Dr. Santanu Dhara
Professor
School of Medical Science and Technology
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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.

Position and Employment:

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

Honors/Awards:

- ✓ 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

<u>Technical Consultancy</u>:

- 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 - Five students under single guidance and five students under joint guidance
- Guided ten PG students and four UG students for their final year project and thesis.
- Twenty one 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.
- ACS Biomat
- ACS Omega

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

Total Publications: 140; **Scopus Citations:** 1956; **h – index:** 23;
Google Citation: 2762; **h –index:** 26, **i10-index**: 83
Book chapters: 6. **Research Papers, Reports:** 130. **General articles:** 2
Others (Invited Articles): 4. **National Journal:** 10
Patents: 20 (one US patent approved)

Patents:

1. 'A green body composition and functional gradient materials prepared thereof", application no. 201931022298, 2019
2. 'Nanofibrous wound dressing for acute/burn wound management', 201831001151, 2018
3. '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)
4. A Microfluidic Bioreactor Device for Vascular Bone Modelling and a Method theteof – Indian Patent Application No. 2018310119077 dated 22nd May, 2018
5. 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)
6. '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)
7. '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
8. '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
9. '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.
10. 'Hybrid composite scaffold preparation and application thereof', P. Dadhich, B. Das, S. Dhara, Indian Patent. 983/KOL/2014
11. '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
12. '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
13. 'Chitosan based biodegradable materials for biomedical applications', P. Ghosh, M. Das, S. Dhara, Indian patent. 566/KOL/2013
14. '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 (DBT and IIT KGP)
15. 'A composition for consolidation of dense ceramic compacts', S. Dhara**,** D. Ghosh and P. Bhargava, Indian Patent. 479/KOL/2003.
16. 'Compositions and process for consolidation of porous bodies', S. Dhara, M. Pradhan and P. Bhargava, Indian Patent. 331/Cal/02
17. '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 graduating from BMTE:

- Dr. Falguni Pati – Assistant Professor, IIT Hyd,
- Dr. Ananya Barui – Assistant Professor, IIEST Shibpur
- Dr. Pallab Dutta – Assistant Professor (Visiting), IIEST Shibpur
- Dr. Soumi De Sarkar – Scientist at Loreal, Mumbai
- Dr. Saralasrita Mohanty – Scientist, NISER, BBS
- Dr. Sanal P. S. – Research Associate, M G University, Kerala, Telaviv University
- Dr. Paulomi Ghosh – Scientist at IICB (Inspired faculty), Cincinnati Children's Hospital Medical Center
- Dr. Prabhash Dadhich – Postdoctoral Researcher, Wake Forest University
- Dr. Pallabi Pal – Postdoctoral Researcher, University Mississippi Medical Center
- Dr. Bodhisatwa Das – Postdoctoral Researcher, University of Rutgers
- Dr. Sumanta Mukherjee – Faculty, Sindri Institute, BIT Sindri
- Dr. Pavan Srivas – Scientist at SCTIMST, Trivandrum
- Dr. Kaushik Kapat, Postdoctoral Researcher, Stomatology Hospital, Guangzhou Medical University
- Dr. Aditya Parekh – Postdoctoral Researcher, NCBS, Bangaluru
- Dr. Arun Prabhu Rameshbabu – Postdoctoral Researcher, Harvard Medical School
- Dr. Kamakshi Bankoti – Postdoctoral Researcher, University of Pennsylvania
- Dr. Sayanti Datta - Postdoctoral Researcher, University of Illinois

Journal Publications:

1. 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)
2. 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, pp. 385-393 (2019)
3. 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, pp. 427-436 (2019)
4. 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, 57, pp. 81-95 (2019)
5. B. Das, P. Pal, S. Dhara, 'Laser Patterned ZNO Substituted Calcium Phosphate Scaffolds via Viscous Polymer Processing for Bone Graft', Materials Today: Proceedings, 11, pp. 849-858 (2019)
6. 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)
7. 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)
8. 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., 107, 5, pp. 1634-1644, (2019)
9. 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', Cummunications biology, Springer Nature group) 2, 146 pp. 1-11 (2019)
10. 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', J. Colloid and Interface Science 555, 132-144 (2019)
11. P. Pal, B. Das, S. Dhara, 'Hybrid scaffold comprising of nanofibers and extrusion printed PCL for tissue engineering', Materials Today: Proceedings, 11 pp. 804–812, (2019)
12. 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)
13. 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', J. Photochem. and Photobiol. B: Biology, 197, 111545 (2019)
14. 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 pp. 316-329 (2019)
15. 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)
16. 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)
17. 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)
18. P. Patra, S. R. Soni, V. S. 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', J. Polym. Sci. Part A: Polym. Chem., 57,15, 1697-1703 (2019)
19. Ragavi Rajasekhara, M. Banerjee, S Dhara, 'Role of Nanofibers on MSCs fate: Influence of fiber Morphologies, Compositions and External stimuli', Materials Science Engineering C, 2019
20. Santanu Dhara, Priti Prasanna Maity, 'Amino acid analysis by HPLC with FLD detector', DOI: 10.1038/protex.2019.022
21. 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, 753-760, (2019)
22. 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)
23. 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)
24. 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)
25. 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)

