant from IIITDM Jabalpur (Grant amount: 3,00,000 INR) as Principal Investigator (Current status: Ongoing, (Mar 2019-Till)
3. “Biomimetic Bone Scaffold of Tailored Radial Porosity Gradient using Fused Deposition Manufacturing” as Senior Visiting Scholar Research Grant from State Key Laboratory of Molecular Engineering of Polymers, Fudan University, China (Project no. FP101, Grant amount: 30,000 RMB) as Principal Investigator (Jan 2019 –Nov 2019).

Membership in Professional Societies

Himansu Sekhar Nanda, Ph.D.

1. Life Member of Society of Biomaterials and Artificial Organs (SBAOI)
2. Life Member Asian Polymer Association (APA)
3. Life member in Indian Institute of Chemical Engineers (IChE)
4. Annual Member of Biomedical Engineering Society (BMES)
5. Professional Member of the Minerals, Metals & Materials Society (TMS)
6. Full Member of International Society of Biomechanics (ISB)
7. Professional (Regular) Member of American Chemical Society (ACS)

Personal Information

Name : Dr. Himansu Sekhar Nanda
Father's Name : Mr. Pradipta Kumar Nanda
Mother's name : Mrs. Binodini Nanda
Spouse name : Dr. (Ms.) Madhusmita Dash
Date of birth : 1st May 1985
Nationality : Indian
Passport No : R2294827 (New), G3006931 (Old),
Adhar Number : 575050500034
Marital Status : Married
Hobbies : Travel, Photography and Cycling

References

Referee-1 (Ph.D. Advisor)	Prof. Guoping Chen Principal Investigator and Unit Director, Tissue Regeneration Materials Unit, Research Centre for Functional Materials, National Institute for Materials Science, Japan Professor, Graduate School of Pure and Applied Sciences, University of Tsukuba, Japan Associate Editor, Journal of Materials Chemistry B (RSC) Phone: +81-29-860-4496 Fax: +81-29-860-4706 E-mail: Guoping.CHEN@nims.go.jp
Referee-2 (PDF Advisor)	Prof. Terry W J Steele Associate Professor, School of Materials Science and Engineering, Nanyang Technological University Singapore Phone: +6565927594 (M), GMT+8h E-mail: wjsteele@ntu.edu.sg
Referee-3 (M-Tech thesis)	Prof. R Jayaganthan

Himansu Sekhar Nanda, Ph.D.

supervisor)	Professor, Department of Engineering Design, Indian Institute of Technology, Madras Phone: +91 44 22574735 (Off), +917358048942 (M) E-mail: edjay@iitm.ac.in , metarj@gmail.com
Referee-4 (External academic advisor and Long-term research partner)	Prof. Seeram Ramakrishna Professor, Department of Mechanical Engineering National University of Singapore 9 Engineering Drive 1 Singapore 117576 Biomaterials Section Editor, Current Opinion in Biomedical Engineering (Elsevier) Mobile: +65 90107766 Email: seeram@nus.edu.sg
Referee-5 (Long-term research partner)	Prof. Young Liu Associate Professor, College of Materials Science and Engineering, Beijing University of Chemical Technology, Beijing, China Mobile: +8613521008075 (M) E-mail: yongliu@mail.buct.edu.cn

Declaration

I hereby declare that all the information regarding my academic and research credentials furnished above are true to the best of my knowledge and belief.



(HIMANSU SEKHAR NANDA)

NAME AND SIGNATURE

DATE: 16-05-2022

PLACE: Jabalpur, Madhya Pradesh, India