MOHAMMAD SHADAB ALAM

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PROFILE

A *Chemical Engineer* having set of skills that can benefit organization. Experienced in **Process Engineering, Quality control, Chemical handling, solid waste management, wastewater characterization & treatment, effluent treatment plant (ETP), simulation, process modeling & benchmarking, aerobic & anaerobic processes, environmental science**. Skilled in process modeling and simulations using **POLYMATH**, **MATLAB**, **Simulink**, **ASPEN Plus** software.

PERSONAL DETAILS

Name - Mohammad Shadab Alam
Father's Name - Mohammad Badruzzaman
D.O.B – 25th January 1991

Permanent Address-

Mohammad Shadab Alam
C/o Mumtaz Ali,
Near Masjid, Moriyaghat, Gaya
Bihar- 823001

EDUCATION

M. Tech. in Chemical Engineering March 2017
www.amu.ac.in
Aligarh Muslim University
Aligarh, India
Dissertation: "**Modeling and simulation of fluid catalytic cracking unit Riser Reactor using POLYMATH**"

B. Tech. in Chemical Engineering May 2014
www.amu.ac.in
Aligarh Muslim University
Aligarh, India
Project: "**Techno-Economic Feasibility report on Production of Acrylonitrile by SOHIO Process**"

PROFESSIONAL EXPERIENCE

Process Engineer & Quality Control July 2018-Present
Modern Insecticides Limited
Ludhiana, India

- Plan and monitor technical & Administrative activities in plant with coordination and help of all departments. I.e. Production, Quality, Maintenance, H.S.E, Admin, H.R departments.
- Engaged in preparing plans, designs, cost estimates, and specifications for experimental, maintenance, Technical Trouble shooting, total productive maintenance (T.P.M), and Safety with modernization programs to determine most feasible and cost effective approach to technical problems.
- Evaluates performance records of chemical processes, physical operations, production target and submit report to management.
- Prepare reports on cost of plant operations and deal with the whole requirement and urgent purchasing of the Technical and Formulation plants.
- Periodic audit of all the activities, operations of the plant to ensure statutory compliance in-house standard compliance with bench-marked parameters.
- Regularly attend timely meeting of the Safety & projects with seniors.
- Develop supporting team for making smooth & Productive environment in the plant.
- Ensuring projects & Extension of Technical and formulation Plant as per target details.

- All type of material handling of Technical & Formulation grades.
- Product recovery, Quality/ Purity enhancement, Process modification on the basis of Q.C Lab & R.D testing reports.

Junior Research Fellow Sep. 2017 – Oct. 2017
TERI University
New Delhi, India

- Worked on project "Development of **sludge free** clean, green and **cost effective technology** at **bench scale** for the treatment of **textile** and **dying industry effluent** ongoing"**.**
- Performed **Textile** and **Dying industry wastewater treatment** using **photo-catalysis** method where **Titanium oxide** utilized as a **photo-catalyst**.
- **Piloting** the proposed **100 litre wastewater treatment plant** for the **textile and dying industry** at the **customer site** and worked towards **scale-up**.
- Conceptualization of the solution followed by **treatment process benchmarking** and **treatment scheme lay-out** with a basic **cost** and **performance** model analysis**.**
- **Recycling** of **Titanium oxide** as **photo-catalyst** after wastewater treatment ready for reuse**.**
- **Treatability assessment** based on rigorous laboratory for **continuous** & **batch process modeling** as well as simulation studies.

PROJECT EXPERIENCE

Modeling and simulation of Fluid Catalytic Cracking Unit Riser Reactor using POLYMATH Sep. 2015 – Dec. 2016
Aligarh Muslim University, Department of Chemical Engineering
Aligarh, UP

Techno-Economic Feasibility Report on Production of Acrylonitrile by SOHIO Process Jan. 2014 - May 2014
Aligarh Muslim University, Department of Chemical Engineering
Aligarh, UP

Determination of Terminal Settling Velocity Using Image Processing Tool of MATLAB Sep. 2013 – Dec. 2013
Aligarh Muslim University, Department of Chemical Engineering
Aligarh, UP

MINI-PROJECT EXPERIENCE

Modeling and simulation of anaerobic digester of the organic waste for Biogas production using MATLAB (2015)

- **Mathematical modeling** of **anaerobic digester** using **Mass balance** and **Energy balance**.
- Simulated an **intermediate kinetic model** that predicts the **volume of anaerobic digester** and **concentration of substrate** and **microorganism** for steady-state as well as unsteady-state condition.
- **Optimization** of design parameters for an anaerobic digester, and provides information such as the relationship between **digester sizing and feed rate**.

Design of a distillation column for the Toluene and Butanol system (2012)

- For the **separation of toluene and butanol** the design of **distillation column** is done using the various correlations and the desired equilibria is achieved.

Eco-friendly Fly Ash Bricks and Cements (2011)

- Since, Fly ash is major byproduct of thermal power plant and its handling is one of the major problem to environment leading to air pollution.
- In this report the qualities of fly ash bricks are compared with the normal bricks and its advantages are studied.

SEMINARS AND PRESENTATIONS

Alam, MD. Shadab. "**Modeling and simulation of anaerobic digester of the organic waste for Biogas production using MATLAB**," Presented at Department of Chemical Engineering Seminar, Aligarh, UP, 2015.

Alam, MD. Shadab. "**Analytical Solution of Bi-parameter Axial Dispersion Model**," Presented at Department of Chemical Engineering Seminar, Aligarh, UP, 2015.

Alam, MD. Shadab. "**Modeling of convective Drying of Food**," Presented at Department of Chemical Engineering Seminar, Aligarh, UP, 2015.

Alam, MD. Shadab. "**Fly Ash Bricks and Cements**," Presented at Department of Chemical Engineering Seminar, Aligarh, UP, 2012.

TECHNICAL SKILLS

- **Wastewater Treatment Plant** (WTP)
- **Effluent Treatment Plant** (ETP)
- **Solid waste Treatment Plant** (STP)
- **Solid Waste Management, wastewater characterization & treatment**
- **Biological**, **electrochemical**, **photo-catalysis**, and **oxidation treatment method** of industrial wastewater
- **Adsorption**, **coagulation**, **precipitation**, **reverse osmosis** (RO)
- **Photo catalysis**
- **Simulation, modeling, optimization, digester sizing**
- **Aerobic and anaerobic processes**
- **water chemistry, atmospheric chemistry**
- **Software skills**: MATLAB, Simulink, ASPEN Plus, POLYMATH