

PRAJAKATTA MULAY

(whereabouts) AKRON, OHIO, USA
(contact) prajakattamulay@gmail.com
+1-330-217-8591

EDUCATION

THE UNIVERSITY OF AKRON
Ph.D. in Chemical Engineering
Research Advisor: Dr. Judit E. Puskas

Akron, Ohio, USA
May 2015 – till present

THE UNIVERSITY OF AKRON
Master of Science (Thesis) in Chemical Engineering
Research Advisor: Dr. Homero Castañeda-Lopez

Akron, Ohio, USA
May 2015

Thesis Title: Damage Evolution of Magnesium Rich Primer Applied Over AA 2024 T-3 Alloy Exposed to Aggressive Environments

INSTITUTE OF CHEMICAL TECHNOLOGY
Bachelor of Technology in Dyestuffs & Intermediates Technology
Project Title: Synthesis of 2-sulphobenzaldehyde

Mumbai, Maharashtra, India
May, 2012

RESEARCH EXPERTISE

- Skilled in multi-step organic synthesis using inert atmosphere including glove box and Schlenk techniques. Experienced in conducting enzymatic trans-esterification reactions.
- Experienced in working with high-pressure reactors.
- Proficient in spectroscopic analysis techniques including NMR (¹H, ¹³C, COSY, NOESY, HSQC), FT-IR, and UV-vis.
- Experienced in different chromatographic techniques including GPC, HPLC, GC, column chromatography, and preparative chromatography.
- Skilled in microscopy techniques including SEM, IFM and Optical Microscopy.
- Experienced in electro-chemical techniques including EIS.
- Skilled in analytical techniques including Karl Fischer, Fluoride and Magnesium Ion Estimation.
- Proficient with Programming Languages: C, C++, R, HTML & Visual Basic.
Softwares: Dynochem 2011 & AutoCAD.

RELEVANT EXPERIENCE

THE UNIVERSITY OF AKRON
Department of Chemical and Bio-molecular Engineering
Graduate Assistant/ Doctoral Student

Akron, Ohio, USA

May 2015 till present

- Currently working on “Enzyme catalysed attachment of Folic Acid into multifunctional PEG based cancer diagnosis” under the guidance of Dr. Judit Puskas.

Department of Chemical and Bio-molecular Engineering

Graduate Assistant/ Master's Student

May 2014 – May 2015

- Worked on “*Characterization of Magnesium Rich Epoxy Primers*” by “DoD, USA”.
- Also on “*Characterization of Zinc Rich Epoxy Primers*” by “Tesla Nanocoatings Inc., USA”.

National Center for Education and Research in Corrosion and Materials Performance

Student Assistant

February 2014 – May 2014

- Conducted preliminary research for the projects “Characterization of Mg Rich Epoxy Primers” and “Characterization of Zinc Rich Epoxy Primers”.

NATIONAL CHEMICAL LABORATORY, COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, HRD, GOVERNMENT OF INDIA

Pune, Maharashtra, India

Chemical Engineering and Process Development Division

Project Assistant II

June 2012 – December 2013

- Worked on “Process development for the synthesis p-isobutyl acetophenone” by “Vinati Organics, India”.
- Synthesized *Vinyl Butyrate* from Butyric Acid and VAM using Pd-Complex catalyst. Designed the experiments for Vinyl Butyrate synthesis in accordance with Plackett-Burman model.
- Synthesized Tributyl Citrate using Reactive Distillation.

BASF INDIA LTD.

Turbhe, Maharashtra, India

Summer Trainee, Basyntan Plant

Summer 2011

- Assisted in making the ISO 9001 and 14001 reports for the year 2010-2011.
- Worked on detailed Process Designing of the new product PAE.
- Made the P&ID's of reactor systems required for the new process applying the instrument interlock logic.

INSTITUTE OF CHEMICAL TECHNOLOGY

Mumbai, Maharashtra, India

Undergraduate Summer Researcher

Summer 2010

- Worked on a project entitled “**Dye syntheses from Lignin**” under the guidance of **Dr. Prof. P.M. Bhate** (H.O.D. – Department of Dyestuff & Intermediates Technology).

AFFILIATIONS AND CERTIFICATIONS

RUBBER DIVISION ACS STUDENT CHAPTER

Treasurer

May 2015 – Present

INDIA SUNDAY SCHOOL

Secretary

Akron, Ohio, USA

September 2014 – June 2015

THE SOCIETY FOR PROTECTIVE COATINGS

Certified in Fundamentals of Protective Coatings (C1)

August 2014

PRESENTATIONS

Mulay, P.; Castaneda, H. Damage Evolution of Magnesium Rich Primer Applied on AA 2024 T-3 System, NACE International Conference, Dallas, TX, United States, March 16 – 20, 2015.