

PERSONAL INFORMATION

Name : Dr. Probal Basu, M.Sc., Ph.D.

Current Address: Wallenberg Wood Science Centre,
Department of Chemistry and Chemical Engineering,
Chalmers University of Technology
Gothenburg, Sweden

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Education And Training**Sept, 2016 – Sept, 2020**

PhD Study (Macromolecular Chemistry; *Study on Calcium Reinforced Polymeric Hydrogel Scaffolds for Bone Tissue Regeneration*) at Tomas Bata University in Zlin, the Czech Republic.
[Ph.D. thesis summary: ISBN 978-80-7454-952-6]

2012-2013

Research Trainee in virus research and vector borne diseases research at Post Graduate Department of Zoology, Asutosh College (University of Calcutta), Kolkata, India.

2010-2012

Master of Science (M.Sc) in Zoology. Department of Zoology and Molecular Biology & Genetics, Presidency College (University of Calcutta), Kolkata, West Bengal India.
[<http://www.presiuniv.ac.in> and www.caluniv.ac.in]

2007-2010

Bachelor of Science (B.Sc) in Zoology. Department of Zoology, Asutosh College (University of Calcutta), Kolkata, West Bengal, India
[www.asutoshcollege.in/ and www.caluniv.ac.in]

Professional Experience

Junior Researcher	October 2020-August 2021
Centre of Polymer Systems, Tomas Bata University in Zlin, Zlin, Czech Republic	
Visiting Research Fellow, (Short Term Scientific Mission, COST Action MP1301)	June, 2017 - July, 2017
Institute of Experimental Morphology, Pathology and Anthropology with Museum- Bulgarian Academy of Sciences (IEMPAM-BAS), Sofia, Bulgaria.	
Research Assistant	August, 2012 - August, 2016
Department of Zoology, Asutosh College (University of Calcutta) Kolkata, India.	
Guest Faculty	September, 2013 - March, 2015
Department of Zoology, Asutosh College (University of Calcutta), Kolkata-700026, West Bengal, India	

Additional Information**Publications**

Publications during post-doctoral research (@CPS, TBU in Zlin, Czech Republic as Junior Researcher)

Basu P., Saha N., Saha T, Saha P. (2021) Polymeric hydrogel based systems for vaccine delivery: A review, *Polymer*, **230**, 124088.

Basu P., Saha N., Saha T., Saha P. (2021) Physical and mechanical properties of microbial cellulose/ biphasic calcium phosphate hydrogels in fracture healing application, *Submitted*.

Basu P and Bhattacharya S. Nanotechnology and Polymer Science: A novel approach in vector control, Springer Book Chapter, 2021, *In Press*.

Publications during doctoral research (@ TBU in Zlin, Czech Republic as *doctoral research fellow*)

Basu P., Saha N., Saha P. (2020) Viscoelastic behavior of Calcium Phosphate Packed Bacterial Cellulose - Polyvinylpyrrolidone based Hydrogel Scaffolds at Human Fever Temperature, *AIP Conf. Proc.*, **2289**, 020009

Basu P, Saha N & Saha P. (2020) Swelling and rheological behaviour of calcium phosphate filled bacterial cellulose based hydrogel scaffold, *J. Appl. Polym. Sci.*, **136**, 48522.

Basu P, Saha N, Alexandrova R, Saha P. (2019) calcium phosphate filled bacterial cellulose-polyvinylpyrrolidone based hydrogel scaffolds: Structural properties and cell viability study for bone regeneration, *Polymers*, **11**(11), 1821.

Basu P, Saha N & Saha P. (2019) Inorganic calcium filled bacterial cellulose based hydrogel scaffold: novel biomaterial for bone tissue regeneration, *Int J Polym Mater*, **68**:1-3, 134-144.

Basu P, Saha N, Alexandrova R, Andonova-Lilova B, Georgieva M, Miloshev G, Saha P. (2018) Biological efficiency of inorganic calcium filled bacterial cellulose based hydrogel scaffold for musculoskeletal engineering, *Int. J. Mol. Sci.* **19**(12): 3980.

Basu P, Saha N, Bandyopadhyay S, Saha P. (2017) Rheological Performance of Bacterial Cellulose based non-mineralized and mineralized hydrogel scaffolds, *AIP Conf. Proc.* **1843**, 050008-1–050008-7

Seminars/Conferences/Workshops

Basu P, Saha N, Saha P (2019) Biomechanical property of calcium phosphate filled bacterial cellulose based hydrogel scaffolds, 25th Congress of the European Society of Biomechanics (ESB-2019), July 7th- 10th, 2019, Vienna, Austria. Abst Pap. P. 562 (ISBN: 978-3-903024-96-0).