26. 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
27. 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)
28. 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)
29. 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)
30. 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)
31. 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)
32. 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)
33. 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)
34. 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)
35. 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)
36. 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)
37. 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)
38. 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)
39. 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)
40. 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)
41. 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)
42. 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)
43. 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)
44. 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)
45. 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)
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154. 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).

155. S. Dhara and P. Bhargava, 'An environmental friendly low cost binder for gelcasting of ceramics', J. Am. Ceram. Soc., 84 [12] pp3048-50 (2001).

Abstracts accepted in Conferences:

1. '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
2. '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
3. '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)
4. '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)
5. 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
6. 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
7. 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)
8. 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)
9. 'Human Placenta Derived Extracellular Matrix Sponges for Osteochondral Tissue Engineering', A Rameshbabu, S Dhara, TISSUE ENGINEERING PART A 22, S10-S10, 2016
10. 'Macro porous blend membrane of Chitosan and Polyurethane diol as skin graft', K Bankoti, S Dhara, TISSUE ENGINEERING PART A 22, S97-S98, 2016
11. 'Cell-Microsphere Construct for Cutaneous Wound Healing', S Datta, S Dhara, TISSUE ENGINEERING PART A 22, S104-S104, 2016
12. 'Bioactive Titanium Foam for Skeletal Tissue Reunion' K Kapat, PK Srivas, S Dhara, TISSUE ENGINEERING PART A 22, S119-S120, 2016
13. '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

14. ‘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
15. ‘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
16. 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.
17. 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
18. Fabrication Of Fluorescent Nanofibers For Monitoring Wound Healing Invivo - 4th TERMIS World Congress, at Boston, MA, US, held on September 8-11, 2015
19. Bone Grafts Designed Via Biomimetic Approach from Natural Origin Materials at TERMIS World Congress (2015) held in Boston, USA, 8 - 11 September 2015
20. Bone grafts designed via bio-mimetic approach from natural origin materials, At Health Tech Innovations 2015, held at IIT Mumbai, 9-10 January, 2015
21. 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
22. 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)
23. 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
24. Nano/microfibrous chitosan/collagen composite for skin tissue engineering, presented in International Conference on Functional Materials (ICFM-2014), IIT Kharagpur, Feb, 2014
25. Reconstruction of Customized Mandible using Alumina Fiber Reinforced Polymer Composite by 3D imaging, Rapid Tooling and Molding, MMDRM, Nepal, January, 2014
26. Nano Silver Substituted Hydroxyapatite, Gelatin, Alginate and SPION Composite Fibrous scaffolds for Bone tissue Engineering in TERMIS AM 2014 (Washington DC 16th December, 2014)
27. 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
28. 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.
29. 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
30. 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
31. Nano-Silver Substituted Calcium Phosphate Gelatin Composites for Bone Tissue Engineering”- in ICFM 2014 IIT Kharagpur, January, 2014.

