



Indian Institute of Technology Delhi
School of Interdisciplinary Research (SIRe)



SIRe Project Number

2023-01-35

(will be assigned by SIRe)

Project Proposal for Ph.D.

Project Details

Project Title

Development of Novel Enzymes for Sustainable Chemical Processing Textiles

Project Summary

(Minimum 500 and maximum 2000 characters)

In this project, the microbe will be isolated from novel sources, and the enzymes like amylase, pectinase, cellulase, laccase and lipase will be extracted from these isolated microbes. The extracted enzymes will be characterized and studied for their activities under various conditions. The extracted enzymes will be used in the chemical processing of textiles. The combined processing of textiles will also be attempted using a combination of extracted enzymes. The sensitivity of the formulations towards various chemicals/auxiliaries will also be screened.

Ph.D. Supervisors

Role	Faculty	Academic Unit in IITD/Institute/University	Email ID (Official)
Supervisor 1	Prof. Javed Nabibaksha Sheikh	Dept. of Textile and Fibre Engineering	jnsheikh@iitd.ac.in
Supervisor 2	Prof. Tanmay Dutta	Dept. of Chemistry	dtanmay@chemistry.iitd.ac.in

Project requirements (Student qualifications, experience required, etc)

- M.Tech./ M.Sc. Biotechnology/biochemistry/ Microbiology
- Research experience in Extraction of enzymes

Source of fellowship/funding

(CSIR/UGC/DBT/ICMR/ICAR/NEET-PG/DST-INSPIRE/IRD/FITT Project details, if any)

Candidate with his/her own fellowship

Role of Faculty Members involved:

Dr. Tanmay Dutta: Isolation of microbes from novel source and extraction of enzymes from isolated microbe
Dr. Javed Sheikh: Application of extracted enzymes in textile processing