Dr. Santanu Dhara
Professor, School of Medical Science and Technology
Professor Incharge, IPR and IR, IIT Kharagpur
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Education:

- Received Ph.D. degree in 26th Feb, 2005, from Materials Science Centre, Indian Institute of Technology, Kharagpur, India

Thesis Title: Rheology of aqueous alumina slurries and their use in gelation forming of dense and porous alumina shapes and structures

- ✓ Qualified in Graduate Aptitude Test in Engineering (GATE) with 92.1 percentile
- ✓ Qualified in National Eligibility Test (NET) with CSIR category.

Designation: Professor

Department/Institute/University: School of Medical Science and Technology

Date of Birth: 31st October, 1974 Sex (M/F): M SC/ST: No

Education (Graduation onwards & Professional Career):

Sl. No.	Institution Place	Degree Awarded	Year	Field of Study
1.	P K College, Contai	B. Sc. Hons	1992-1995	Chemistry
2.	Vidyasagar University	M. Sc.	1995-1997	Organic Chemistry
3.	Indian Institute of Technology Kharagpur	Ph.D.	1998-2004	Fabrication of Ceramics

Position and Employment:

Sl.No.	Institution Place	Position	From (Date)	To (date)
1	I.I.T., Kharagpur	Professor	26/02/2018	Till date
2	Judge Business School University of Cambridge (UK)	BIRAC Fellow IGNITE Program	6/07/2014	19/07/2014
3.	I.I.T., Kharagpur	Associate Professor	13/01/2012	Till date
4.	I.I.T., Kharagpur	Professor	April, 2018	Till date
5.	I.I.T., Kharagpur	Associate Professor	13/01/2012	April, 2018
6.	I.I.T., Kharagpur	Assistant Professor	01/06/2007	13/01/2012
7.	DMRL, Hyderabad (DRDO)	Scientist 'C'	07/08/2006	24/05/2007
8.	University of Bristol (UK)	Research Assistant	01/04/2005	31/07/2006
9.	University of Birmingham (UK)	Research Fellow	24/05/2004	31/03/2005

Honors/Awards:

- ✓ Faculty Excellence Award by IIT KGP, 2022
- ✓ Received CII best IP profile for IIT Kharagpur among different academic organizations in India in 2021-22 during the tenure of PIC-IPR and IR
- ✓ SBAOI – Best PhD Thesis Awards Committee member
- ✓ TIFAC: Technology status and forecast of bioprinting technology
- ✓ Evaluation Committee: BIRAC
- ✓ Cover page image in Materials Today (December, 2017) by winning microscopy competition organized by Zeiss
- ✓ Leadership/Scientist Award for TERMIS-AM 2016 Conference by Two students (Mr. K. Kapat and Dr. B. Das) and TERMIS-AM 2017 Dr. P Dadhich
- ✓ Awarded gold medal in the DST-Lockheed Martin India Innovation Growth Programme (IIGP) 2016, a PAN India Innovators' Competition held at Federation House (FICCI), Tansen Marg, New Delhi for 'Simple low cost processing of metallic foam for diverse applications'
- ✓ BIRAC SRISTI GYTI award at organized at Rastrapati Bhawan, New Delhi in March'2016 for 'a simple cost effective titanium foam for skeletal tissue reunion'
- ✓ Selected among Top 8 Business plan in the 'Honourable Mention category at TERMIS World Congress 2015 held at Boston, USA on 8-11 September 2015
- ✓ Awarded gold medal in the 2015 DST - Lockheed Martin India Innovation Growth Programme (Joint initiative of the DST, FICCI, Lockheed Martin Corporation; Indo-US Science and Technology Forum, Stanford Graduate School of Business and University of Texas)
    - 'Bone grafts designed via biomimetic approach from natural origin materials'

- 'Development of X – ray visible polymers for non – invasive imaging applications'

- ✓ For best concept note 'Bone graft Designed via Biomimetic Approach from Natural Origin Materials' under 'Health Tech Innovations – 2015' organized by DeitY, SAMEER in technical collaboration with NHSRC & ICMR under theme 'Technology Innovations in Treatment of Disease' organized on 9th-10th January, 2015
- ✓ BIRAC SRISTI GYTI award 2015 at Rastrapati Bhawan for contribution entitled 'Development of X-ray visible polymers via in situ iodination–crosslinking for non-invasive real time imaging' on 8th March, 2015
- ✓ BIRAC fellowship for Entrepreneurial learning under Ignite program at University of Cambridge in 2014
- ✓ EPSRC fellowship UK 2004-2006
- ✓ Fast Track Scheme for Young Scientists (FAST) funded by DST, Govt. India (2010)
- ✓ Highlighted in the MRS Bulletin News, 30 [9] 628 (2005) for 'Synthesis of Nano Crystalline Alumina Using Egg White'
- ✓ Awarded a silver medal for excellent technology based innovations 'Protein Coagulation Casting of Ceramics' at Incubiz (Anveshan III) organized by IIM Ahmedabad in March 2005
- ✓ Selected to present in the student's session at the Annual Indian Ceramic Society Conferences held at Hyderabad (January 2001) and Jaipur (January 2002), respectively
    - 'Challenges and opportunities in ceramic manufacturing via gelcasting'
    - 'Direct casting of ceramic foams–microstructure and processing relationships'
- ✓ Best posters and presentations awards in eight occasions

Technical Consultancy:

- Delivery of hydroxyapatite palette to ITC Ltd.
- Design, development of sample holders and characterization of IOL lenses for cataract surgery – SAP and PAP
- Involved in consultancy project of IIT Kharagpur - ARCI, Hyderabad
- Fabricated and supplied specialized ceramic crucibles (dimensions – 3 mm I.D., 5 mm O.D., 5 mm Height) for thermal analysis applications to M/s Jay Crucibles

Research Students:

- Doctoral degree awarded – Twenty-Five students under single guidance joint guidance
- Guided ten PG students and four UG students for their final year project and thesis.
- Twenty-three PhD students are working for their doctoral dissertation

Reviewer for International Journals:

- Powder Technology
- J. European Ceramics Society
- J. American Ceramic Society
- International Journal of Applied Ceramic Technology
- Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy
- Food Chemistry
- J. Applied Polymer Science
- Carbohydrate Research
- J. Aquatic Food Product Technology
- Materials Science Engineering C
- Process Biochemistry
- Carbohydrate Polymer
- ACS Applied Materials & Interfaces
- Biomacromolecules
- Acta Biomaterialia
- The Stem Cell Research & Therapy
- Journal of Materials Chemistry B
- Tissue Engineering, Part B
- Colloids and Surfaces B
- Ceramics International
- Scientific Report
- Bull. Mat. Sci.

Member of Organizations:

- Society for Polymer Science, India (life member)
- STERMI (life member)
- SBAOI (life member)
- The American Ceramic Society (2004-2005)
- The Indian Ceramic Society (2001-2003)
- Powder Matrix, UK (2004-2007)
- TERMIS

Invited Lectures:

- Recycling of Biowaste Materials for Orthopaedic application at Workshop on Biomechanics, Implants and Related Medical Devices, IIEST, Shibpur, 14-15th Feb 2017
- Customized manufacturing of Organizing Chair, EMCA-2017, March 15-17, 2017, NIT Durgapur, WB, INDIA
- 'Materials and strategies for Health Care' an invited lecture in Jadavpur University (2012).
- 'Nano-technology in Medicine' School of Pharmaceutical Science, S'O'A University, Bhubaneswar (2011).

- "Introduction to Bio-Medical Science for Diagnosis and Rehabilitation" at P. K. College, Contai (2011).
- "Future perspective of Bone Tissue Engineering", Materails-10 at Physics, NIT Durgapur (2010).
- ''Recent Trends in Hard Tissue Engineering' MR10 at Metallurgical and Materials Engg., IIT Mumbai (2010).
- 'Current State of the Art in Hard Tissue Engineering for better Osteo-integration' national workshop on Ceramics as Biomaterials at NIT Rourkela (2010).
- 'Development of Bioactive Scaffold for Tissue Engineering, at New Delhi, Indo-Australian Workshop on New Biomedical Devices (2009)
- 'Development of Wound Dressing System', at New Delhi, Indo-Australian Workshop on New Biomedical Devices (2009).
- "Rheological Characterization of Colloidal Slurries" Short Term Course on Advanced Ceramics Processing & Characterization organized by NIT, Rourkela (2008).
- "Advanced Processing of Ceramics via Colloidal Slurry", Short Term Course on Advanced Ceramics Processing & Characterization organized by NIT, Rourkela (2008)
- "Advanced Shape Forming of Ceramics", International Conference on High Tech. Alumina organized by CGCRI, Kolkata on 28 Feb. to 1st March' 2008.
- 'Protein Coagulation Casting of Ceramics', DMRL Hyderabad 2005

Teaching:

- MM61316 (3-1-0) BIOMATERIALS
- MM69322 (0-0-3) BIOMATERIALS LAB
- MM61314 (3-0-0) TRANSLATIONAL HEALTH RESEARCH (partly)
- MM61514 (3-1-0) Molecular Imaging (partly)
- MM73337 (3-1-0) Advanced Biomaterials with Laboratory practical
- MM60022 (3-1-0) Nanomaterials and Device in Medicine

Achievements:

- Developed at least six platform technologies in various domain of materials processing for healthcare
- Three technologies are in pilot scale studies towards commercialization
- Entrepreneurship learning at Judge Business School at University of Cambridge
- Ten students completed their doctoral work under single and joint guidance
- Formed a startup for in-house collagen production from biowaste and funded by BIRAC; Now TATA STEEL providing fund for large scale manufacturing and certification

Total Publications: 205; **Scopus Citations:** 4678; **h – index:**38;
Google Citation: 5736; **h –index:** 43, **i10-index**: 138
Book chapters: 10**.** **Research Papers, Reports:** 185. **General articles:** 2
Others (Invited Articles): 4. **National Journal:** 10

Patents: 23 (2 US; 1 PCT, 1 Bangladesh)

Patents:

1. Venkata Sundeep Seesala, Santanu Dhara, 'Design for ceramic dental implant with trabecular porous surface' Design patent No. 352875-001
2. 'Multimodal air filtering unit for working environment, and filtration testing thereof' Pravin Vaidya, S Dhara, Tapas Bandhyopadhyay, Nandita Kedia, Arindam Maondal, Zahiruddin Quazi, Santi Mandal, Indian Application No. 202233020810, 2022
3. "Smart breathing air purifier and its application in personal protective equipment" P Vaidya, S Dhara, Sangeeta Das Bhattacharya, Tapas Bandhyopadhyay, Patent Application No. 202131007893, 2021
4. 'Design for ceramic dental implant with trabecular porous surface' Venkata Sundeep Seesala, Santanu Dhara, Design patent No. 352875-001
5. "A Green Body Composition and Functional Gradient Material Prepared Thereof" Venkata Sundeep Seesala, Santanu Dhara, Indian Patent filed with Application No.: 201931022298 dated June 5, 2019, PAA 2942
6. "A Green Body Composition and Functional Gradient Material Prepared Thereof", Venkata Sundeep Seesala, Santanu Dhara, International Filing: PCT International Application No. PCT/IB2019/059435, Dated November 4, 2019
7. A Microfluidic Bioreactor Device for Vascular Bone Modelling and a Method thereof – B. Das, V. S. Seesala, S Dhara, Indian Patent Application No. 2018310119077 dated 22nd May, 2018
8. High throughput Isolation of Collagen type II from Capra Hircus Biowaste and its application thereof Indian Patent submitted 2018 (PAA2799)
9. Bioactive titanium and/or alloy based nanostructures, P. K. Srivas, K. Kapat, S. Dhara, 201711023608 filed on 5th July, 2017 (Jointly by DRDO and IIT Kharagpur)
10. Long term cell tracking with inherent reactive oxygen species scavenging using biomass derived carbon nanodots (CNDs) and application thereof: Bodhisatwa Das, Prabhash Dadhich, Santanu Dhara (Filed: Patent Application no: 439/KOL/2015)
11. 'Process for extraction of fish collagen and formulations of 3D matrices of collagen for biomedical and therapeutic applications thereof', US 20170204136 A1 (Application number US 15/406,453)
12. 'A process for extraction of collagen from fish scale and polyelectrolyte based bioactive super-absorbent materials', WO 2017122216 A1 (Application number PCT/IN2016/000211)
13. 'Process for extraction of fish collagen and formulations of 3D Matrices of collagen for biomedical and therapeutic applications thereof', Bangladesh Application- P/BD/2017/000015
14. 'A process for extraction of collagen from fish scale and polyelectrolyte based bioactive super-absorbent materials', Indian Application Kolkata No. 201631001353 dated 14.01.2016
15. 'Preparation of porous structures with controlled and continuous variation by additive manufacturing', Sumanta Mukherjee, P Saha, S Dhara, Application No. 201631013286 dated April 15, 2016 (Indian Patent. TEMP/E-1/11918/2016-KOL)

16. 'Fiber-Cell construct/Tissue Analogues Comprising Cell Laden unit and Process for Manufacturing thereof' P. Ghosh, Arun Prabhu R., S. Dhara, Indian Patent. 278/Kol/2015
17. 'Net Shape Forming via Plastic Dough Processing of Polymer-Metal Powder Blend and applications thereof', P. K. Srivas, K. Kapat, S. Dhara, US Patent Application No. 14/939, 605 dt. 24th Nov, 2015
18. 'Acetabular cup implant and a method for additive manufacturing of the same based on Geodesical dome approach with continuous radially graded porosity', Sumanta Mukherjee, P Saha, S Dhara, Application no. 201631025559, 2015.
19. 'Hybrid composite scaffold preparation and application thereof', P. Dadhich, B. Das, S. Dhara, Indian Patent. 983/KOL/2014
20. 'Radiopaque surgical suture, mesh, stent and glue with antimicrobial property', H. Singh Pawar, N. K. Francis, P. Ghosh, S. Dhara, Indian patent.1342/KOL/2014
21. 'Net Shape Forming via Plastic Dough Processing of Polymer-Metal Powder Blend and applications thereof', P. K. Srivas, K. Kapat, S. Dhara, Indian Patent Application No. 1173/KOL/2014 dt. 24th Nov, 2015
22. 'Chitosan based biodegradable materials for biomedical applications', P. Ghosh, M. Das, S. Dhara, Indian patent. 566/KOL/2013
23. 'A process for fabrication of customized ceramic products by CNC machining of green ceramics compacts using diamond impregnated tool', S. Mohanty, S. Dhara, Indian Patent. 588/KOL/2012
24. 'A composition for consolidation of dense ceramic compacts', S. Dhara**,** D. Ghosh and P. Bhargava, Indian Patent. 479/KOL/2003.
25. 'Compositions and process for consolidation of porous bodies', S. Dhara, M. Pradhan and P. Bhargava, Indian Patent. 331/Cal/02
26. 'A composition for use in gelation forming of ceramics and a process for the preparation thereof' S. Dhara and P. Bhargava, Indian Patent. 595/Cal/2000