32. Non Photo-bleachable Selective Cell Cytoskeleton Imaging by Biomass Derived Highly Luminescent Carbon Nanodots, IMMT Bhubaneswar, Feb, 2014.
33. Comparison of Smooth and Rough Chitosan Fibers for Cellular Growth Investigations at 4th International Conference on Biomedical Engineering and Technology, Penang, Malaysia, March, 2014
34. 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)
35. Phosphorylated Alumina Fibrous Scaffolds for Bone Tissue Engineering at TERMIS-AP 2013 at Wu-Zhen, Sanghai, China, October, 2013
36. LASER Patterned Nano Silver Doped Calcium Phosphate Scaffolds for Bone Graft Application"- Presented in TERMIS-AM 2013, November, 2013
37. Development of multi-phasic calcium phosphate scaffolds from sea shell for bone graft, TERMIS-AP 2013 at Wu-Zhen, Sanghai, China, October, 2013
38. 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
39. Self-assembled PEG-PCL-PEG nanoparticles for insulin delivery *in 3rd*FAPS Polymer Congress and MACRO IISc Bangalore, May 15-18 (2013)
40. Biodegradable PEG-PCL-PEG nanoparticles for celecoxib drug delivery *in* ICRRM IIT Kharagpur, March 6 - 9 (2013)
41. Thermo-responsive Biodegradable PEG-PCL-PEG Based Hydrogel for Insulin Deliveryin ICMAT MRS Singapore 30th June to 5th July (2013)
42. 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
43. Direct Laser Microgrooving of Ti6Al4V as a Surface Modification Method for Biological Implants presented at International Conference (PSAM) organized by IIT Guahati, 2012
44. 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
45. 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)
46. 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)
47. Reconstruction of mandible using 3D imaging, rapid tooling and molding, at Bind 12 at IISC Bangalore, International Conference on Designing of Biomaterials.
48. 2,5-dimethoxy-2,5-dihydrofuran cross-linked chitosan for bone tissue engineering application at TERMIS World Congress, Vienna, September, 2012
49. Multiscale Fibrous Scaffolds for Skin Tissue Engineering at TERMIS World Congress, Vienna, September, 2012
50. '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

51. ‘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
52. ‘*In vitro* cellular response of osteoblast cells on bioactive alumina fibrous scaffolds’, oral presentation at MRS Fall Meeting & Exhibit, Hynes Convention Centre, Boston, MA (2011)
53. ‘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
54. ‘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
55. ‘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
56. ‘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
57. “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
58. “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
59. 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
60. Electro-spinning Chitosan for Skin Tissue Engineering Applications, TERMIS Asia-Pacific Meeting, Singapore, August 2011
61. 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
62. Tripolyphosphate treated Chitosan based nano-fibers for Skin Tissue Engineering Applications, International Conference on Surface and Interface of Biomaterials, Japan, July 2011
63. 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
64. 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

65. Honey Based Fibrous Scaffold for Tissue Engineering. IEEE/NIH Life Science Systems & Applications Workshop. April 7-8, 2011, Bethesda, Maryland, USA
66. 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)
67. 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)
68. '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.
69. 'Development of chitosan-tripolyphosphate fiber for biomedical application', Students' Technology Symposium (TechSym), IEEE pp. 77-81 (2010)
70. Nanofibrous Chitosan Collagen composite scaffold for biological skin substitute, Bangalore Nano 2010, Bangalore, December 2010
71. Chitosan Collagen composite scaffold for tissue engineering of skin, TERMIS Asia-Pacific Meeting, Sydney, September 2010
72. 'Honey based fibrous scaffold for tissue engineering application' International Conference on Cellular and Molecular Bioengineering. 2-4th August, 2010, Nanyang Technological University, Singapore
73. '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)
74. 'Honey-alginate Fibrous Scaffold for Tissue Engineering Application' XIX International Materials Research Congress, Cancun, Quintana Roo, Mexico, (15-19 August, 2010)
75. 'Correlating Optical Biopsy with Histopathology of Wounds under Topical Intervention with Honey', Systems in Medicine and Biology (ICSMB2010), IIT KGP (2010)
76. 'Distinguishing Phyllodes from Fibroadenoma by Immunohistochemical and Swept Source-Optical Coherence Tomography Studies', Systems in Medicine and Biology (ICSMB2010), IIT KGP (2010)
77. '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)
78. 'Effect of ionic and covalent cross-linking on physiochemical properties of chitosan fiber', Macro 2010, 15-17 December, New Delhi, India (2010)
79. 'Electrospinning of Collagen in Aqueous System', Melbourne, Australia (2010).
80. '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)
81. 'Fish Collagen: A Potential Material for Biomedical Application', IEEE EMB Techsym 2010, IIT Kharagpur, & IEEE Explore (2010)
82. 'Development of Chitosan-Tripolyphosphate Fiber for Biomedical Application', IEEE EMB Techsym 2010, IIT Kharagpur, & IEEE Explore (2010)

