

Joseph Hsieh
(215) 833-4559
Joseph.c.Hsieh@drexel.edu
132 Brandamore Rd., Honey Brook, PA 19344

Education

Drexel University
Bachelor's Degree of Science in Materials Engineering
Minor in Nuclear Engineering
Cumulative GPA: 3.24

Philadelphia, PA
Anticipated Graduation - June 2012

Honors

AJ Drexel Academic Scholarship
Drexel University Pennoni Honors College
James W. Lindemer Endowed Memorial Scholarship: *in recognition of academic merit* (Feb 17 2010)

Relevant Coursework

Ceramics Processing	Thermodynamics of Materials
Processing of Metallic Metals	Comp Lab and Numerical Methods
Mechanical Behavior of Solids	Special Topic: Electronic & Photonic Properties

Experience

Research: *Dynamic Characterization Group, PI: Dr. Mitra Taheri, MSE* January 2009 - Current

Current Project: *Grain boundary engineering on stainless steel*

Goal: Develop thermal mechanical processing to generate coincident site lattice (CSL) boundaries and analyze material behavior response (e.g. corrosion, stress corrosion cracking).

Key requirements: -the use of electron backscatter diffraction (EBSD) in a SEM for grain boundary analysis
-very detailed sample machining, organized thermal mechanical processing and EBSD-level polishing

Previous Projects: *Diffusion of Intermetallics into Iron Particles*

Goal: Characterize diffusion behavior of coated powder into Fe, for soft magnet application.

Key requirements: -the use of scanning electron microscopy work to characterize particles in Fe matrix via energy-dispersive X-ray spectroscopy (EDS)

Employment

Drexel University

Undergraduate researcher (co-op), Dynamic Characterization Group

- worked closely alongside a PhD student on the project *Grain boundary engineering on stainless steel* to develop the project into publishable information
- organized and processed samples for a three variable matrix, requiring very methodical sample preparation and identification
- was trained on a scanning electron microscope (SEM), and ran over 100 hours of EBSD.

Philadelphia, PA
March 2011-current

Carpenter Technology

Technical Services, Forge Bar and Billet Co-op

- collected extensive qualification data for existing grades for new customers, compiling the data and information into a presentation
- maintained long term data collection projects with the goal of increasing lean manufacturing through trend analysis; data included furnace performance, ultrasonic inspection, and other root causes
- performed sample preparation, etching, optical analysis with optical microscope, and image analysis with Clemex
- accumulated fiscal year data for various reporting projects using Data Warehouse

Reading, PA
March 2010 - September 2010

Technical Services, Coil Finishing Co-op

- Provided lab support and data collection for the Coil Finishing Group
- Performed extensive work with sample preparation, etching, and image analysis with stereoscopes and optical microscopes
- Compiled and arranged data for multiple root cause analysis projects
- Actively worked with manufacturing to develop cold roll inventory system

March 2009 - September 2009

Skills, MATLAB, Maple, AutoCAD, Pro Engineer, Microsoft Excel, Word, PowerPoint