

EDUCATION

Western Michigan University, College of Engineering and Applied Sciences, Kalamazoo, MI
Ph.D. Candidate. Paper Science and Imaging Engineering Fall 08- present
Department of Paper Engineering, Chemical Engineering and Imaging

Western Michigan University, College of Engineering and Applied Sciences, Kalamazoo, MI
MS in Paper Science and Imaging Engineering April 2008

Thesis Title: Effect of High Temperature Drying of Recycled Paper on Drying Rate and Paper Properties.

Research Project: The research presented a study on the effect of high temperature on paper drying rates and properties for both virgin and recycled pulp. The studies focused on investigating the effect of high temperature cylinder and one side paper drying on heat transfer, shell-paper contact coefficient and paper properties. In the experiments conducted, a laboratory drying system that simulates paper drying at elevated temperatures was applied on different handsheets. Using this system, dried paper was tested for curl and strength properties. The results of this study provided information that optimizes the location of the high temperature dryers in paper mills. At the ideal location, the heat transfer rates are maximized with minimum effect on sheet properties.

Independent Study Project:

Title of Project Study: Effect of Soybean Proteins on Paper Mechanical Properties.

The objective of this research was to study the effect of soybean proteins when added to hard wood (HW) pulp on paper properties. It was found that the addition of soybean solutions to HW pulp had a significant effect in increasing paper tearing resistance, tensile strength and bending resistance. This increase could be explained by the interaction of soybean proteins' polymer with HW pulp fibers and fine retention. Therefore, fiber-to-fiber bonding increases which gives stronger and stiffer paper.

Significant Course Work: Coating, Rheology Advanced Paper Processes, Printability Analysis, Mechanics & Optics of Paper & Fibers, Coating Formulations, Paper-Printing & Ink, and Design of Experiments.

The University of Jordan, Faculty of Engineering, Amman, Jordan

BS Chemical Engineering,

Spring 2001

Senior Design Project: Manufacturing and Equipment Design of Tomato Paste Products

A review of the manufacturing equipment and operational procedures for a tomato paste plant was implemented. Different mathematical models and heat and mass transfer phenomena were applied to design equipment used at each stage of producing tomato paste and puree.

Practical Study Project:

Title of Study: Dye Removal by Ultra-Filtration

The objective of project was to study the effect of process variables from volumetric flow rates and temperature on dye removal by ultra filtration.

Significant Course Work: Calculus (3 courses), Differential Equations, General Physics (2 courses), General Chemistry (2 courses), Organic chemistry, Physical Chemistry, Analytical

Chemistry, Thermodynamics (2 courses), Fluid Mechanics, Statistics, Engineering Drawing, Physics (2 courses) Chemical Engineering Principles (2 courses), Process Heat Transfer, Transport Phenomena Numerical Methods in Chemical Engineering, Biochemical Engineering, Process Modeling by Statistical Methods, Petroleum Refining Engineering, Inorganic Chemistry Industries and Polymers and Plastics Engineering.

EXPERIENCE

Western Michigan University, College of Engineering and Applied Sciences, Kalamazoo, MI
Department of Paper Chemical and Imaging Engineering

Teaching Instructor Fall 08- present

- Practical Teaching in the Discipline

Participated in the lecturing, explaining and teaching of core chemical engineering undergraduate coursework curriculum. Worked with students one on one and in groups. Assisted in problem solving and grading.

Teaching Assistant

- Chemical Engineering Thermodynamics

Fall 06- Present

- Plant Economics and Project Design

- Material and Energy Balances

- Data Acquisition and Handling

Supervised and instructed engineering students in different laboratory experiments. Assisted in problem solving and grading.

- Engineering Design Center Supervisor: Supervised students working on different departmental projects in a university workshop

Royal Scientific Society, Amman, Jordan

Summer 2000

Intern and Trainee

Testing according to ASTM standards. Division of Organic Materials. Division of Textile & Paper, and Petroleum and lubricant unit.

PUBLICATIONS & PRESENTATIONS

Al-Said, D. Chudnovsky, Cameron, J. Effect of High Temperature Drying of Recycled Paper on Heat Transfer Rates and Sheet Properties. TAPPI JOURNAL. August (2009).

TAPPI 8th Research Forum on Recycling. Niagara Falls, Canada.

09/ 2007

Speaker and Presenter.

Al-Said, D. Chudnovsky, Y. Alkhasawneh, H. Cameron, J. Effect of High Temperature Drying of Recycled Paper on Heat Transfer Rates and Sheet Properties.

AWARDS

Western Michigan University Grant - Fellowship

Fall 08- present

WMU Department Graduate Research and Creative Scholar Award

Spring 08

Western Michigan University Grant - Fellowship

Fall 06 –
Spring 08