Basu P, Saha N, Saha P (2019) Calcium filled bacterial cellulose based composite hydrogel for bone tissue engineering: Optical microscopy and bone marker analysis, 35th International Conference of the Polymer Processing Society (PPS-35), May 26-30, 2019, Çeşme-İzmir, Turkey.

Basu P, Saha N, and Saha P (2018) Inorganic Calcium filled Bacterial Cellulose based Scaffold for Bone Regeneration, 4th International Conference on Biomedical Polymers & Polymeric Biomaterials, 15th July – 18th July 2018, Krakow, Poland, Abst Pap. P. 05 (ISBN: 978-83-65955-10-4).

Basu P, Saha N, and Saha P (2017) Rheological Performance of Bacterial Cellulose based non-mineralized and mineralized hydrogel scaffolds, Novel Trends in Rheology VII, 26th- 27th July-2017, Tomas Bata University in Zlin, Czech Republic.

Basu P, Saha N, and Saha P (2017) Calcium Phosphate loaded bioadhesive biopolymer based hydrogel scaffold: a novel biomaterial for bone tissue engineering, Proceedings of Eight Workshop on “Experimental Models and Methods in Biomedical Research”, 14-16th June-2017, IEMPAM-BAS, Sofia, Bulgaria. ISSN: 1314-9091.

Basu P, Saha N, Saha P (2017) Calcium phosphate filled bacterial cellulose based hydrogel scaffolds for dental and orthopaedic application, European Cooperation of Science and Technology (COST) NEWGEN MP1301 (European Union) Workshop and WG Meeting (Cluj-Napoca, Romania) on Biomaterials for Dental and Orthopaedic applications, Abst. Pap. P. 10.

Basu P, Saha N, Saha P (2016) Functional Significance of Three Dimensional Hydrogel Scaffolds in Bone Tissue Engineering – A Review, European Cooperation of Science and Technology (COST) NEWGEN MP1301 (European Union), Workshop and WG Meeting (Zlin, Czech Republic) on Hydrogel/ Biomineralized Biomaterial for Bone Tissue Regeneration, Abst. Pap. P. 22 (ISBN: 978-80-7454-623-5).

Scientific Training

Training School “Non Living Materials meet living Biology”, 9th – 12th May, 2017 at Patras, Greece. Organized by European Ceramic Society (ECerS) and COST MP1301 “NEWGEN” (EU).

Scholarships/Grants/Awards

- **Ph.D. extraordinary Research Scholarship (2016-20)**, Tomas Bata University in Zlin, Czech Republic.
- **Trainee Grant (09.05.2017-12.05.2017) for COST-TS-ECOST-TRAINING_SCHOOL (MP1301-090517-086224) NEWGEN MP1301 (EU)**, Patras, Greece.
- **Short Term Scientific Mission (STSM) Fellowship (15.06.2017-15.07.2017)**, European Cooperation of Science and Technology (COST) NEWGEN MP1301 (EU), for working at IEMPAM-BAS, Sofia, Bulgaria.
- Awarded **First Position** in Poster Presentation Contest at Training School “Non Living Materials meet living Biology”, 9th – 12th May, 2017 at Patras, Greece. Organized by European Ceramic Society (ECerS) and European Cooperation of Science and Technology (COST) MP1301 “NEWGEN” (EU)
- Awarded **Third Position** in PowerPoint presentation and English language contest in “Show off/ Zeig Dich” competition, 18th April, 2018 at Faculty of Humanities, Tomas Bata University in Zlin, Czech Republic.
- **ITC Conference Grant (CA-15216-1480) (07.07.2019-10.07.2019)** for participating 25th Congress of the European Society of Biomechanics (ESB-2019), Vienna, Austria.

Project Accomplished till 2020-2021

1. **IGA/CPS/2017/003**, “Preparation and characterization of bacterial cellulose (BC) based hydrogel with enhanced mechanical and bio-adhesive property”, Tomas Bata University in Zlin, Czech Republic, **Co-Investigator**
2. **IGA/CPS/2018/008**, “Bacterial cellulose based functional biomaterials: Preparation and characterization”, Tomas Bata University in Zlin, Czech Republic, **Principal Investigator**.
3. **IGA/CPS/2019/003**, “Calcium phosphate filled bacterial cellulose based hydrogel scaffolds”, Tomas Bata University in Zlin, Czech Republic, **Principal Investigator**.

Membership

Polymer Processing Society, USA.