Technology developed:

- Protein Coagulation Casting of Ceramics for dense and porous ceramics, nanopowder synthesis (PhD thesis) – Silver medal Incubiz (Anveshan III) organized by IIM Ahmedabad in 2005
- Plastic Dough processing of metal powders for dense and porous Metal – Gold medal from DST - Lockheed Martin India Innovation Growth Programme in 2016; BIRAC SRISTI award in 2016
- Radio-opaque antimicrobial polymers for biomedical applications -Gold medal from DST - Lockheed Martin India Innovation Growth Programme in 2015; BIRAC SRISTI award in 2015
- Isolation of collagen and formulation of superabsorbent wound dressing – Technology modified for pilot scale manufacturing under Amnivor Medicare Pvt. Ltd. by BIG funding (DBT)
- Large scale manufacturing of nanofibers- 2017
- Recycling of mineral based biowastes for direct printed customized 3D printed bone graft - Gold medal from DST - Lockheed Martin India Innovation Growth Program in 2015
- Placenta derived ECM matrices for tissue regeneration – 2016-2017
- Microwave based rapid synthesis of canbon nano-dots and their derivative for live cell imaging and therapeutic – 2014-2017

Current status of Students after graduation:
After graduation from BMTE, several candidates joined as faculty in the premier institutes (i.e., IIT (2 faculties), IIEST (one faculty), NISER (one scientist), NIPER (two faculties), State University (one faculty), National Research Laboratory (one scientist)) and few of them joined premier research institutes for translational research (i.e., Cincinnati Children Hospital, Wake forest University, University Mississippi, Medical Center, University of Rutgers, Harvard Medical school) including MNCs - Himalaya, L'Oréal India;

Journal Publications:

1. RG Talukdar, CM Saviour, K Tiwarekar, S Dhara, S Gupta, 'Bone Remodeling Around Solid and Porous Interbody Cages in the Lumbar Spine', Journal of Biomechanical Engineering 144 (10), 101011, 2022
2. Priti Prasanna Maity, Puja Poddar, Subhayan Das, Krishna Dixit, Dibakar Dhara, Mahitosh Mandal, Amit Roy Chowdhury, Santanu Dhara, Sumanta Mukherjee, 'Size dependent regeneration capacity of functionalized Capra ear-derived micro-tissue scaffolds for treatment of cartilage defects', Materialia, 101569, 2022
3. Sayan Dey, Preetam Guha Ray, Trina Roy, Sumita Santra, Santanu Dhara, Samit Kumar Ray, Prasanta Kumar Guha, 'Nanoinspired Biocompatible Chemosensors: Progress toward Efficient Prognosis of Arsenic Poisoning', ACS Applied Bio Materials, 5 (8), 3850-3858, 2022
4. VS Seesala, S Dhara, 'A novel strategy for fabricating zirconia implants with a trabecular biomimetic porous surface', Journal of the American Ceramic Society 105 (8), 5131-5139, 2022
5. A Dey, PG Ray, S Dhara, S Neogi, 'Optically engineered ZnO Nanoparticles: Excitable at visible wavelength and lowered cytotoxicity towards bioimaging applications', Applied Surface Science 592, 153303, 2022
6. A Roy, P Guha Ray, A Bose, S Dhara, S Pal, 'pH-Responsive Copolymeric Network Gel Using Methacrylated β-Cyclodextrin for Controlled Codelivery of Hydrophilic and Hydrophobic Drugs', ACS Applied Bio Materials 5 (7), 3530-3543, 2022
7. Sanjoy Kumar Ghorai, Abir Dutta, Trina Roy, Preetam Guha Ray, Debabrata Ganguly, Muthupandian Ashokkumar, Santanu Dhara, Santanu Chattopadhyay, 'Metal Ion Augmented Mussel Inspired Polydopamine Immobilized 3D Printed Osteoconductive Scaffolds for Accelerated Bone Tissue Regeneration', ACS Applied Materials & Interfaces 14 (25), 28455-28475, 2022
8. VS Seesala, R Rajasekaran, PV Vaidya, S Dhara, 'Functional Gradient Coating of Alumina on Net Shaped Zirconia Implant: Improved Strength, Aging Resistance, and Role of Residual Stress', Journal of the European Ceramic Society, 2022
9. Kalipada Manna, Priyapratim Patra, Arpita Roy, Rakesh Kumar Roy, Krishna Chaitanya Sunka, Santanu Dhara, Niladri Patra, Sagar Pal, 'Amino Acid Inspired Alginate-Based pH Sensitive Polymeric Micelles via Reversible Addition–Fragmentation Chain Transfer Polymerization', ACS Applied Polymer Materials, 2022
10. A Roy, K Manna, PG Ray, S Dhara, S Pal, 'β-Cyclodextrin-Based Ultrahigh Stretchable, Flexible, Electro-and Pressure-Responsive, Adhesive, Transparent Hydrogel as Motion Sensor', ACS Applied Materials & Interfaces 14 (15), 17065-17080, 2022

11. D Palai, T Roy, PS Prasad, C Hazra, S Dhara, R Sen, S Das, K Das, 'Influence of Copper on the Microstructural, Mechanical, and Biological Properties of Commercially Pure Zn-Based Alloys for a Potential Biodegradable Implant', ACS Biomaterials Science & Engineering 8 (4), 1443-1463, 2022
12. M Das, PG Ray, S Dhara, S Roy, 'Symbiotically Augmented removal of Congo red by polyaniline/cobalt sulfide/graphite composites', Materials Chemistry and Physics 278, 125487, 2022
13. B Das, SV Seesala, P Pal, T Roy, PG Roy, S Dhara, A vascularized bone-on-a-chip model development via exploring mechanical stimulation for evaluation of fracture healing therapeutics, In vitro models 1 (1), 73-83, 2022
14. Sanjoy Kumar Ghorai, Trina Roy, Somnath Maji, Preetam Guha Ray, Kajal Sarkar, Abir Dutta, Amiyangshu De, Sharba Bandyopadhyay, Santanu Dhara, Santanu Chattopadhyay, 'A judicious approach of exploiting polyurethane-urea based electrospun nanofibrous scaffold for stimulated bone tissue regeneration through functionally nobbled nanohydroxyapatite', Chemical Engineering Journal 429, 132179, 2022
15. B Mathai, S Dhara, S Gupta, 'Bone remodelling in implanted proximal femur using topology optimization and parameterized cellular model', Journal of the Mechanical Behavior of Biomedical Materials 125, 104903, 2022
16. KC Sunka, PK Byram, A Kumar, BR Chaudhuri, S Dhara, 'Machinable Regenerated Silk Fibroin Monoliths for Tissue Engineering Applications', Trends in Biomaterials & Artificial Organs 35 (5) 2022
17. A Roy, P Guha Ray, K Manna, C Banerjee, S Dhara, S Pal, 'Poly(N-vinyl imidazole) Cross-Linked β-Cyclodextrin Hydrogel for Rapid Hemostasis in Severe Renal Arterial Hemorrhagic Model', Biomacromolecules 22 (12), 5256-5269, 2021
18. S Sengupta, PG Ray, S Dhara, A Bandyopadhyay, 'Hyperbranched Copolymers Forming Polymersome-like Structures Used for Encapsulation and Controlled Release of α-Tocopherol Succinate (TOS): Drug Transport Modeling', ACS Applied Bio Materials 4 (12), 8236-8247, 2021
19. VS Seesala, S Dhara, 'Nature inspired dough processing of alumina-zirconia composites: Rheology, plasticity and weibull analysis towards net shaping', Journal of the European Ceramic Society 41 (14), 7170-7181, 2021
20. PK Srivas, K Kapat, SK Chaitanya, S Koley, B Su, S Dhara, 'Net shape forming of Ti6Al4V implants via green machining', Journal of Materials Research 36 (19), 3905-3913, 2021
21. K Chattopadhyay, S Datta, S Dhara, V Bertolasi, D Ray, 'Exploration of varying coordination reactivity of Schiff base H3L toward CdII, ZnII and MgII: Hydroxido-bridged dimer, acetato-directed chain and live cell-imaging', Polyhedron 205, 115288, 2021
22. G Kulkarni, PG Ray, S Das, S Biswas, S Dhara, S Das, 'Raman spectroscopy assisted biochemical evaluation of L929 fibroblast cells on differentially crosslinked gelatin hydrogels',Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 257, 119760, 2021
23. P Dadhich, PK Srivas, B Das, P Pal, J Dutta, P Maity, P Guha Ray, S Roy, S K Das, Santanu Dhara 'Direct 3D Printing of Seashell Precursor toward Engineering a Multiphasic Calcium Phosphate Bone Graft', ACS Biomaterials Science & Engineering 7 (8), 3806-3820, 2021
24. RG Talukdar, KK Mukhopadhyay, S Dhara, S Gupta, 'Numerical analysis of the mechanical behaviour of intact and implanted lumbar functional spinal units: Effects of loading and boundary conditions', Proceedings of the Institution of

Mechanical Engineers, Part H: Journal of Engineering in Medicine, 235, 7, 792-804, 2021
25. LM Mukundan, S Dhara, S Chattopadhyay, Trimodal attributes within acidic mesostructured bioactive glass nanoparticles', Materials Letters 293, 129677, 2021
26. B Mathai, S Dhara, S Gupta, 'Orthotropic bone remodelling around uncemented femoral implant: a comparison with isotropic formulation', Biomechanics and Modeling in Mechanobiology 20 (3), 1115-1134, 2021
27. S Mukherjee, S Dhara, P Saha, 'Enhanced corrosion, tribocorrosion resistance and controllable osteogenic potential of stem cells on micro-rippled Ti6Al4V surfaces produced by pulsed laser remelting', Journal of Manufacturing Processes 65, 119-133, 2021
28. VS Seesala, R Rajasekaran, A Dutta, PV Vaidya, S Dhara, 'Dense-porous multilayer ceramics by green shaping and salt leaching', Open Ceramics 5, 100084, 2021
29. S Datta, AP Rameshbabu, K Bankoti, M Roy, C Gupta, S Jana, AK Das, Ramkrishna Sen, Santanu Dhara 'Decellularized bone matrix/oleoyl chitosan derived supramolecular injectable hydrogel promotes efficient bone integration', Materials Science and Engineering: C 119, 111604, 2021
30. S Datta, AP Rameshbabu, K Bankoti, S Jana, S Roy, R Sen, S Dhara, 'Microsphere embedded hydrogel construct–binary delivery of alendronate and BMP-2 for superior bone regeneration', Journal of Materials Chemistry B 9 (34), 6856-6869, 2021
31. VS Seesala, PV Vaidya, R Rajasekharan, A Kumar Ojha, S Jana, B Pal, S Dhara, 'Monolith dental bridge by soft machining of dried ceramic dough', Frontiers in Dental Medicine, 55, 2021
32. PK Byram, KC Sunka, A Barik, M Kaushal, S Dhara, N Chakravorty, 'Biomimetic silk fibroin and xanthan gum blended hydrogels for connective tissue regeneration', International Journal of Biological Macromolecules 165, 874-882, 2020
33. K Bankoti, AP Rameshbabu, S Datta, P Goswami, M Roy, D Das, 'Dual functionalized injectable hybrid extracellular matrix hydrogel for burn wounds', Biomacromolecules 22 (2), 514-533, 2020
34. G Kulkarni, PG Ray, PK Byram, M Kaushal, S Dhara, S Das, 'Tailorable hydrogel of gelatin with silk fibroin and its activation/crosslinking for enhanced proliferation of fibroblast cells', International Journal of Biological Macromolecules 164, 4073-4083, 2020
35. P Poddar, P Maity, S Maiti, S Sahoo, S Dhara, D Dhara, 'Synthesis of a new triple-responsive biocompatible block copolymer: Self-assembled nanoparticles as potent anticancer drug delivery vehicle', Reactive and Functional Polymers 154, 104679, 2020
36. Arun Prabhu Rameshbabu, Kamakshi Bankoti, Sayanti Datta, Elavarasan Subramani, Anupam Apoorva, Paulomi Ghosh, Subhodeep Jana, Padmavati Manchikanti, Sabyasachi Roy, Koel Chaudhury, Santanu Dhara, 'Bioinspired 3D porous human placental derived extracellular matrix/silk fibroin sponges for accelerated bone regeneration', Materials Science and Engineering: C 113, 110990, 2020
37. M Roy, M Bose, K Bankoti, A Kundu, S Dhara, AK Das, 'Biochemical characterization of VapC46 toxin from Mycobacterium tuberculosis', Molecular Biotechnology 62 (6), 335-343, 2020

