DEEPAK KUMAR SHARMA

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Chemical engineering graduate with industrial experience seeking good opportunities. Strong quantitative skills and excellent problem solving skills with the ability to lead a team effectively in a professional environment

EDUCATION

City College of New York, City University of New York, NY, USA
Master of Engineering in Chemical Engineering

Sir Visvesvaraya Institute of Technology, Pune University, India
Bachelor of Engineering in Chemical Engineering

SKILLS

Lab Technique's: X-ray powder Diffraction (XRD), Scanning Electron Microscopy (SEM), Energy dispersive X–ray Spectroscopy (EDS), Inductive Coupled Plasma spectroscopy (ICP), Brunauer-Emmett-Teller (BET) Surface Area, Porosity measurement via Pycnometer, Gas Chromatography (GC).

PROJECT

High temperature Corrosion Analysis.
- Analyzed the corrosion mechanisms of different alloys at high temperatures under different gaseous conditions for the samples provided by various alloy-manufacturing companies.
- Used SEM to analyze the sample's microscopic structure on surface and at a cross-section.
- Understanding the fundamentals behind the different corrosion characteristics of different alloy compositions for improving the alloy formulation.
- Assisted in the selection of the alloys for different industrial applications.

Fly Ash Treatment and Analysis.
- Used analytical methods the composition and its effects on the fly ash leaching behavior.
- Microscopic analyses of the samples to check pore collapse and migration
- Used XRD to identify crystal lattice change and conversion with temperature.
- Characterizing Fly Ash and accordingly formulating their treatment and pacification methods.

Characterization of ash particles from Waste Incineration plants.
- Characterizing bottom ash obtained from various Waste-to-Energy plants of Covanta Cooperation.
- Developed analytical techniques to understand leaching properties of the ash.
- Using SEM, XRD and ICP techniques identified key parameters effecting leaching in ash.
- Proposed a method to stabilize ash.

Technical feasibility study of Zero Waste for Paper and Plastic.
- Analyzed various waste recycling techniques and their limitations.
- Studied Paper and Plastic recycling techniques form a technical perspective.
- Presented the findings at WTERT(2014) and NAWTEC(2015) conference. **Journal article in review**

Design of Photo-catalytic reactor for degradation of Phenol in wastewater using Photo-catalyst Titanium dioxide.
- Incorporated the concept of fluidized bed to increase the rate of degradation of phenol.
- Modeled a reactor that increased the conversion to 95.27% in 1 hour from a conversion of 94% in two hours.
- Project findings published in International Journal of Chemical Engineering and Application.

JOURNALS

"Design of Photo-catalytic Reactor for Degradation of Phenol in Wastewater", *International Journal of Chemical Engineering and Applications* 2011 Vol. 2, No. 5: 337-341, ISSN: 2010-0221, http://www.ijcea.org/show-33-394-1.html.

EXPERIENCE

City College of New York, New York, NY   **02/15 – Present**
Research Associate, Chemical Engineering Department,
Combustion and Catalysis Lab & Earth Engineering Lab
- Managed different projects ranging from recycling, corrosion and controlled combustion residues.
- Analyzed samples from different sources and identified key aspects to develop a theory to explain characteristic behavior.
- Provide suggestions based on investigations and analysis of data.
- Work with designers and manufacturing officers to develop a solution for the on-site concerns in process.

Seya Industries Pvt. Ltd., **Tarapur, MH, India**   **11/11 - 02/13**
Process Engineer,
- Manage the manufacturing system of the Mono-Chloro-Benzene Plant.
- Maintain reliable and safe manufacturing systems while improving/maintain production rates, efficiencies, yields, costs and changeovers
- Troubleshoot for problems during the operations.

AFFILIATIONS

Vice- President, Sustainable Energy Now Club, City College of New York, 2014 -15

Board Member, Chemical Eng. Dept. Student Committee, SVIT, 2010-11