

# Michael J. Roy

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## OBJECTIVE

To obtain a full time position as a Process Engineer to utilize my talents and education to reduce operational costs and develop alternative methods for product synthesis.

## PROFESSIONAL EXPERIENCE

### **Georgia Tech, *Graduate Research Assistant***

**August 2010 – Present**

- Working towards creating value added products such as specialty chemicals and fuels from renewable biomass through catalytic reactions. I am investigating the hydrodeoxygenating abilities of Platinum, Zinc, and ZSM-5 zeolite catalysts for the conversion of lignin model compounds.

### **Florida Crystals Corporation, *SRDP Chemical Engineer***

**May 2008 – 2010**

- Implemented over \$100k worth of controls to increase efficiency at the desweetening system and prevent product from being discarded, saving in excess of \$50k annually. Conducted test to design and characterize operating parameters for automation of filters to save \$150k annually with \$250k worth of control hardware. Implemented process parameters to reduce wastewater in the refinery by 50% to 100,000gpd and reduced makeup water demand by over 10,000gpd with less than \$5k in materials.

### **University of Florida, *Research Assistant***

**January 2007 – 2008**

- Tested the rheology of oscillatory flow in parallel plate systems and established an empirical function for use in modeling of oscillatory flow in pipe.
- Hyun-Ok Park, Jonathan M. Bricker, Michael J. Roy, and Jason E. Butler, "Rheology of oscillating suspensions of non-colloidal spheres at small and large total strains," *Physics of Fluids* **23**, 013302 (2011)

### **U.S. Department of Agriculture, *Biological Science Aid***

**October 2002 – 2006**

- Solved contamination problem from local nursery, saving the company in excess of \$2M annually from their palm and Ficus export businesses. Managed and planned an operating budget exceeding \$50k for equipment and supplies in the laboratory.

## EDUCATION

**Master of Science in Chemical Engineering**, Georgia Institute of Technology  
Paper Science & Engineering Minor, GPA: 3.52

**August, 2012**

**Bachelor of Science in Chemical Engineering**, University of Florida  
*Summa cum Laude*, GPA: 3.84

**May, 2008**

## SKILLS AND TRAINING

- Conversational Spanish
- Mass Spectrometer, Elemental Analysis, IR, NMR, & GPC
- Microsoft Office, Basic CAD, MATLAB
- OSHA 30 Hour Training January 2009
- American Heart Association First Aid & CPR Training June 2008
- EPA Worker Protection Standard Training: Handler July 2005