38. A Pyne, S Nandi, M Ghosh, T Roy, S Dhara, N Sarkar, 'Denaturant-Mediated Modulation of the Formation and Drug Encapsulation Responses of Gold Nanoparticles', Langmuir 36 (26), 7634-7647, 2020
39. PG Ray, M Das, M Wan, C Jacob, S Roy, P Basak, S Dhara, Surfactant and catalyst free facile synthesis of Al-doped ZnO nanorods–An approach towards fabrication of single nanorod electrical devices, Applied Surface Science 512, 145732, 2020
40. Abir Dutta, Kaushik Mukherjee, Venkata Sundeep Seesala, Kaushik Dutta, Ranjan Rashmi Paul, Santanu Dhara, Sanjay Gupta, 'Load transfer across a mandible during a mastication cycle: The effects of odontogenic tumour', Journal Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 234, 5, 486-495, 2020
41. A Roy, S Samanta, K Singha, P Maity, N Kumari, A Ghosh, S Dhara, S Pal, 'Development of a thermoresponsive polymeric composite film using cross-linked β-cyclodextrin embedded with carbon quantum dots as a transdermal drug carrier', ACS Applied Bio Materials 3 (5), 3285-3293, 2020
42. A Apoorva, AP Rameshbabu, S Dasgupta, S Dhara, M Padmavati, 'Novel pH-sensitive alginate hydrogel delivery system reinforced with gum tragacanth for intestinal targeting of nutraceuticals', International Journal of biological macromolecules 147, 675-687, 2020
43. B Das, P Dadhich, P Pal, S Thakur, S Neogi, S Dhara, 'Carbon nano dot decorated copper nanowires for SERS-Fluorescence dual-mode imaging/anti-microbial activity and enhanced angiogenic activity', Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 227, 117669, 2020
44. Ragavi Rajasekaran, Venkata Sundeep Seesala, Krishna Chaitanya Sunka, Preetam Guha Ray, Baisakhee Saha, Mamoni Banerjee, Santanu Dhara, 'Role of nanofibers on MSCs fate: Influence of fiber morphologies, compositions and external stimuli', Materials Science and Engineering: C 107,110218, 2020
45. Kamakshi Bankoti, Arun Prabhu Rameshbabu, Sayanti Datta, Madhurima Roy, Piyali Goswami, Sabyasachi Roy, Amit Kumar Das, Sudip Kumar Ghosh, Santanu Dhara,' Carbon nanodot decorated acellular dermal matrix hydrogel augments chronic wound closure', Journal of Materials Chemistry B, 8, 40, 9277-9294, 2020
46. A. Dutta, K. Mukherjee, S. Dhara, S. Gupta, 'Design of Porous Titanium Scaffold for Complete Mandibular Reconstruction: the Influence of Pore Architecture Parameters', Computers in Biology and Medicine, 108, 31-41, (2019)
47. A. Roy, P. P. Maity, A. Bose, S. Dhara, S. Pal, 'β-Cyclodextrin based pH and thermo-responsive biopolymeric hydrogel as a dual drug carrier', Materials Chemistry Frontiers, 3, 385-393, (2019)
48. B. Das, P Dadhich, P. Pal, J. Dutta, P. Srivas, A. Dutta, P. K. D Mohapatra, A. M. Maity, S. Bera, S. Dhara, 'Doping of carbon nanodots for saving cells from silver nanotoxicity: A study on recovering osteogenic differentiation potential', Toxicology in Vitro, 18; 57:81-95. doi: 10.1016/j.tiv.2019.02.015, (2019)
49. B. Das, P. Pal, S. Dhara, 'Laser Patterned ZNO Substituted Calcium Phosphate Scaffolds via Viscous Polymer Processing for Bone Graft', Materials Today: Proceedings, 11, 2, pp 849-858, 2019
50. B. Das, P. Dadhich, P. Pal, J. Dutta, A. Dutta, P. K. Srivas, and S. Dhara, 'Doping of Carbon Quantum Dots (CDs) in Calcium Phosphate Nanorods for Inducing Ectopic Chondrogenesis via Activation of the HIF-α/SOX-9 Pathway, ACS Omega, 4 (1), pp. 374–386 (2019)

51. B Das, A Girigoswami, P Pal, S Dhara, ‘Manganese oxide-carbon quantum dots nano-composites for fluorescence/magnetic resonance (T1) dual mode bioimaging, long term cell tracking, and ROS scavenging’, Materials Science and Engineering: C 102, 427-436, 2019
52. B. Subramanian, A. P. Rameshbabu, K. Ghosh, P. K. Jha, R. Jha, S. Murugesan, S. Chattopadhyay, S. Dhara, K. C. Mondal, P. Basak, P. P. Maiti, S. K. Guha, ‘Impact of styrene maleic anhydride (SMA) based hydrogel on rat fallopian tube as contraceptive implant with selective antimicrobial property’, Materials Science and Engineering: C 94, pp. 94-107 (2019)
53. MP Drupitha, Kamakshi Bankoti, Pallabi Pal, Bodhisatwa Das, Ramesh Parameswar, Santanu Dhara, Golok B Nando, Kinsuk Naskar, ‘Morphology induced physico mechanical and biological characteristics of TPU–PDMS blend scaffolds for skin tissue engineering applications”, Journal of Biomedical Materials Research Part B: Applied Biomaterials, 107, 5, 1634-1644, 2019
54. Poushali Das, Sayan Ganguly, Tarun Agarwal, Pritiprasanna Maity, Sabyasachi Ghosh, Sumita Choudhary, Subhashis Gangopadhyay, Tapas Kumar Maiti, Santanu Dhara, Susanta Banerjee, Narayan Chandra Das, ‘Heteroatom doped blue luminescent carbon dots as a nano-probe for targeted cell labeling and anticancer drug delivery vehicle’, Materials Chemistry and Physics, 237, 121860, 2019
55. Poushali Das, Sayan Ganguly, Priti Prasanna Maity, Hemant Kumar Srivastava, Madhuparna Bose, Santanu Dhara, Sharba Bandyopadhyay, Amit Kumar Das, Susanta Banerjee, Narayan Chandra Das, ‘Converting waste Allium sativum peel to nitrogen and sulphur co-doped photoluminescence carbon dots for solar conversion, cell labeling, and photobleaching diligences: a path from discarded waste to value-added products’, Journal of Photochemistry and Photobiology B: Biology, 197, 111545, 2019
56. Poushali Das, Priti Prasanna Maity, Sayan Ganguly, Sabyasachi Ghosh, Joydeep Baral, Madhuparna Bose, Sumita Choudhary, Subhashis Gangopadhyay, Santanu Dhara, Amit Kumar Das, Susanta Banerjee, Narayan Chandra Das, ‘Biocompatible carbon dots derived from κ-carrageenan and phenyl boronic acid for dual modality sensing platform of sugar and its anti-diabetic drug release behavior’, International journal of biological macromolecules 132, 316-329, 2019
57. P Datta, V Vyas, S Dhara, AR Chowdhury, A Barui, ‘Anisotropy properties of tissues: A basis for fabrication of biomimetic anisotropic scaffolds for tissue engineering’, Journal of Bionic Engineering 16 (5), 842-868, 2019
58. P Datta, S Dhara, ‘Engineering porosity in electrospun nanofiber sheets by laser engraving: a strategy to fabricate 3D scaffolds for bone graft applications’, Journal of the Indian Institute of Science 99 (3), 329-337, 2019
59. Preetam Guha Ray, Shreya Biswas, Trina Roy, Saptarshi Ghosh, Deblina Majumder, Piyali Basak, Somenath Roy, Santanu Dhara, ‘Sonication assisted hierarchical decoration of Ag-NP on zinc oxide nanoflower impregnated eggshell membrane: evaluation of antibacterial activity and in vitro cytocompatibility’, ACS Sustainable Chemistry & Engineering, 7, 16, 13717-13733, 2019
60. PG Ray, P Pal, S Dhara, ‘Hierarchical Decoration of Eggshell Membrane with Polycaprolactone Nanofibers to fabricate a Bilayered Scaffold for Skin Tissue Engineering’, MRS Advances 4 (21), 1215-1221, 2019
61. Priti Prasanna Maity, Debabrata Dutta, Sayan Ganguly, Kausik Kapat, Krishna Dixit, Amit Roy Chowdhury, Ramapati Samanta, Narayan Chandra Das, Pallab Datta, Amit Kumar Das, Santanu Dhara, ‘Isolation and mass spectrometry based

hydroxyproline mapping of type II collagen derived from Capra hircus ear cartilage'', Communications biology, Springer Nature group, 2, 146 (2019)
62. P. Pal, B. Das, S. Dhara, 'Hybrid scaffold comprising of nanofibers and extrusion printed PCL for tissue engineering', Materials Today: Proceedings, 11, 2, pp 804-812, 2019
63. P Samanta, K Kapat, S Maiti, G Biswas, S Dhara, D Dhara, 'pH-labile and photochemically cross-linkable polymer vesicles from coumarin based random copolymer for cancer therapy', Journal of colloid and interface science 555, 132-144, 2019
64. P. K. Srivasa, K. Kapat, B. Das, P. Pal, P. Guha Ray, S. Dhara, 'Hierarchical surface morphology on Ti6Al4V via patterning and hydrothermal treatment towards improving cellular response', Applied Surface Science, 478, pp. 806-817 (2019)
65. P Patra, SR Soni, VS Seesala, S Dhara, A Ghosh, S Pal, Synthesis of a novel copolymer using glycogen and poly (lactide) as a carrier of dual drugs—ornidazole and ofloxacin, Journal of Polymer Science Part A: Polymer Chemistry 57 (15), 1697-1703, 2019
66. P. Patra, V. S. Seesala, S. R. Soni, R. K. Roy, S. Dhara, A. Ghosh, N. Patra, S. Pal, Biopolymeric pH-responsive fluorescent gel for in-vitro and in-vivo colon specific delivery of metronidazole and ciprofloxacin, European Polymer J., 114, pp. 255-264, (2019)
67. R Chakraborty, VS Seesala, JS Manna, P Saha, S Dhara, 'Synthesis, characterization and cytocompatibility assessment of hydroxyapatite-polypyrrole composite coating synthesized through pulsed reverse electrochemical deposition', Materials Science and Engineering: C 94, 597-607, 2019
68. S. Mohanty, P. K Srivas, S. Dhara, 'Reverse Engineering Approach for Customized Dental and Maxillofacial Implants of Alumina Fibre Reinforced Composite', Materials Today: Proceedings, 11, 2, pp 753-760, 2019
69. P. Maiti, Santanu Dhara, 'Amino acid analysis by HPLC with FLD detector', Protocol Exchange, doi.org/10.1038/protex.2019.022, 2019
70. A. Roy, P. P Maity, S. Dhara, S. Pal, 'Biocompatible, stimuli-responsive hydrogel of chemically crosslinked β-cyclodextrin as amoxicillin carrier', J. Appl. Polym. Sci. 135 (10) (2018)
71. A. P. Rameshbabu, K. Bankoti, S. Datta, E. Subramani, A. Apoorva, P. Ghosh, P. P. Maity, P. Manchikanti, K. Chaudhury, S. Dhara, 'Silk Sponges Ornamented with a Placenta-Derived Extracellular Matrix Augment Full-Thickness Cutaneous Wound Healing by Stimulating Neovascularization and Cellular Migration', ACS Applied Materials and Interfaces, 10 (20), pp. 16977-16991 (2018)
72. Arun Prabhu Rameshbabu, Sayanti Datta, Kamakshi Bankoti, Elavarasan Subramani, Koel Chaudhury, V Lalzawmliana, Samit K Nandi, Santanu Dhara, 'Polycaprolactone nanofibers functionalized with placental derived extracellular matrix for stimulating wound healing activity', Journal of Materials Chemistry B, 6, 42, 6767-6780, 2018
73. A. Parekh, D. Das, S. Das, S. Dhara, K. Biswas, M. Mandal, S. Das, 'Bioimpedimetric analysis in conjunction with growth dynamics to differentiate aggressiveness of cancer cells', Scientific Reports, Springer Nature group, 8 (1), 783 (2018)
74. A. Parekh, S. Das, S. Parida, C. K. Das, D. Dutta, S. K. Mallick, P. H. Wu, B. N. P. Kumar, R. Bharti, G. Dey, K. Banerjee, S. Rajput, D. Bharadwaj, I. Pal, K. K. Dey, Y. Rajesh, B. C. Jena, A. Biswas, P. Banik, A. K. Pradhan, S. K. Das, A. K. Das, S.

Dhara, P. B. Fisher, D. Wirtz, G. B. Mills, M. Mandal, 'Multi-nucleated cells use ROS to induce breast cancer chemo-resistance in vitro and in vivo', Oncogene, 37(33) pp. 4546-4561 (2018)

75. B. Das, P. Pal, P. Dadhich, J. Dutta, S. Dhara, 'In Vivo Cell Tracking, Reactive Oxygen Species Scavenging, and Antioxidative Gene Down Regulation by Long-Term Exposure of Biomass-Derived Carbon Dots', ACS Biomaterials Science & Engineering 5 (1), pp. 346-356, 2018
76. B. R. Kumar, A. Anupam, P. Manchikanti, A. P. Rameshbabu, S. Dasgupta, S. Dhara, 'Identification and characterization of bioactive phenolic constituents, anti-proliferative, and anti-angiogenic activity of stem extracts of Basella alba and rubra', J. Food Science and Technology, 55 (5), pp. 1675-1684 (2018)
77. K. Kapat, A. P. Rameshbabu, P. P. Maity, A. Mandal, K. Bankoti, J. Dutta, D.K. Das, G. Dey, M. Mandal, S. Dhara, 'Osteochondral Defects Healing Using Extracellular Matrix Mimetic Phosphate/Sulfate Decorated GAGs-Agarose Gel and Quantitative Micro-CT Evaluation', ACS Biomaterials Science & Engineering 5 (1), pp. 149-164 (2018)
78. K. Kapat, P. P. Maity, A. P. Rameshbabu, P. K. Srivas, P. Majumdar and S. Dhara, 'Simultaneous Hydrothermal Bioactivation with Nano-topographic Modulation of Porous Titanium Alloy towards Enhanced Osteogenic and Antimicrobial Responses', J. Mat. Chem B, B 6 (18), pp. 2877-2893 (2018)
79. M. P. Drupitha, K Bankoti, P. Pal, B. Das, R. Parameswar, S. Dhara, G. B. Nando, K Naskar, Morphology induced physico mechanical and biological characteristics of TPU–PDMS blend scaffolds for skin tissue engineering applications, J. Biomed. Mat. Res. Part B: Appl. Biomat., doi: 10.1002/jbm.b.34256, (2018)
80. M. P. Drupitha, B. Das, R. Parameswaran, S. Dhara, G. B. Nando, K. Naskar, 'Hybrid electrospun fibers based on TPU-PDMS and spherical nanohydroxyapatite for bone tissue engineering, Materials Today Communications 16, pp.264-273, (2018)
81. P. D. Karmakar, V. S. Seesala, A. Pal, S. Dhara, S. Chatterjee, S. Pal, Synthesis of RAFT Mediated Amphiphilic Graft Copolymeric Micelle Using Dextran and Poly (Oleic Acid) toward Oral Delivery of Nifedipine, J. Polym. Sci. Part A: Polymer Chemistry 56 (20), pp. 2354-2363 (2018)
82. P. Das, S. Ganguly, S. Mondal, U. K. Ghorai, P. P. Maity. S. Choudhary, S. Gangopadhyay, S. Dhara, S. Banerjee, N. C. Das, 'Dual doped biocompatible multicolor luminescent carbon dots for bio labeling, UV active marker and fluorescent polymer composite, 33 (6), pp. 1136-145, (2018)
83. P. Ghosh, A. P. Rameshbabu, D. Das, B. Subramanian, S. K. Samanta, S. Roy, S. Pal, S.K. Ghosh, S. Dhara, 'Single-pot biofabrication of living fibers for tissue engineering applications', J. Mat. Res. 33 (14), pp. 2019-2028 (2018)
84. P. Guha Ray, P. Pal, P. K Srivas, P. Basak, S. Roy, S. Dhara, 'Surface Modification of Eggshell Membrane with Electrospun Chitosan/Polycaprolactone Nanofibers for Enhanced Dermal Wound Healing', ACS Applied Bio Materials 1 (4), pp. 985-998 (2018)
85. P. K. Srivas, K. Kapat, M. Wan, S. Dhara, 'Dough Extrusion Forming of Titanium Alloys—Green Body Characteristics, Microstructure and Mechanical Properties', J. Manufacturing Science and Engineering 140 (7), pp. 071014 (2018)
86. P. Patra, V. S. Seesala, D. Das, A.B. Panda, S. Dhara, S. Pal, 'Biopolymeric nanogel derived from functionalized glycogen towards targeted delivery of 5-fluorouracil', Polymer, 140, pp. 122-130 (2018)