83. 'Tailoring the microstructure of cellular ceramics for multifunctional composites', International Conference on Multifunctional Composites, 2008
84. "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
85. "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
86. "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
87. "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
88. "Green Machining of Ceramics using Protein Coagulation Cast Compacts", presented in Shaping III, Limoges, France on May' 2006 organized by European Ceramics Society
89. "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
90. "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
91. "Highly interconnected Ti foam", Powder matrix Revolution Annual Review Meeting held on 7th March' 2006 at Holy well Park, Loughborough, UK
92. "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
93. "Highly Inter-connective TiO_2 foam for Orthopedic applications", presented on 4th UK Society for Biomaterials Conference – held on 21 - 22 June 2005
94. "Novel Powder Processing Methods for Highly Interconnected Ti Foam", presented on 4th UK Society for Biomaterials Conference –held on 21 - 22 June 2005
95. "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
96. "Green Machining of Alumina Ceramics", PowdermatriX Revolution Annual Review Meeting which is being held on 22nd February 2005 at Holy well Park, Loughborough, UK
97. "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
98. "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

99. "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)
100. "Aqueous consolidation of SiC Ceramics", Annual meeting of the Materials Research Society of India (MRSI), Banaras Hindu University, (Jan 2004) at Banaras
101. "Simplified aqueous gelcasting of silicon carbide ceramics", at Annual Session of the Indian Ceramic Society and International Ceramic Congress, Chennai (January 9 – 11, 2004)
102. Invited talk on "Direct casting technologies: Transcending the barriers in ceramic fabrication", at CMERI, Durgapur symposium on "National Conference on Investment Casting", September 2003
103. "Protein Coagulation Casting – A new forming technique for dense and porous ceramics", MRSI, Kolkata chapter, for Young Scientist Colloquium (September 2003)
104. "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)
105. "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)
106. "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)
107. "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)
108. "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)
109. "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)
110. "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)
111. "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)

Workshop/Symposium Attended:

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)

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	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
5	Development of bio-active scaffold for bone graft through hard tissue engineering	01-06-2011 to 31-05-2014	CSIR (R&D)	1700000.00
6	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
7	Development of titanium lattice structured implant for joint replacement	16-04-2014 to 15-04-2017	MHRD (R&D)	6500000.00
8	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
9	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
10	Multi - layer customized skin graft for full thickness wound	24-06-2014 to 25-06-2017	DBT (R&D)	2731000.00
11	Mechanical characterization of ophthalmic implants: a case study	23-06-2014 to 22-09-2014	SAP & PAP (R&D)	402000.00
12	Development Porous Scaffold for Hard Tissue Engineering	Completed	SRIC IITKGP (R&D)	500000.00
13	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				**34313850.00**
Co-Investigator				
14	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
15	Miniature active device for guidance of intracoronary angioplasty wires, catheters & stents	28-03-2014 to 27-03-2017	MHRD (R&D)	8100000.00
16	Micro/nano manufacturing and characterization facility for robotics in nano-scale manipulation	24-02-2015 to 23-02-2018	MHRD (R&D)	100000000.00

17	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
18	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
19	Separation and Electrical Characterization of Biological Cells using Microfludic Device	Completed	ADA-NPMASS (R&D)	9200000.00
20	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
21	Medical Image Analysis and MEMS Based Flow Sensor Development	Completed	Texas Instruments (India) Pvt. Ltd (R&D)	9200000
Total value				**139356730**

Graduated Students: Dr. Falguni Pati, Dr. Ananya Barui, Dr. Pallab Datta, Dr. Soumi Dey Sarkar, Dr. Saralasrita Mohanty, Dr. Sanal P. S., Dr. Paulomi Ghosh, Dr. Prabhash Dadheech, Dr. Pallabi Pal, Dr. Bodhisatwa Das, Dr. Kausik Kapat, Dr. Arun R. Prabhu, Dr. Pavan Srivas, Dr. Sumanta Mukherjee, Dr. Kamaksi Bankoti, Dr. Sayanti Datta, Dr. Aditya Parekh

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

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

Present students working for doctoral work:

Joint Guidance: Trina Ray, Abir Dutta, Krishna Dixit, Pravin Vaidya, Basil Mathai, Prasanna Kumar Byram, Atul Kumar Ojha, Ankit Porwal, Anurag Kumar Pandey, Rahul Gautam Talukdar, Gaurav Dinesh Kulkarni, Lakshmi M Mukundan, Krishna Chatanya

Single guidance: Venkata Sundeep S, Asmita Biswas

Outside the institute: Arpita Roy (ISM Dhanbad); Priti Prasanna Maiti (IIEST)

Santanu Dhara