SASWATCHOUDHURY

IISc Bangalore Campus, 560012

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RESEARCH INTERESTS

Biomaterials, Medical Devices, Additive Manufacturing, Polymer Science

EDUCATION

Indian Institute of Science Bangalore Ph.D. (Prime Minister Research Fellow (PMRF)) Centre for Biosystems Science and Engineering	July 2019- Present CGPA: 8.8/10
National Institute of Technology Rourkela B.Tech, Metallurgical and Materials Engineering	July 2015- June 2019 CGPA: 8.99/10
Ravenshaw Junior College Cuttack Senior Secondary	July 2012- June 2014 86%
S.C.B Medical Public School Cuttack High School	July 2011- June 2012 94%

RESEARCH EXPERIENCE

Indian Institute of Science Bangalore — July 2019- Present

Ph.D. Project: 4D printing of shape memory polymer composites for deployable medical devices.

National Institute of Technology Rourkela — July 2017- June 2019

B.Tech Project: Fabricated fiber reinforced polymer composites and modified the interface through incorporation of nanofillers for enhancement in flexural and other mechanical properties.

Indian Institute of Technology Kanpur — May 2018- July 2018

SURGE Summer Intern: Synthesis of agar glycerol based hydrogel films for chronic wound dressing applications

AWARDS AND ACHIEVEMENTS

First place award and Agastya fellowship in 3 minute video competition of Mechanical sciences symposium IISc	2023
One of the top five finalists in Talk your thesis competition at India Science Festival 2023	2022
Second place award in the Youtube contest by the Bioceramics division of American Ceramic Society	2022
Runners up award in the national competition MATERIAL NEXT 2.0 organized by TATA STEEL	2021
Received the prestigious Prime Minister Research fellowship in first attempt	2019

PUBLICATIONS

1. 4D Printed Programmable Shape-Morphing Hydrogels as Intraoperative Self-Folding Nerve Conduits for Sutureless Neurorrhaphy Akshat Joshi*, **Saswat Choudhury***, Vageesh Singh Baghel, Souvik Ghosh, Sumeet Gupta, Samrat Chauhan, Debrupa Lahiri, G.K. Ananthasuresh, Kaushik Chatterjee (*equal contribution; (https://doi.org/10.1002/adhm.202300701))

2. 4D Printed Biocompatible Magnetic Composite for Minimally Invasive Deployable Structures Saswat Choudhury, Akshat Joshi, Debayan Dasgupta, Ambarish Ghosh, Sonal Asthana, Kaushik Chatterjee (https://doi.org/10.26434/chemrxiv-2022-dv25j)

3. Light-Mediated 3D Printing of Micro-Pyramid-Decorated Tailorable Wound Dressings with Endogenous Growth Factor Sequestration for Improved Wound Healing Akshay Joshi, Tejinder Kaur, Akshat Joshi, Sriram Bharath Gugulothu, **Saswat Choudhury**, Neetu Singh (https://doi.org/10.1021/acsami.2c16418)

4. Emerging Trends in Biliary Stents: A Materials and Manufacturing Perspective **Saswat Choudhury**, Sonal Asthana, Shervanthi Homer-Vanniasinkam, Kaushik Chatterjee (doi: https://doi.org/10.1039/D2BM00234E)

5. Strategies to Promote Vascularization in 3D Printed Tissue Scaffolds: Trends and Challenges Akshat Joshi, **Saswat Choudhury**, Sriram Bharath Gugulothu, Sandhya S. Visweswariah, Kaushik Chatterjee, (https://doi.org/10.1021/acs.biomac.2c00423)

6. Effects of fiber surface grafting by functionalized carbon nanotubes on the interfacial durability during cryogenic testing and conditioning of CFRP composites Soubhik De, P.N. Shivangi, **Saswat Choudhury**, Abhinav Omprakash Fulmali, Bankim Chandra Ray, Rajesh Kumar Prusty (https://doi.org/10.1002/app.51231)

7. Interface modification of carbon fiber reinforced epoxy composite by hydroxyl/carboxyl functionalized carbon nanotube Soubhik De, Abhinav Omprakash Fulmali, P.N.Shivangi, **Saswat Choudhury**, Rajesh Kumar Prusty, Bankim Chandra Ray (https://doi.org/10.1016/j.matpr.2020.02.970)

SKILLS

Tools	FTIR, Scanning Electron Microscopy (SEM), Rheometer, DSC, DMA, UTM, 3D Printing, XRD, Universal Testing Machine (UTM)
Hands on	Origin, Xpert Pro, Adobe Illustrator, Photoshop, Solidworks, MS office tools, EndNote

EXTRA-CURRICULAR ACTIVITIES

Life Member of Society for Biomaterials and Artificial Organs India (SBAOI), member of President's council of student advisors	2022
President of the American Chemical Society ACS-IISc Student Chapter	2022
Student Member of the American Ceramic Society	2022
Writer and content curator at Monday Morning, the largest student -run media body in India (work involved interviewing faculty, deans, student representatives, publishing articles, etc.)	2017-2019

CONFERENCES/ WORKSHOPS

1. BIOREMEDI, IIT Guwahati: Oral Presentation	2022
2. AM Tech Expo, Hyderabad: Poster	2022
3. Materials for Humanity (MH 22), MRS-S at NUS Singapore: Oral presentation	2022
4. Bengaluru Tech Summit (BTS): Poster	2021
5. e-Symposium on Health Care Materials & Devices, IIT Hyderabad	2020
6. 3D Bioprinting & Bio fabrication TEQIP Workshop, IIT Hyderabad	2019