87. P. Das, S. Ganguly, P. P. Maity, M. Bose, S. Mondal, S. Dhara, A. K. Das, S. Banerjee, N.C. Das, 'Waste chimney oil to nanolights: A low cost chemosensor for tracer metal detection in practical field and its polymer composite for multidimensional activity', Journal of Photochemistry and Photobiology B: Biology, 180, pp. 56-67 (2018)
88. R. Chakraborty, V. S. Seesala, S. Sengupta, S. Dhara, P. Saha, K. Das, S. Das, 'Comparison of Osteoconduction, cytocompatibility and corrosion protection performance of hydroxyapatite-calcium hydrogen phosphate composite coating synthesized in-situ through pulsed electro-deposition with varying amount of phase and crystallinity', Surfaces and Interfaces, 10, pp.1-10 (2018)
89. S. Ganguly, P. P. Maity, S. Mondal, P. Das, P. Bhawal, S. Dhara, N. C. Das, 'Polysaccharide and poly (methacrylic acid) based biodegradable elastomeric biocompatible semi-IPN hydrogel for controlled drug delivery', Materials Science and Engineering: C 92, pp.34-51, (2018)
90. S. Ganguly, S. Mondal, P. Das, P. Bhawal, P.P. Maity, S. Ghosh, S. Dhara, N. C. Das, 'Design of psyllium-g-poly(acrylic acid-co-sodium acrylate)/cloisite 10A semi-IPN nanocomposite hydrogel and its mechanical, rheological and controlled drug release behaviour', International Journal of Biological Macromolecules, 111, pp. 983-998, (2018)
91. S. Ganguly, P. Das, P. P Maity, S. Mondal, S. Ghosh, S. Dhara, N. C. Das, 'Green reduced graphene oxide toughened semi-ipn monolith hydrogel as dual responsive drug release system: rheological, physicomechanical, and electrical evaluations', The Journal of Physical Chemistry B 122 (29), pp.7201-7218 (2018)
92. S. Ganguly, D. Ray, D. P. Das, P. P. Maity, S. Mondal, K. V. Aswal, S. Dhara, N. C. Das, 'Mechanically robust dual responsive water dispersible-graphene based conductive elastomeric hydrogel for tunable pulsatile drug release', Ultrasonics Sonochemistry, 42 pp.212-227 (2018)
93. S. Mukherjee, S. Dhara, P. Saha, 'Laser surface remelting of Ti and its alloys for improving surface biocompatibility of orthopaedic implants', Materials Technology, pp1-13(2018)
94. T. Roy, P. P. Maity, A. P. Rameshbabu, B. Das, A. John A, A. Dutta, S. K. Ghorai, S. Chattopadhyay, S. Dhara, 'Core-Shell Nanofibrous Scaffold Based on Polycaprolactone-Silk Fibroin Emulsion Electrospinning for Tissue Engineering Applications, Bioengineering, doi: 10.3390/bioengineering5030068, (2018)
95. A. Barik, S. Banerjee, S. Dhara, N. Chakravorty, 'A reductionist approach to extract robust molecular markers from microarray data series – Isolating markers to track osseointegration', J. Biomed. Inform., 68 pp104-111(2017)
96. A. Roy, A. Pyne, P. Pal, S. Dhara, and N. Sarkar, 'Effect of Vitamin E and a Long-Chain Alcohol n-Octanol on the Carbohydrate-Based Nonionic Amphiphile Sucrose Monolaurate—Formulation of Newly Developed Niosomes and Application in Cell Imaging', ACS Omega, 2 (11) pp. 7637–7646 (2017)
97. A. Roy, P. Dadhich, S Dhara, S. De, 'Understanding and Tuning of Polymer Surfaces for Dialysis Applications' Polymers for Advanced Technologies, 28 (2) pp. 174-187 (2017)
98. B Mandal, A P Rameshbabu, S R Soni, A Ghosh, S Dhara, S Pal, 'In Situ Silver Nanowire Deposited Cross-Linked Carboxymethyl Cellulose: A Potential Transdermal Anticancer Drug Carrier', ACS applied materials & interfaces 9 (42) pp. 36583-36595 (2017)

99. B. Mandal, A. Prabhu Rameshbabu, S. Dhara, Sagar Pal, 'Nanocomposite hydrogel derived from poly (methacrylic acid)/carboxymethyl cellulose/AuNPs: A potential transdermal drugs carrier', Polymer, 120 pp. 9-19 (2017)
100. D Das, A P Rameshbabu, P Ghosh, P Patra, S Dhara, Sagar Pal, 'Biocompatible nanogel derived from functionalized dextrin for targeted delivery of doxorubicin hydrochloride to MG 63 cancer cells', Carbohydrate Polymers, 171, 27-38 (2017)
101. Prabhash Dadhich, Santanu Dhara,'Calcium phosphate flowers – A bone filler substitute', Materials Today, 20, 10 pp. 657-658 (2017)
102. E. Subramani, A. P. Rameshbabu, M. Jothiramajayam, B. Subramanian, D. Chakravorty, G. Bose, M. Joshi, C. D. Ray, I. Lodh, R. Chattopadhyay, S. Saha, A. Mukherjee, S. Dhara, B. Chakravarty, K. Chaudhury, 'Mycobacterial heat shock protein 65 mediated metabolic shift in decidualization of human endometrial stromal cells', Scientific Reports, Springer Nature group, 7(1) pp. 3942 (2017)
103. H. Kalita, P. Pal, S. Dhara, A. Pathak, 'Fabrication and Characterization of Polyvinyl alcohol/Metal (Ca, Mg, Ti) Doped Zirconium Phosphate Nanocomposite Films for Scaffold-guided Tissue Engineering Application', Materials Science and Engineering: C, 71 pp. 363-37 (2017)
104. K. Bankoti, A. P. Rameshbabu, S. Datta, B. Das, A. Mitra and S. Dhara, 'Onion derived carbon nano-dots for live cell imaging and accelerated skin wound healing' J. Materials Chemistry B, **5** pp. 6579 – 6592 (2017)
105. K. Bankoti, A. Prabhu Rameshbabu, S. Datta, P. Prasanna Maity, P. Goswami, P. Datta, S. Kumar Ghosh, A. Mitra, S. Dhara, 'Accelerated healing of full thickness dermal wounds by macroporous waterborne polyurethane-chitosan hydrogel scaffolds', Materials Science and Engineering: C 81 pp. 133-143 (2017)
106. K. Kapat, P. Srivas, A. P. Rameshbabu, P. P. Maity, S. Jana, J. Dutta, P. Majumdar, D. Chakrabarti, S. Dhara, 'Influence of porosity and pore size distribution in Ti6Al4V foam on physic-mechanical properties, osteogenesis and quantitative validation of bone ingrowth by micro-CT', ACS Applied Interface 9(45) pp. 39235-39248 (2017)
107. K. Kapat, P. K. Srivas, S. Dhara, 'Coagulant assisted foaming–A method for cellular Ti6Al4V: Influence of microstructure on mechanical properties', Materials Science and Engineering: A 689 pp. 63-71 (2017)
108. N. K. Francis, H. S. Pawar, S. Dhara, A. Mitra, A. Mitra, "Radiopaque 'Hemocompatible Ruminant-Sourced Gut Material with Antimicrobial Physiognomies for Biomedical Applications in Diabetics', ACS Omega 2 (3) pp. 755-764 (2017)
109. P. Pal, P. K Srivas, P. Dadhich, B. Das, D. Moulik, S. Dhara, 'Nano/microfibrous cotton-wool-like 3D scaffold with core-shell architecture by emulsion electrospinning for skin tissue regeneration', ACS Biomaterials Science & Engineering, 3 (12) pp. 3563–3575(2017)
110. P. Pal, B. Das, P. Dadhich, A. Achar, S. Dhara, 'Carbon nanodots impregnated fluorescent nanofibers for in vivo monitoring and accelerating full-thickness wound healing', J. Materials Chemistry B 5 pp6645 – 6656(2017)
111. P. Pal, P. Dadhich, P. K. Srivas, B. Das, D. Maulik, S Dhara, 'Bilayered nanofibrous 3D hierarchy as skin rudiment by emulsion electrospinning for burn wound management', Biomater. Sci., 5 pp 1786-1799(2017)
112. P. K Srivas, K. Kapat, P. Dadhich, P. Pal, J. Dutta, P. Datta, S. Dhara, 'Osseointegration Assessment of Extrusion Printed Ti6Al4V Scaffold towards Accelerated Skeletal Defect Healing via Tissue in-growth', Biofabrication, 6 pp8-17(2017)

113. R. Chakraborty, V. S. Seesala, M. Sen, S. Sengupta, S. Dhara, P. Saha, K. Das, S. Das, 'MWCNT reinforced bone like calcium phosphate—Hydroxyapatite composite coating developed through pulsed electrodeposition with varying amount of apatite phase and crystallinity to promote superior osteoconduction, cytocompatibility and corrosion protection performance compared to bare metallic implant surface', Surface and Coatings Technology, 325 pp496-514(2017)
114. S. Datta, A. P. Rameshbabu, K. Bankoti, P. P. Maity, D. Das, S. Pal, S. Roy, R. Sen, S. Dhara, 'Oleoyl Chitosan based Nanofiber Mats Impregnated with Amniotic Membrane Derived Stem Cells for Accelerated Full-Thickness Excisional Wound Healing', ACS Biomaterials Science & Engineering3 (8) pp1738-1749(2017)
115. A. P. Rameshbabu, P. Ghosh, E. Subramani, K. Bankoti, K. Kapat, S. Datta, P. P. Maity, B. Subramanian, S. Roy, K. Chaudhury, S. Dhara, 'Investigating the potential of human placenta-derived extracellular matrix sponges coupled with amniotic membrane-derived stem cells for osteochondral tissue engineering', J. Mat. Chem. B 4 (4) pp613-625(2016)
116. B. Das, P. Dadhich, P. Pal, S. Dhara, 'Single Step Synthesized Sulfur and Nirogen Doped Carbon Nanodots from Whey Protein: Nanoprobes for Long term Cell Tracking Crossing the Barrier of Photo-toxicity', RSC Advances, 6 pp60794 – 60805(2016)
117. B. Mandal, D. Das, A. P. Rameshbabu, S. Dhara and S. Pal, 'A Biodegradable, biocompatible transdermal device derived from carboxymethyl cellulose and multi-walled carbon nanotube for sustained release of diclofenac sodium', RSC Adv., 6 pp19605-19611 (2016)
118. D. Das, A. P. Rameshbabu, P. Patra, P. Ghosh, S. Dhara, S. Pal, 'Biocompatible amphiphilic microgel derived from dextrin and poly(methyl methacrylate) for dual drugs carrier', Polymer, 107 pp282–291, (2016)
119. D. Das, P. Patra, P. Ghosh, A. P. Rameshbabu, S. Dhara, S. Pal, 'Dextrin and poly (lactide)-based biocompatible and biodegradable nanogel for cancer targeted delivery of doxorubicin hydrochloride', Polymer Chemistry 7 (17) pp2965-2975 (2016)
120. J. Jana, M. Ganguly, B. Das, S. Dhara, Y. Negishi, T. Pal, 'One pot synthesis of intriguing fluorescent carbon dots for sensing and live cell imaging', Talanta 150, pp253-264(2016)
121. N. K. Francis, H. S. Pawar, P. Ghosh, S. Dhara, 'In situ iodination cross-linking of silk for radio-opaque antimicrobial surgical sutures', ACS Biomater. Sci. Eng., 2 (2) pp188–196(2016)
122. P. Dadhich, B. Das, P. Pal, P. K Srivas, J. Dutta, S. Ray, and S. Dhara, 'A Simple Approach for Eggshells based 3D Printed Osteoinductive Multi-phasic Calcium Phosphate Scaffold', ACS Appl. Mater. Interfaces, 8(19) pp11910-24(2016)
123. H. S. Pawar, N. K. Francis, A. P. Rameshbabu, S. Dhara, '2,5-Dihydro-2,5-dimethoxyfuran crosslinked silk-chitosan blend tubular construct for vascular graft application', Materials Today Communications [8] pp139-147(2016)
124. P. Patra, A. Prabhu Rameshbabu, D. Das, S. Dhara, A. Baran Panda and S. Pal, 'Stimuli-responsive, biocompatible hydrogel derived from glycogen and poly(*N*-isopropylacrylamide) for colon targeted delivery of ornidazole and 5-amino salicylic acid', Polymer Chemistry, 7 pp5426-5435(2016)
125. P. Pal, P. K. Srivas, P. Dadhich, B. Das, P. P. Maity, D. Moulik, S. Dhara, 'Accelerating full thickness wound healing using collagen sponge of mrigal fish (Cirrhinuscirrhosus) scale origin', Inter. J. Biol. Macromol, 93 pp1507-1518 (2016)

126. S. Sen, S. Konar, B. Das, A. Pathak, S. Dhara, S. Das Gupta, S Das Gupta, 'Inhibition of fibrillation of human serum albumin through interaction with chitosan-based biocompatible silver nanoparticles', RSC Advances 6 (49) pp43104-43115(2016)
127. A. Roy, P. Dadhich, S. Dhara, S. De, 'In Vitro Cytocompatibility and Blood Compatibility for Polysulfone blend, surface modified polysulfone and Polyacrylonitrile membranes for hemodialysis', RSC Advances, **5** pp7023-7034 (2015)
128. A. P. Rameshbabu, S. Mohanty, K. Bankoti, P. Ghosh, S. Dhara, 'Effect of Alumina, Silk and Ceria Short Fibers in Reinforcement of Bis-GMA/TEGDMA Dental Resin', Composites Part B: Engg. 70 pp238-246(2015)
129. D. Das, P. Ghosh, A. Ghosh, C. Haldar, S. Dhara, A. B. Panda, and S. Pal, 'Stimulus-responsive, Biodegradable, Biocompatible, Covalently Crosslinked Hydrogel Based on Dextrin and Poly (N-isopropyl acrylamide) for In-vitro/In-vivo Controlled Drug Release', ACS Applied Materials & Interfaces, 7 pp14338-14351(2015)
130. D. Das, P. Ghosh, S. Dhara, A.B. Panda, S. Pal, 'Dextrin and Poly (Acrylic Acid) Based Biodegradable, Non Cytotoxic, Chemically Crosslinked Hydrogel for Sustained Release of Ornidazole and Ciprofloxacin', ACS Applied Materials & Interfaces, 7 (8) pp4791-4803(2015)
131. M. Ganguly, J. Jana, B. Das, S. Dhara, A. Pal, T. Pal, 'Orange-red silver emitters for sensing application and bio-imaging, Dalton Transactions', 44 (25) pp11457-11469(2015)
132. P. Dadhich, B. Das, S. Dhara, 'Microwave assisted rapid synthesis of N-methylene phosphonic chitosan via Mannich-type reaction', Carbohydrate polymers 133 pp345-352(2015)
133. P. Dadhich, P. K. Srivas, S. Mohanty, S. Dhara, 'Microfabrication of green ceramics: Contact vs. non-contact machining', J. Eurp. Ceram. Soc. 35 (14) pp3909-3916 (2015)
134. P. Ghosh, A. P. Rameshbabu, D. Das, N. K. Francis, H. S. Pawar, B. Subramanian, S. Pal, S. Dhara, 'Covalent cross-links in polyampholytic chitosan fibers enhances bone regeneration in a rabbit model', Colloids and Surfaces B: Biointerfaces, 125 pp160-169(2015)
135. P. S. Sanal, S Panja, P Mandal, S Dhara, S Chattopadhyay, 'Organic solvent-free low temperature method of preparation for self-assembled amphiphilic poly (ϵ-caprolactone)–poly (ethylene glycol) block copolymer based nanocarriers for protein delivery', Colloids and Surfaces B: Biointerfaces 135 pp510-517(2015)
136. P. Majumdar, S. B. Singh, S Dhara, M. Chakraborty, 'Influence of boron addition to Ti-13Zr-13Nb alloy on MG63 osteoblast cell viability and protein adsorption' Materials Science and Engineering C 46 pp62–68(2015)
137. R. Das, D. Das, P. Ghosh, S. Dhara, A.B. Panda, S. Pal, 'Development and application of a nanocomposite derived from crosslinked HPMC and Au nanoparticles for colon targeted drug delivery', RSC Advances, 5 pp27481-27490(2015)
138. R. Das, D. Das, P. Ghosh, A. Ghosh, S. Dhara, A.B. Panda, S. Pal, 'Novel pH-responsive graft copolymer based on HPMC and poly(acrylamide) synthesized by microwave irradiation: application in controlled release of ornidazole', Cellulose, 22 pp313-327(2015)

139. S. Mukherjee, S. Dhara, P. Saha, 'Enhancing the biocompatibility of Ti6Al4V implants by laser surface microtexturing: an in vitro study', International J. Adv. Manufac. Tech., 76 pp5-15(2015)
140. B. Das, P. Dadhich, P. Pal, P. K. Srivas, K. Bankoti and S. Dhara, 'Carbon Nanodots from Date Molasses: New Nanolight to Scavenge Reactive Oxygen Species In Vitro', J. Mater. Chem. B, 2 pp6839-6847(2014)
141. C. Mondal, A. K. Sinha, M. Ganguly, J. Pal, S. Dhara, Y. Negishi and T. Pal, 'Deposition of Zinc Oxide Nanomaterial on different substrates as a thin film for useful applications', CrystEng. Comm, 16 pp 4322-4328(2014)
142. P. Ghosh, M. Das, A. P. Rameshbabu, D. Das, S. Datta, S. Pal, A. B. Panda, and S. Dhara, 'Chitosan Derivatives Cross-Linked with Iodinated 2,5-Dimethoxy-2,5-dihydrofuran for Non-Invasive Imaging', ACS Appl. Mater. Interfaces, 6(20) pp 17926-36(2014)
143. P. Ghosh, A. P. Rameshbabu, and S. Dhara, 'Citrate Cross-Linked Gels with Strain Reversibility and Viscoelastic Behavior Accelerate Healing of Osteochondral Defects in a Rabbit Model', Langmuir, 30 (28) pp8442–8451(2014)
144. P. Ghosh, A. P. Rameshbabu, N. Dogra and S. Dhara, '2,5-Dimethoxy 2,5-dihydrofuran crosslinked chitosan fibers enhance bone regeneration in rabbit femur defects', RSC Adv., 4 pp19516-19524(2014)
145. P. S. Sanal, S. Dhara, S. Chattopadhyay, 'Heat-chill Method of Preparation for Self-Assembled Amphiphilic Poly(ε-caprolactone)-Poly(ethylene glycol) Block Copolymer based Micellar Nanoparticles for Drug Delivery', Soft Matter, 10 pp 2150-2159(2014)
146. P. S Sanal, S. Dhara, S. Chattopadhyay, 'Thermo responsive biodegradable PEG PCL PEG based injectable hydrogel for pulsatile insulin delivery', J. Biomed. Mat. Res. Part A, 102A pp1500–1509(2014)
147. P. Datta, G. Thakur, J. Chatterjee, S. Dhara, 'Biofunctional phosphorylated chitosan hydrogels prepared above pH 6 and effect of crosslinkers on gel properties towards biomedical applications', Soft Materials 12, pp27–35(2014)
148. A. K. Pandey, F Pati, D. Mandal, S. Dhara, K. Biswas, 'In vitro evaluation of osteoconductivity and cellular response of zirconia and alumina based ceramics', Materials Science and Engineering: C, 33 97) pp3923–3930(2013)
149. D. Das, R. Das, P. Ghosh, S. Dhara, A. B. Panda, S. Pal, 'Dextrin cross linked with poly (HEMA): a novel hydrogel for colon specific delivery of ornidazole', RSC Advances 3 (47), pp25340-25350(2013)
150. F. Pati, H. Kalita, B. Adhikari, S. Dhara, 'Osteoblastic Cellular Responses on Ionically Cross-linked Chitosan-Tripolyphosphate Fibrous 3D Mesh Scaffolds', J. Biomedical Materials Research, Part A, 101A pp2526–2537(2013)
151. P. Datta, J. Chatterjee, S. Dhara, 'Phosphate functionalized and lactic acid containing graft copolymer: synthesis and evaluation as biomaterial for bone tissue engineering application', Journal of Biomaterials Science Polymer Edition, 24(6) pp696-713(2013)
152. P. Datta, P. Ghosh, K. Ghosh, P. Maiti, S. K. Samanta, S. K. Ghosh, P. K. Das Mohapatra, J. Chatterjee, S Dhara, 'In Vitro ALP and Osteocalcin Gene Expression Analysisand in Vivo Biocompatibility of N-Methylene Phosphonic Chitosan Nanofibers for Bone Regeneration', J. Biomed. Nanotech., 9(5) pp870-879(2013)
153. P. P. Maity, S. Chatterjee, R. K. Das, S. Mukhopadhyay, A. Maity, D. Maulik, A. K. Ray, S. Dhara, J. Chatterjee, 'Finding an optimum immuno-histochemical feature set to distinguish benign phyllodes from fibroadenoma', Micron 48 pp34-41(2013)

154. P. Dadhich, B. Das, S. Dhara, 'Single Step Sintered Calcium Phosphate Fibers from Avian Egg Shell', International J. Modern Physics: 22, pp305-312(2013)
155. S. Mohanty, A. P. Rameshbabu, S. Dhara, 'Net Shape Forming of Green Alumina via CNC Machining using Diamond Embedded Tool', Ceramics International, 39(8) pp8985-8993(2013)
156. S. Mohanty, A. P. Rameshbabu, S. Mandal, B. Su, S. Dhara, 'Critical issues in near net shape forming via green machining of ceramics: A case study of alumina dental crown', J. Asian Ceram Soc. 1 (3) pp274-281(2013)
157. S. Mohanty, B. Das, S. Dhara, 'Poly (maleic acid)–A novel dispersant for aqueous alumina slurry', J. Asian Ceram Soc. 1 pp 184–190(2013)
158. S. Das, F. Pati, S. Chameettachal, S. Pahwa, A. R. Ray, S. Dhara, and S. Ghosh, 'Enhanced Redi erentiation of Chondrocytes on Microperiodic Silk/Gelatin Sca olds: Toward Tailor-Made Tissue Engineering', Biomacromolecules, 14 pp 311 – 321(2013)
159. S. Dey Sarkar, B. Farrugia, T. Dargaville, S. Dhara, 'Chitosan-collagenscaffolds withnano/micro fiber architecture for skin tissue engineering application', J. Biomed. Mat. Res., Part A, 101 (12) pp3482–3492(2013)
160. S. Dey Sarkar, B. Farrugia, T. Dargaville, S. Dhara, 'Physico-chemical/Biological properties of tripolyphosphate cross-linked chitosan based nanofibers', Materials Science and Engineering C 33 (3), pp. 1446-1454(2013)
161. F. Pati, P. Datta, B. Adhikari and S. Dhara, K.Ghosh, P. K. Das Mohapatra, 'Collagen scaffolds derived from fresh water fish origin and their biocompatibility', J. Biomed. Mat. Res. Part A, 100A: pp1068-1079(2012)
162. F. Pati, B. Adhikari, S. Dhara, 'Collagen intermingled chitosan-tripolyphosphate nano/micro fibrous scaffolds for tissue-engineering application', J. Biomat. Sci., Polymer Edition, 23 (15) pp 1923-1938(2012)
163. P. Datta, S. Dhara, J. Chatterjee, Hydrogels and electrospun nanofibrous scaffolds of N-methylene phosphonic chitosan as bioinspired osteoconductive materials for bone grafting., Carbohydrate Polymers, 87 pp1354-62(2012)
164. F. Pati, B. Adhikari and S. Dhara, 'Development of chitosan-tripolyphosphate non-woven fibrous scaffolds for tissue engineering application., J Mater Sci: Mater Med, (23) pp1085-1096(2012)
165. P. Majumdar, S. B. Singh, S. Dhara, M. Chakraborty J., Influence of in situ TiB reinforcements and role of heat treatment on mechanical properties and biocompatibility of beta Ti-alloys., Mechanical Behaviour of Biomedical Materials, 10 pp1-10(2012)
166. P. Datta, J. Chatterjee, S. Dhara, 'Electrospun nanofibers of a phosphorylated polymer-A bioinspired approach for bone graft applications', Colloids and Surfaces B: Biointerfaces, 94 pp177-183(2012)
167. S. Mohanty, A. P. Rameshbabu, S. Dhara, Alpha-Alumina Fiber with Platelet Morphology through Wet Spinning., J. Am. Ceram. Soc, 94[4] pp1234-1240 (2012)
168. A. A. Gokhale, N.V. Ravi Kumar, B. Sudhakar, S. N. Sahu, H. Basumatary, and S. Dhara, Cellular Metals and Ceramics for Defence Applications., Defence Science Journal, 61 [6] pp567-57 (2011)
169. A. Barui, P. Banerjee, R. Kumar Das, S. K. Basu, S. Dhara, and J. Chatterjee, 'Immunohistochemical Evaluation of p63, E-Cadherin, Collagen I and III Expression in Lower Limb Wound Healing under Honey', Evidence-Based Complementary and Alternative Medicine, pp1-8(2011)

170. A. Barui, R. Patra, R. K. Das, S. Dhara, P. K. Dutta, J. Chatterjee, 'Swept-Source Optical Coherence Tomography of Lower Limb Wound Healing with Histo-pathological Correlation', J. Biomed. Opt. 16, pp026010(2011)
171. D. Mishra, B. Bhunia, I. Banerjee, P. Datta, S. Dhara, T. K. Maiti, 'Enzymatically crosslinked carboxymethyl-chitosan/gelatin/nano-hydroxyapatite injectable gels for in situ bone tissue engineering application', Materials Science and Engineering C, (31) pp1295-1304(2011)
172. F. Pati, B. Adhikari and S. Dhara, 'Development of chitosan-tripolyphosphate fibers through pH dependent ionotropic gelation', Carbohydrate Research, 346, 2582-2588 (2011)
173. F. Pati, B. Adhikari, S. Dhara, 'Development of Ultrafine Chitosan Fibers through Modified Wetspinning Technique', J. Appl. Polym. Sci., 121 [3] pp1550–1557(2011)
174. A. Barui, P. Banerjee, R. K Das, S Dhara, J. Chatterjee, 'Correlating Optical Biopsy with Histopathology of Wounds under Topical Intervention with Honey', IEEE Explore, (2010)
175. A. Barui, R. K. Das, S. Dhara, J. Chatterjee, R. Dev Das, A. K. Ray, C. Roy Chaudhuri, 'Simple Cytosensor Based Electrical Characterization of Keratinocytes and Fibroblasts with Prime Molecular Expressions towards Skin Tissue Engineering Applications', IEEE Explore, (2010).
176. B. Dineshkumar, P. Vignesh kumar, S. P. Bhubaneshwaran, A. Mitra, M. Manjunatha, S Dhara, J Chatterjee, 'Nuts and Seeds Bioactive Compounds and Related Nutraceutical Properties –A Review', Int. J Food Safety Nutr, Public Health Technology, 2 (1): pp1-8 (2010).
177. F. Pati, B. Adhikari, S. Dhara, 'Isolation and characterization of fish scale collagen of higher thermal stability', Bioresource Technology, 101, pp3737-3742 (2010).
178. F. Pati, B. Adhikari, S. Dhara, 'Freeze Dried Fish Scale Collagen: A Potential Matrix for Tissue Engineering and Wound Dressing', Proceedings of International Conference on Biotechnology and Food Science (ICBFS 2010) held in Bangalore& World Academic Union (World Academic Press), UK (2010)pp 115-119.
179. F. Pati, B. Adhikari, S. Dhara, 'Fish Collagen: A Potential Material for Biomedical Application' IEEE Explore, (2010).
180. F. Pati, P. Datta, J. Chatterjee, S. Dhara, B. Adhikari, 'Development of Chitosan-Tripolyphosphate Fiber for Biomedical Application', IEEE Explore, (2010).
181. P. P. Maity, A. K. Maity, S. Mukhopadhya, A. Sadhu, D. J. Moulik, S. Chatterjee, A. Ghosh, P. Banerjee, S. Dhara, and J. Chatterjee, 'Distinguishing Phyllodes from Fibroadenoma by Immunohistochemical and Swept Source-Optical Coherence Tomography Studies', IEEE Explore, (2010).
182. L. Yin, H.X. Peng, S. Dhara, L. Yang, B. Su, 'Natural additives in protein coagulation casting process for improved open porosity', Composites Part B: Engineering, 40, [7], pp638-644(2009).
183. B. Su, S. Dhara and L. Wang, 'Ceramic green machining: a top-down approach for the rapid fabrication of complex shaped ceramics', J. Euro. Ceram. Soc., article in press, 28, 11, pp2109–2115 (2008).
184. L. Yin, H. X. Peng, S. Dhara, L. Yang, B. Su, 'Improvement of Microstructural Controllability of Cellular Ceramics for Multifunctional Composites', Advanced Materials research, 47-50, pp944-947 (2008).
185. B. Su, X. He, S. Dhara and J. P. Mansell, 'Porous and Bioactive Alumina Ceramics for Bone Grafts and Tissue Engineering Scaffolds', Key Engineering Materials, 330-332, pp975-978, (2007).

186. M. Ngiam, T. R. Hayes, S. Dhara and B. Su, 'Biomimetic Apatite/Polycaprolactone (PCL) Nanofibers for Bone Tissue Engineering Scaffolds', Key Engineering Materials, pp330-332, 991-994 (2007).
187. S. Dhara, P. Bhargava, 'Influence of Slurry Composition and Rheology on Microstructure and Mechanical Properties of Alumina Foams', Int. J. Appl. Ceram. Technol., 3 [5] pp382–392 (2006).
188. M. Ngiam, S. Dhara, B. Su, 'Biomimetic Synthesis of Apatite on Polycaprolactone for Bone Tissue Engineering', European Cells and Materials Vol. 10. Suppl. 2, p70 (2005).
189. S. Dhara and B. Su, 'Green Machining to Net Shape Alumina Ceramic Prepared using Different Processing Routes', International J. Appl. Ceram. Tech., 2 [3] pp261–269 (2005).
190. S. Dhara, 'Synthesis of Nano-crystalline Alumina Using Egg White', J. Am. Ceram. Soc. 88 [7] pp2003-2004(2005).
191. S. Dhara, P. Bhargava, 'Influence of Nature and Amount of Dispersant on Rheology of Aged Alumina Slurries', J. Am. Ceram. Soc. 88 [3] pp547-552 (2005).
192. S. Dhara, M. Pradhan, D. Ghosh and P. Bhargava, 'Nature Inspired Novel Processing Routes to Ceramic Foams'- *An invited article* published in a special issue on porous materials brought out by British Ceramic Transaction renamed as Advances in Appl. Ceram., 104 [1] pp1-13(2005)
193. D. Ghosh, S. Dhara and P. Bhargava, 'Fabrication of Green SiC Compacts', Am. Ceram. Soc. Bull., 83 [12] pp9101-9106(2004).
194. D. Ghosh, S. Dhara and P. Bhargava, 'Simplified Aqueous Gelcasting of Silicon Carbide Compacts', T Indian Ceram Soc, 63 [4] pp199-202 (2004).
195. S. Dhara, M. Pradhan, P. Bhargava, 'Direct casting technologies: Transcending the barriers in ceramic fabrication', "INVESTMENT CASTING" Edited by B. N. Mondal, J. Basu, N. P. Mukherjee and G. P. Sinha, Allied Publishers Pvt. Ltd., New Delhi, pp38-41, 2004.
196. P. Bhargava, S. Dhara, 'Protein Coagulation Casting of Ceramics', *An invited topical review* in the Proceedings of International Conference by the Indian Ceram. Soc., Pages 44-51. PROCER edited by V.N. Vaidya, S.Majumder, A. V. R. Reddy and S. Muralidhar on 21-24th December 2004.
197. S. Dhara, P. Bhargava, K. Sri. Ramakanth, 'Deairing of Aqueous Gelcasting Slurries', Am. Ceram. Soc. Bull., 83 [2] pp9201-9206 (2004).
198. R. K. Kamboj, S. Dhara and P. Bhargava, 'Machining behaviour of green gelcast ceramics', J. Eur. Ceram. Soc., 23 [7] pp1005-1011 (2003).
199. S. Dhara and P. Bhargava, 'A simple direct casting route to ceramic foams', J. Am. Ceram. Soc., 86 [10] pp1645–50(2003).
200. S. Dhara, R. K. Kamboj, M. Pradhan and P. Bhargava, 'Shape forming of ceramics via gelcasting of aqueous particulate slurries', Bull. Mater. Sci., 25 [6] 565-568(2002).
201. S. Dhara, M. Pradhan, P. Bhargava, 'Critical aspects in shape forming of ceramics via gelcasting of aqueous particulate slurries', Proc. of the Intl. Conf. on Advances in Materials and Materials Processing, Pub. Tata McGraw Hill, Ed. by N. Chakraborti and U.K. Chaterjee, pp. 202 – 206, IIT Kharagpur (2002).
202. S. Dhara and P. Bhargava, 'An environmental friendly low cost binder for gelcasting of ceramics', J. Am. Ceram. Soc., 84 [12] pp3048-50 (2001).

Books and Book Chapters:

1. JL Parimi, H Bora, B Saha, K Dixit, S Dhara, B Guntupalli, P Manchikanti, 'The uses of carbon dots as potential materials for future tissue engineering, Book titled "Carbon Dots: Next-generation materials for biomedical applications", Publisher: IOP Publishing, 2022
2. PK Byram, L Das, KC Sunka, G Kulkarni, S Dhara, N Chakravorty, 'Silk Fibroin-Based Biomaterials in Biomedical Applications', Functional Biomaterials, 203-244, 2022, Springer, Singapore
3. G Kulkarni, K Dixit, JL Parimi, H Bora, B Saha, S Das, S Dhara, 'Conducting Polymers for Biomedical Imaging', Conducting Polymers, 207-222, 2022, CRC Press
4. P Guha Ray, B Saha, P Vaidya, H Bora, K Dixit, A Biswas, S Dhara, 'Tailoring Multi-Functional 1D or 2D Nanomaterials: An Approach towards Engineering Futuristic Ultrasensitive Platforms for Rapid Detection of Microbial Strains', BioSensing, Theranostics, and Medical Devices, 233-264, 2022, CRC Press
5. Atul Kumar Ojha, Ragavi Rajasekaran, Anurag Kumar Pandey, Abir Dutta, Venkata Sundeep Seesala, Subrata K Das, Koel Chaudhury, Santanu Dhara, 'Nanotheranostics: Nanoparticles Applications, Perspectives, and Challenges', BioSensing, Theranostics, and Medical Devices, 345-376, 2022, Springer, Singapore
6. 3D Printing: Challenges and Its Prospect in Futuristic Tissue Engineering Applications, Abir Dutta, Trina Roy, Preetam Guha Ray, Ragavi Rajasekaran, Mamoni Banerjee, Santanu Chattopadhyay, Sanjay Gupta, Santanu Dhara, 2020, Book titled 3D Printing in Biomedical Engineering, 1-22, Publisher: Springer, Singapore
7. PG Ray, R Rajasekaran, T Roy, A Dutta, B Saha, H Bora, SK Das, S Dhara, 'Engineered surfaces: A plausible alternative in overviewing critical barriers for reconstructing modern therapeutics or biomimetic scaffolds', Regenerated Organs, 39-80, 2021, Book title: Regenerated Organs: Future Perspectives, 2021, Pages 39-80, Academic Press, edited by CP Sharma
8. PK Byram, L Das, S Dhara, N Chakravorty, 'Natural polymeric hydrogels in chondral/osteochondral tissue engineering', Elsevier. https://doi. org/10.1016/B978-0-12-820352-1.00097-3, 2021, Reference Module in Materials Science and Materials Engineering,
9. K. Kapat, S. Dhara, 'Bio-polymers modification and their utilization in bio-mimetic composites for osteochondral tissue engineering', Handbook of Composites from Renewable Materials, Vol. 4, (eds V. K. Thakur, M. K. Thakur, M. R. Kessler), Wiley Scrivener, Chapter 10 pp253-285, (2017)
10. P. Ghosh, K. Kapat, S. Dhara, 'Polymer Modifications and Recent Technological Advances towards Live Cell Encapsulation and Delivery', Chapter 8, Surface modification of Biopolymers; Wiley Publications (Invited book chapter pp 194-223) edited by Vijay Kumar Thakur and Amar Singh Singha (ISBN: 978-1-118-66955-6)
11. S. Dhara, P. Datta, S. De Sarkar, P. Pal, 'Processing and Industrial aspects of fish scale collagen: a biomaterials perspective' a book chapter by (2012), 'Marine Proteins and Peptides' edited by Se-Kwon Kim. Pub: Willey and Blackwell, Print ISBN: 9781118375068

Abstracts accepted in Conferences:

1. Multi-stimuli Responsive Biphasic Dual Network Hydrogel For Drug Delivery, N Kumar, SK Ghorai, B Ghosh, S Dhara, S Chattopadhyay, TISSUE ENGINEERING PART A 28, 255-255, 2022, MARY ANN LIEBERT, INC
2. Induction of Polyaniline as Electro-Active Based Biomaterial Incorporated in Silk Fibroin/Polycaprolactone Nanofibrous Scaffold for Full-Thickness Wound Healing Application, R Rajasekaran, V Seesala, AK Ojha, M Banerjee, S Dhara,TISSUE ENGINEERING PART A 28, 400-400, 2022, MARY ANN LIEBERT, INC
3. P-466 Decellularization of whole organ human cervix: Physio and biochemical aspects of decellularized extracellular matrix', P Pal Chaudhuri, AK Ojha, R Rajasekaran, S Sharma, S Dhara, K Chaudhury, B Chakravarty, Human Reproduction 37 (Supplement_1), deac107. 438
4. Sonication aided hierarchical tailoring of zno/ag nanoparticles on a natural substrate towards enhanced wound regeneration, PG Ray, S Biswas, P Basak, S Dhara, Tissue engineering part a 28, s227-s227, 2022
5. Biomolecule immobilized 3d printed nanohybrid scaffolds for accelerated bone tissue regeneration
6. S K Ghorai, T Roy, S Dhara, S Chattopadhyay, Tissue engineering part a 28, s164-s165, 2022
7. Induction of polyaniline as electro-active material in silk fibroin loaded nanofibrous scaffold for tissue regeneration, R Rajasekaran, Pg Ray, A Dutta, Ak Ojha, M Banerjee, S Dhara, Tissue engineering part a 28, s145-s145, 2022
8. Biodegradable scaffold for mullerian anomaly: fabrication and in-vitro study to improve women's reproductive health, Atul Kumar Ojha, Ragavi Rajasekaran, Abir Dutta, Sunita Sharma, Kamal Oswal, Santanu Dhara, Koel Chaudhury, Tissue engineering part a 28, s201-s202, 2022
9. Facile approach for imaging cells on non-transparent polypyrrole incorporated sf/gel matrices using clove derived carbon nanodots, G Kulkarni, PG Ray, AK Pandey, S Dhara, S Das, Tissue engineering part a 28, s610-s610, 2022
10. Evaluation of keratin rich electrospun nanofibrous scaffold for skin tissue engineering, K Dixit, R Rajasekaran, G Mukherjee, S Dhara, Tissue engineering part a 28, s224-s224, 2022
11. 'Reverse Engineering Approach for Customized Dental and Maxillofacial Implants of Alumina Fiber Reinforced Composite', 2nd International Conference on Emerging Materials: Characterization &Application (EMCA-2017), March 15-17, 2017, National Institute of Technology, Durgapur, India
12. 'Rapid Interconnected Porous Membranes by Blending Chitosan and Polyurethan Diol as Extracellular Matrix Surrogate', K. Bankoti, S. Dhara, accepted in MRS Fall Meeting and Exhibit held on 27th Nov to 2nd December 2016 at Boston, Massachusetts, USA
13. 'Micropatterned Copper Substituted Calcium Phosphate/Gelatin Nanocomposite Scaffolds for Vascularized Bone Grafts', 2nd International Conference on Emerging Materials: Characterization & Application (EMCA-2017), March 15-17, 2017, National Institute of Technology, Durgapur, India, (Oral EMCA-NITD-2017)

14. ‘Laser Patterned ZnO Substituted Calcium Phosphate Scaffolds via Viscous Polymer Processing for Bone Graft’, 2nd International Conference on Emerging Materials: Characterization &Application (EMCA-2017), March 15-17, 2017, National Institute of Technology, Durgapur, India, (Poster EMCA-NITD-2017)
15. SayantiDatta and Santanu Dhara, ‘Electrospun Fatty Acid Modified Chitosan/Gelatin Hybrid Nanofiber: A Biomimetic Scaffold for Skin Tissue Engineering’, accepted in MRS Fall Meeting and Exhibit held on 27th Nov to 2nd December 2016 at Boston, Massachusetts, USA
16. Rameshbabu, A. P.; Dhara, S.; Bis-GMA/TEGDMA Dental Resin Reinforced with Alumina, Silk and Ceria Short Fibers, MRS Fall Meeting & Exhibit 2016, held on 27th Nov to 2nd December 2016 at Boston, Massachusetts, USA
17. K Kapat, PK Srivas, et al. (2016) Bioactive Porous Ti6Al4V as Cancellous Bone Substitute. BiTerm2016, 26th Annual Meeting of SABOI and 9th Annual Meeting of STERMI, India. Indian Institute of Technology Delhi, New Delhi, India. 15th-17th April. (Poster)
18. K Kapat, PK Srivas, et al. (2016) Porous titanium for orthopedics: fabrication and biological assessment. WBC2016, 10th World Biomaterials Congress, Montreal, QC Canada 17th -22nd May. (Oral)
19. ‘Human Placenta Derived Extracellular Matrix Sponges for Osteochondral Tissue Engineering’, A Rameshbabu, S Dhara, TISSUE ENGINEERING PART A 22, S10-S10, 2016
20. ‘Macro porous blend membrane of Chitosan and Polyurethane diol as skin graft’, K Bankoti, S Dhara, TISSUE ENGINEERING PART A 22, S97-S98, 2016
21. ‘Cell-Microsphere Construct for Cutaneous Wound Healing’, S Datta, S Dhara, TISSUE ENGINEERING PART A 22, S104-S104, 2016
22. ‘Bioactive Titanium Foam for Skeletal Tissue Reunion’ K Kapat, PK Srivas, S Dhara, TISSUE ENGINEERING PART A 22, S119-S120, 2016
23. ‘2, 5-Dimethoxy-2, 5-Dihydro-Furan (DMDF) Cross-linking of Plain Catgut for Radio-opaque Antimicrobial Surgical Sutures’, N Francis, HS Pawar, S Dhara, A Mitra, TISSUE ENGINEERING PART A 22, S129-S129, 2016
24. ‘Copper Doped Hydroxyapatite Gelatin Micro Patterned Nanocomposite Scaffolds for Bone Graft with Enhanced Angiogenesis’, B Das, P Dadhich, P Pal, PK Srivas, S Dhara, TISSUE ENGINEERING PART A 22, S88-S88, 2016
25. ‘Ti6Al4V Lattice Structure by Extrusion Printing for Skeletal Tissue Healing’ PK Srivas, K Kapat, P Dadhich, J Dutta, S Dhara, TISSUE ENGINEERING PART A 22, S89-S89, 2016
26. Functionalized Polymeric Composite Nano-Fibrous Scaffold for Bone Tissue Engineering at 27th Annual Conference of the European Society for Biomaterials (ESB) held in Kraków, Poland, 30 August-3 September 2015.
27. Nano microfibrous scaffold for burn wound healing- 27th European Conference on Biomaterials ESB2015, The Royal City of Krakow, Poland, held on 30th August 2015 to 3rd September 2015
28. Fabrication Of Fluorescent Nanofibers For Monitoring Wound Healing Invivo - 4th TERMIS World Congress, at Boston, MA, US, held on September 8-11, 2015
29. Bone Grafts Designed Via Biomimetic Approach from Natural Origin Materials at TERMIS World Congress (2015) held in Boston, USA, 8 - 11 September 2015
30. Bone grafts designed via bio-mimetic approach from natural origin materials, At Health Tech Innovations 2015, held at IIT Mumbai, 9-10 January, 2015

31. Delivered invited lecture in workshop organized State Council of Science and Technology with the sponsorship of West Bengal DST at B.M.T. Sikhaniketan on 30th January, 2015
32. Heat-chill method of preparation for self-assembledamphiphilic block copolymer micellar nanoparticles for drug delivery inInternational conference on functional materials (Poster Presentation) IIT Kharagpur, February 5 - 7 (2014)
33. Electrospunpolycaprolactone/collagen nanofiber composite for skin tissue engineering presented in Second International Conference on Medical Materials, Devices and Regenerative Medicine (MMDRM) Feb, 2014, Kathmandu, Nepal
34. Nano/microfibrous chitosan/collagen composite for skin tissue engineering, presented in International Conference on Functional Materials (ICFM-2014), IIT Kharagpur, Feb, 2014
35. Reconstruction of Customized Mandible using Alumina Fiber Reinforced Polymer Composite by 3D imaging, Rapid Tooling and Molding, MMDRM, Nepal, January, 2014
36. Nano Silver Substituted Hydroxyapatite, Gelatin, Alginate and SPION Composite Fibrous scaffolds for Bone tissue Engineering in TERMIS AM 2014 (Washington DC 16th December, 2014)
37. Development of Bioactive 3D Scaffold with Nano/Micro Hierarchy for Bone Tissue Engineering through Combinatorial Approach at International Conference on Soft Materials, held at MNIT, Jaipur, 06-10 October, 2014
38. Nano-Micro Architectural Hybrid Composite Scaffold for Bone Tissue Engineering at 26th Annual Conference of the European Society for Biomaterials (ESB-2014) held at University of Liverpool, UK, 31 August-3 September 2014.
39. Development of multi-phasic flower-like agglomerates of calcium phosphate fibrous scaffolds from egg shell for bone graft at International Conference on Functional Materials (ICFM), held at IIT Kharagpur, 5-7 February, 2014
40. Development of multi-phasic calcium phosphate fibrous scaffolds from egg shell for bone graft, At IInd International Conference on MMDRM 2014, held at Kathmandu, Nepal, 11-13 January, 2014
41. Nano-Silver Substituted Calcium Phosphate Gelatin Composites for Bone Tissue Engineering"- in ICFM 2014 IIT Kharagpur, January, 2014.
42. Non Photo-bleachable Selective Cell Cytoskeleton Imaging by Biomass Derived Highly Luminescent Carbon Nanodots, IMMT Bhubaneswar, Feb, 2014.
43. Comparison of Smooth and Rough Chitosan Fibers for Cellular Growth Investigations at 4th International Conference on Biomedical Engineering and Technology, Penang, Malaysia, March, 2014
44. Carbon Nano Dots from Whey Protein: Fluorescent Nanoprobe for Live cell Imaging and Reduced Super Oxide Activity at International Conference on Soft Materials (MNIT Jaipur October 11 2014)
45. Phosphorylated Alumina Fibrous Scaffolds for Bone Tissue Engineering at TERMIS-AP 2013 at Wu-Zhen, Sanghai, China, October, 2013
46. LASER Patterned Nano Silver Doped Calcium Phosphate Scaffolds for Bone Graft Application"- Presented in TERMIS-AM 2013, November, 2013
47. Development of multi-phasic calcium phosphate scaffolds from sea shell for bone graft, TERMIS-AP 2013 at Wu-Zhen, Sanghai, China, October, 2013
48. Hierarchical Chitosan-Collagen Scaffolds for Healing of Full Thickness Skin Lesions: In vitro and In vivo Evaluationat TERMIS-AP 2013 at Wu-Zhen, Sanghai, China, October, 2013

49. Self-assembled PEG-PCL-PEG nanoparticles for insulin delivery *in 3rd*FAPS Polymer Congress and MACRO IISc Bangalore, May 15-18 (2013)
50. Biodegradable PEG-PCL-PEG nanoparticles for celecoxib drug delivery *in* ICRRM IIT Kharagpur, March 6 - 9 (2013)
51. Thermo-responsive Biodegradable PEG-PCL-PEG Based Hydrogel for Insulin Deliveryin ICMAT MRS Singapore 30th June to 5th July (2013)
52. Phosphorylated Polymeric Fibrous Scaffolds: A Novel Approach towards Bioactivity in Bone Tissue Engineering-invited talk at International Conference on Designing of Biomaterials (Bind 12) organized by IISC Bangalore, 2012
53. Direct Laser Microgrooving of Ti6Al4V as a Surface Modification Method for Biological Implants presented at International Conference (PSAM) organized by IIT Guahati, 2012
54. Laser Microgrooving of Ti6Al4V and its Effect on Viability Human Osteoblast-like MG63 Cells- presented at International conference (AIMTDR'12) organized by Jadavpur University, 2012
55. Synthesis, Characterization and In Vitro Biocompatibility study of Patterned Calcium Phosphate Fibrous Scaffold from Sea Shell presented at Bind 12 at IISC Bangalore, International Conference on Designing of Biomaterials (2012)
56. Single Step Sintered Calcium Phosphate Fibres from Avian Egg Shell, presented at International Conference on Ceramics, organized by Govt. Engineering College Bikaner & Ceramic Electrical Research & Development Centre, Bikaner (ICC 2012)
57. Reconstruction of mandible using 3D imaging, rapid tooling and molding, at Bind 12 at IISC Bangalore, International Conference on Designing of Biomaterials.
58. 2,5-dimethoxy-2,5-dihydrofuran cross-linked chitosan for bone tissue engineering application at TERMIS World Congress, Vienna, September, 2012
59. Multiscale Fibrous Scaffolds for Skin Tissue Engineering at TERMIS World Congress, Vienna, September, 2012
60. 'Omics in Bone Tissue Engineering', International Conference on OMICS MEETS DISEASE and 3rd annual meeting of Proteomics Society (India) jointly organized by Saha Institute of Nuclear Physics (SINP), Indian Institute of Chemical Biology (IICB) and University of Calcutta at SINP Auditorium Complex, Salt Lake, Kolkata on 15-18 December, 2011
61. 'Electrospinning of Partially Phosphorylated Hydrogel Polymers Designed to Promote Rapid Mineralization and Osteoblast-like- Cells Adhesion', Accepted for Oral Presentation at Materials Research Society 2011 Fall Meeting, at Boston. USA during November 28-December 02, 2011
62. '*In vitro* cellular response of osteoblast cells on bioactive alumina fibrous sca olds', oral presentation at MRS Fall Meeting & Exhibit, Hynes Convention Centre, Boston, MA (2011)
63. 'Biocompatibility evaluation of Fish scale Collagen intermingled Chitosan based nano-fibers for Skin Tissue Engineering Application', at Materials Research Society Fall Meeting Boston, USA, November, 2011
64. 'Fabrication of custom specific dental crown through green stage machining of ceramics', International Conference on Biomaterials and Implants: Prospects and Possibilities in the New Millennium (BIO 2011) at CGCRI, Kolkata, 2011
65. 'Genipin Cross-linked N Methylene Phosphonic Chitosan Bio-hydrogels', Accepted Abstract for oral Presentation for 3rd International Congress on Biohydrogels to be held in Gould Institute, Florence, Italy, during November 8-12, 2011

66. ‘Honey-alginate Matrix for Tissue Engineering Application’, Accepted Abstract for oral Presentation for 3rd International Congress on Biohydrogels to be held in Gould Institute, Florence, Italy, during November 8-12, 2011
67. “Development of electrospunnanofibers of partially phosphorylated polymers and evaluation of cellular response by markers of osteogenic maturation”, Accepted Abstract for Poster Presentation for International Bone Tissue Engineering Congress to be held in Institute of Innovative Oral Surgery and Medicine, Hannover, Germany during October 12-15 2011
68. “Development of Biocompatible Scaffolds Based on Cross-linking of Phosphorylated Chitosan with Genipin”, Accepted Abstract for Poster Presentation for International Conference on Biomaterials and Implants: Prospects and Possibilities in the New Millennium (BIO 2011) at CGCRI, Kolkata to be held during 21-23 July, 2011
69. Phosphorylation of Polymers and their Electrospinning- Towards Development of Biomimetic Osteoconductive and Osteoinductive Matrices For Bone Regeneration, Accepted for poster presentation at World Conference on Regenerative Medicine to be held in November 2-4, 2011 Leipzig, Germany
70. Electro-spinning Chitosan for Skin Tissue Engineering Applications, TERMIS Asia-Pacific Meeting, Singapore, August 2011
71. Nano/Micro Architecture Chitosan-Collagen scaffolds for Tissue engineered Skin, International Conference on Biomaterials and Implants: Prospects and Possibilities in the new Millennium organized by Central Glass and Ceramic Research Institute in July, 2011
72. Tripolyphosphate treated Chitosan based nano-fibers for Skin Tissue Engineering Applications, International Conference on Surface and Interface of Biomaterials, Japan, July 2011
73. Honey based fibrous scaffold for tissue engineering application, Barui, A., Banerjee, P., K. Das, R., Dhara, S., Chatterjee, J. 2011 Proceedings of the 2011 IEEE/NIHLife Science Systems and Applications Workshop, LiSSA 2011 , art. no. 5754161, pp. 83-85
74. A simple and sensitive cytosensor based electrical characterization of in vitro wound healing assay for keratinocytesMondal, N., Mondal, D., Roychaudhuri, C., Barui, A., Dhara, S., Chatterjee, J. 2011 Proceedings of the 2011 IEEE/NIH Life Science Systems and Applications Workshop, LiSSA *2011* , art. no. 5754152, pp. 47-50
75. Honey Based Fibrous Scaffold for Tissue Engineering. IEEE/NIH Life Science Systems & Applications Workshop. April 7-8, 2011, Bethesda, Maryland, USA
76. A Simple and Sensitive Cytosensor Based Electrical Characterization of in vitro Wound Healing Assay for Keratinocytes. IEEE/NIH Life Science Systems & Applications Workshop, Bethesda, Maryland, USA (April 7-8, 2011)
77. Honey based Fibrous Scaffold for Tissue Engineering Application. International Conference on Biomaterials and Implants: Prospects and Possibilities in the New Millennium (BIO 2011) CGCRI, Kolkata (21-23 July, 2011)
78. ‘Effect of Ionic and Covalent Crosslinking on Physicochemical Properties of Chitosan Fiber’, Macro - 11th international conference on Frontiers of Polymers and Advanced Materials, New Delhi, India, 15-17th December, 2010.
79. ‘Development of chitosan-tripolyphosphate fiber for biomedical application’, Students' Technology Symposium (TechSym), IEEE pp. 77-81 (2010)
80. Nanofibrous Chitosan Collagen composite scaffold for biological skin substitute, Bangalore Nano 2010, Bangalore, December 2010

81. Chitosan Collagen composite scaffold for tissue engineering of skin, TERMIS Asia-Pacific Meeting, Sydney, September 2010
82. 'Honey based fibrous scaffold for tissue engineering application' International Conference on Cellular and Molecular Bioengineering. 2-4th August, 2010, Nanyang Technological University, Singapore
83. 'Changes in p63 expression in regenerating epithelium through healing progression' International Conference on Stem Cells and Cancer (ICSCC-2010) 11th-14th December 2010, organized by School of Biotechnology, International Institute of Information Technology (I2IT, Pune)
84. 'Honey-alginate Fibrous Scaffold for Tissue Engineering Application' XIX International Materials Research Congress, Cancun, Quintana Roo, Mexico, (15-19 August, 2010)
85. 'Correlating Optical Biopsy with Histopathology of Wounds under Topical Intervention with Honey', Systems in Medicine and Biology (ICSMB2010), IIT KGP (2010)
86. 'Distinguishing Phyllodes from Fibroadenoma by Immunohistochemical and Swept Source-Optical Coherence Tomography Studies', Systems in Medicine and Biology (ICSMB2010), IIT KGP (2010)
87. 'Simple Cyto-sensor Based Electrical Characterization of Keratinocytes and Fibroblasts with Prime Molecular Expressions towards Skin Tissue Engineering Applications', Systems in Medicine and Biology (ICSMB2010), IIT KGP (2010)
88. 'Effect of ionic and covalent cross-linking on physiochemical properties of chitosan fiber', Macro 2010, 15-17 December, New Delhi, India (2010)
89. 'Electrospinning of Collagen in Aqueous System', Melbourne, Australia (2010).
90. 'Freeze Dried Fish Scale Collagen: A Potential Matrix for Tissue Engineering and Wound Dressing', International Conference on Biotechnology and Food Science (ICBFS 2010), Bangalore, & World Academic Union (World Academic Press), UK (2010) on Feb. 9-10 (2010)
91. 'Fish Collagen: A Potential Material for Biomedical Application', IEEE EMB Techsym 2010, IIT Kharagpur, & IEEE Explore (2010)
92. 'Development of Chitosan-Tripolyphosphate Fiber for Biomedical Application', IEEE EMB Techsym 2010, IIT Kharagpur, & IEEE Explore (2010)
93. 'Tailoring the microstructure of cellular ceramics for multifunctional composites', International Conference on Multifunctional Composites, 2008
94. "Influence of nature and amount of dispersant on rheology of alumina slurry" presented in 10th International Conference and Exhibition of the European Ceramic on June 17 - 21, 2007 Estrel Convention Center, Berlin
95. "A Simple Fabrication Method for Highly Interconnected Ti Foams for Bone Replacements", presented in 20th European Conference on Biomaterials, at Nantes, France on September, 2006
96. "Biomimetic Apatite/PolycaprolactoneNanofibres for Bone Tissue Engineering Scaffolds" presented in BIOCERAMICS 19, Chengdu, China on October' 2006 organized by the International Society for Ceramics in Medicine (ISCM) at the 19th International Symposium on Ceramics in Medicine
97. "Porous and Bioactive Alumina Ceramics for Bone Grafts and Tissue Engineering Scaffolds" presented in BIOCERAMICS 19, Chengdu, China on October' 2006 organized by the International Society for Ceramics in Medicine (ISCM) at the 19th International Symposium on Ceramics in Medicine

98. "Green Machining of Ceramics using Protein Coagulation Cast Compacts", presented in Shaping III, Limoges, France on May' 2006 organized by European Ceramics Society
99. "A Novel Method for Highly Interconnected Ti Foam for application of bio materials", presented in Shaping III, Limoges, France on May' 2006 organized by European Ceramics Society
100. "Green Ceramic Machining: A Top-Down Approach to Rapid Prototyping of Ceramics"-7th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering held on 22nd-25th MARCH, 2006 in the Hotel Ambassadeur, Juan Les Pins, France
101. "Highly interconnected Ti foam", Powder matrix Revolution Annual Review Meeting held on 7th March' 2006 at Holy well Park, Loughborough, UK
102. "Biomimetic Apatite formation on Polycaprolactone (PCL) for Bone Tissue Engineering" presented in meeting for Biomaterials and Tissue Engineering on 21st June' 2005 at Queen's College, University of London
103. "Highly Inter-connective TiO_2 foam for Orthopedic applications", presented on 4th UK Society for Biomaterials Conference – held on 21 - 22 June 2005
104. "Novel Powder Processing Methods for Highly Interconnected Ti Foam", presented on 4th UK Society for Biomaterials Conference –held on 21 - 22 June 2005
105. "Gelcasting: A novel Ceramic forming technique for the convergence of Top down and Bottom up Approaches", Oral presentation at the 107th Annual Meeting & Exposition of The American Ceramic Society, April 10-13, 2005 at the Marriott Waterfront Hotel in Baltimore, Maryland, USA
106. "Green Machining of Alumina Ceramics", PowdermatriX Revolution Annual Review Meeting which is being held on 22nd February 2005 at Holy well Park, Loughborough, UK
107. "Protein Coagulation Casting: A New Environment Friendly Ceramic Forming Process", at 106th Annual Session of the American Ceramic Society, held on April 18-21, 2004 at the Convention Center and RCA Dome in Indianapolis, Indiana, USA
108. "Influence of sucrose addition on consolidation of ceramic bodies by Protein Coagulation Casting (PCC)", at 106th Annual Session of the American Ceramic Society, held on April 18-21, 2004 at the Convention Center and RCA Dome in Indianapolis, Indiana, USA
109. "Protein Coagulation Casting (PCC): A New Process with Wide Commercial Applicability for Fabrication of Ceramic Components", at Annual Session of the Indian Ceramic Society and International Ceramic Congress, Chennai (January 9 – 11, 2004)
110. "Aqueous consolidation of SiC Ceramics", Annual meeting of the Materials Research Society of India (MRSI), Banaras Hindu University, (Jan 2004) at Banaras
111. "Simplified aqueous gelcasting of silicon carbide ceramics", at Annual Session of the Indian Ceramic Society and International Ceramic Congress, Chennai (January 9 – 11, 2004)
112. Invited talk on "Direct casting technologies: Transcending the barriers in ceramic fabrication", at CMERI, Durgapur symposium on "National Conference on Investment Casting", September 2003

113. "Protein Coagulation Casting – A new forming technique for dense and porous ceramics", MRSI, Kolkata chapter, for Young Scientist Colloquium (September 2003)
114. "Direct casting of ceramic foams" at the International Symposium on "Recent Advances in Inorganic Materials (RAIM-2002)", Materials Research Society of India (MRSI), IIT Bombay (December 2002)
115. "Use of egg white as a gel forming material in synthesis of nano-crystalline alumina"- at the International Symposium on "Recent Advances in Inorganic Materials (RAIM-2002)", Materials Research Society of India (MRSI), IIT Bombay (December, 2002)
116. "Rheological behavior of fresh and aged aqueous alumina gelcasting slurries" - at the International Symposium on "Recent Advances in Inorganic Materials (RAIM-2002)", Materials Research Society of India (MRSI), IIT Bombay (December 2002)
117. "Shape forming of ceramics via gelcasting of aqueous particulate slurries", National Conference on Frontiers in Materials Science and Technology (FMST 02), IIT Kharagpur (February 2002)
118. "Critical aspects in shape forming of ceramics via gelcasting of aqueous particulate slurries", International Conference on Advances in Materials and Materials Processing, IIT Kharagpur (February 2002)
119. "Aqueous gelcasting and its applications in fabrication of complex ceramic components", Annual meeting of the Materials Research Society of India (MRSI), Science City, Calcutta (Jan 2001)
120. "Development of aqueous gelcasting and its application in ceramics forming", at the National Seminar on "Engineering Ceramics: Prospects in the New Millennium", Central Glass and Ceramic Research Institute (CGCRI), Calcutta (November 2000)
121. "Forming of Functionally Graded Ceramic and Composite Shapes by Gelcasting", Symposium on Ceramic Matrix Composites - CCM 99, Materials Research Society of India (MRSI), Sardar Patel University, Vallabh Vidyanagar, Gujarat (December 1999)

<u>Workshop/Symposium Attended</u>:

1. Winter school on "Chemistry of Materials", organized by JNCSAR, Bangalore on December' 2006
2. Workshop on "Nano-materic materials: Production, Processing and Prospects" organized by DMRL, Hyderabad on September' 2006
3. Symposium on "A Forecast of the Future for Biomaterials", Professor Larry L. Hench Retirement Symposium was held at Imperial College London, on 29 and 30 September 2005
4. Symposium on "Functionally Graded Materials" at NMRL Ambernath, India on 2001

Academic Collaboration: Prof. Bo Su (University of Bristol), Dr. Sourabh Ghosh (IIT Delhi), Dr. Sagar Pal (ISM Dhanbad), Dr. Asit Baran Panda (Central Salt & Marine Chemicals Research), Dr. Himadri Nandan Bar (Non-destructive Testing Group, NML Jamshedpur)

Clinicians collaborator: Dr. Samit Kumar Nandi (Department of Veterinary Surgery and Radiology, West Bengal University of Animal and Fishery Sciences), Dr. K M Mandana (Fortis Hospital, Kolkata), Dr. Debasish Chakraborty (Fortis Hospital, Kolkata), Dr. T K Gahlot (RAJUVAS), Dr. Sabyasachi Roy (Midnapore Medical College and Hospital), Dr. Arun Achar (Bankura Sammilani Medical College), Dr. Bimal Raj, Dr. D. Moulik (Bankura Sammilani Medical College), Dr. Zahir Quazi, DMIMS Wardha

No.	Project Title	Sanction year	Sponsorer	Sanction Amt (INR)
Principal Investigator				
1	Fabrication of hydroxyapatite discs	16-11-2015 to 16-02-2016	ITC (Consultancy)	223275.00
2	'CAD model Design of Opthalmic Implants samples and testing holders'	23-06-2014 to 22-09-2014	SAP & PAP (Consultancy)	66675.00
3	Net shape fabrication of dental crown using computer numerical control (CNC) machinery of green ceramics compacts	29-01-2009 to 30-06-2012	DBT (R&D)	4302900.00

4	Bioprinting of Skeletal Tissue Forwards Customized Phalanx Reconstruction and Regeneration by Tissue Engineering Approach	25-02-2022 To 24-02-2025	ICMR	6817877
5.	Anatomically Analogous Bio-integrable Artificial Cornia	17-05-2022 To 16-05-2024	ICMR	7325670.00
6.	Dense Porous Multilayer Implants for improved osseointegration through tissue ingrowth	17-05-2022 To 16-05-2024	ICMR	1555670.00
7	Customized Bioactive porous Titanium Implants with Improved Tissue- integration and attenuated Aseptic Loosening for Orthopaedic application	24-04-2019 To 23-01-2023	DRDO	7071833.00
8	Development of bioactive 3D scaffold with nano/micro hierchy for bone tissue engineering through combinatorial approach	01-10-2015 to 30-09-2018	DST (R&D)	4845000.00
9	Development of bio-active scaffold for bone graft through hard tissue engineering	01-06-2011 to 31-05-2014	CSIR (R&D)	1700000.00
10	Simple low-cost bioactive titanium foam via novel route for skeletal tissue reunion	28-04-2016 to 27-04-2018	BIRAC SRISTI (R&D)	1500000.00
11	Development of titanium lattice structured implant for joint replacement	16-04-2014 to 15-04-2017	MHRD (R&D)	6500000.00
12	Direct printing of bioresorbable radiopaque polymeric stent: a novel approach for lumen stricture	16-04-2014 to 15-04-2017	MHRD (R&D)	2900000.00
13	Development of dense and porous titanium components via powder metallurgy route for biomedical applications	19-03-2012 to 18-03-2015	DRDO (R&D)	6783000.00
14	Multi - layer customized skin graft for full thickness wound	24-06-2014 to 25-06-2017	DBT (R&D)	2731000.00
15	Mechanical characterization of ophthalmic implants: a case study	23-06-2014 to 22-09-2014	SAP & PAP (R&D)	402000.00
16	Development Porous Scaffold for Hard Tissue Engineering	Completed	SRIC IITKGP (R&D)	500000.00
17	Development of Ceramic Nanofiber-polymer Resin based Composite for Dental Filler	01-06-2010to 31-05-2012	DST Fast Track (R&D)	1860000.00
Total value				57084900.00

Co-Investigator				
1	Sequence dependent molecular action of zd6474 with paclitaxel and radiation in progression and treatment of breast cancer	28-03-2011 to 31-12-2014	DBT (R&D)	3150000.00
2	Miniature active device for guidance of intracoronary angioplasty wires, catheters & stents	28-03-2014 to 27-03-2017	MHRD (R&D)	8100000.00
3	Micro/nano manufacturing and characterization facility for robotics in nano-scale manipulation	24-02-2015 to 23-02-2018	MHRD (R&D)	100000000.00
4	Isolation and characterization of the active constituents from leaves of three indian medicinal plants and evaluation of sustained delivery system of anti-diabaetic bio-active molecules based on chitosan loaded nano/micro beads	06-01-2014 to 05-01-2017	DTE (R&D)	1549130.00
5	Involvement of functional single nucleotide polymorphisms (SNP) of matrix metalloproteinase (MMP) gene promoters in the cell type specific regulation of human mmps: intrinsic genetic characteristics in cancer cell progression	05-03-2013 to 06-09-2016	DBT (R&D)	5257600.00
6	Separation and Electrical Characterization of Biological Cells using Microfludic Device	Completed	ADA-NPMASS (R&D)	9200000.00
7	Synthesis, development and in-vitro characterization of bio-inert Yttrium/Ceria coated/stabilized Zirconia toughened Alumina composites for Biomedical	2008-2011	DBT (R&D)	2900000.00
8	Medical Image Analysis and MEMS Based Flow Sensor Development	Completed	Texas Instruments (India) Pvt. Ltd (R&D)	9200000.00
9	Development of porous Interbody cage for Lumbar Spinal Fusion using Biomechanical Analysis and Digital Manufacturing	28-01-2022 To 27-01-2025	DST (SERB)	4807000.00
10	Design and Fabrication of Multimaterial – Multihead 3D Printer for Tissue Phantom development utilizing CT/MRI data	23-05-2022 To 22-05-2024	ICMR	145820.00
Total value				**144309550**

Project Sanctioned				Agency (status)
1	Development of cutomized implants via powder metallurgy process	Approved in 2022	IMC/2020/000019	Not yet finded
2	Design and Fabrication of Customized Composite Scaffolds for Skeletal Tissue Healing using Biological Waste Materials	Approved (PI)	16400000 (INR)	Imprint Fund not received
3	Multilayered Skin Equivalent Model using Biopolymers for Burn Wound Management	Approved (PI)	16410200 (INR)	Imprint Fund not received
4	Functionally Graded Bioactive Titanium Foam as Customized Cancellous Bone Analogue	Approved (Co-PI)	24811200 (INR)	Imprint Fund not received
5	In Vitro Biomimetic Burn Model: An Alternative Wound Healing Platform for Evaluation of Neo-Therapeutics	(PI)		West Bengal DST under review
6	Design and development of cancellous bone analogue for bone defect healing	(Co-PI)		SERB under review
7	Bioactive Dental Root Implant with Improved Osseointegration	PI		DBT submitted

Graduated PhD Students received degree:

Joint guidance: Dr. Falguni Pati, Dr. Ananya Barui, Dr. Pallab Datta, Dr. Soumi Dey Sarkar, Dr. Sanal P. S., Dr. Aditya Parekh, Dr. Sumanta Mukherjee, Dr. Preetam Guha Ray, Dr. Sayanti Datta, Dr. Kamakshi Bankoti, Dr. Priti Prasanna Maiti, Dr. Arpita Roy, Dr. Basil Mathai, Dr. Abit Datta, Dr. Preetam Guha Roy, Gaurav Dinesh Kulkarni (Submitted)

Single Guidance: Dr. Saralasrita Mohanty, Dr. Paulomi Ghosh, Dr. Prabhash Dadheech, Dr. Pallabi Pal, Dr. Bodhisatwa Das, Dr. Kausik Kapat, Dr. Pavan Srivas, Dr. Arun R. Prabhu, Dr. Venkata Sundeep Seesala,

Masters Students received degree:

Pritiprasanna Maity, Shyamal Mandal, Sujit Hiwale, Chandan Rath, Sankhya Mohapatra, Amit Mehndiratta, Pavan Srivas, Harpreet, Nimmy Francis

Present students working for doctoral work:

Joint Guidance: Trina Ray, Krishna Dixit, Pravin Vaidya, Prasanna Kumar Byram, Atul Kumar Ojha, Ankit Porwal, Anurag Kumar Pandey, Rahul Gautam Talukdar, Lakshmi M Mukundan, Krishna Chaitanya, Sonali Sheeba, Mitali Mishra, Saikat Biswas,

Doctoral Students Outside the institute: Dr. Rajashree Bhadhuri (GNI Dental Sciences and Research, Kolkata)

Single Guidance: Sayan Mukherjee, Sayan Das, Suman Mishra, Samir Das,

B. Tech thesis completed: Avinash, Sankhya Mohapatra, Tanmoy Haldar, Vikas Kumravat

Santanu Dhara