



# Scott C. Rowe

(314) 601-4836 | [scott.rowe@colorado.edu](mailto:scott.rowe@colorado.edu)

## Education

**University of Colorado**  
Boulder, CO  
2013-2018  
PhD (Chemical Engineering)

**University of Texas**  
Austin, TX  
2010-2013  
BS (Chemical Engineering)

**University of California**  
Berkeley, CA  
2007-2009  
MS (Plant & Microbial Biology)

## Selected Awards

**Dean's Assistantship**  
University of Colorado  
*Recipient, 2013*

**GAANN Fellowship**  
University of Colorado  
*Recipient, 2014*

**STaRS Industry Expo**  
University of Colorado  
*Winner, 2014 & 2017*

## Skills

pilot plant commissioning  
factory acceptance  
optimization  
molecular biology  
C, Matlab, RsLogix  
advanced process control  
HYSYS, Solidworks, Aspen  
P&ID, DCS, PLC programming

## Instructor of Record

*Multiple Universities | 2018-2019*

Modernized labs with PLCs & process equipment (*CU Boulder*).  
Led **86 students** in capstone coursework (*Florida State/A&M*)  
Led **160 students** in capstone coursework (*CU Boulder*).  
Lead instructor in *programming, separations, balances, control, thermodynamics, kinetics, projects, design, & differential Equations*.

## Controls Engineer & Pilot Plant Commissioning

*University of Colorado | Boulder, CO | 2014-2017*

Commissioned a **\$3M pilot plant**, including factory acceptance.  
Led contractors, technicians and safety personnel.  
Pilot plant advanced process control.  
Integrated solar & electric heat.

## Cofounder

*[bigbluetec.com](http://bigbluetec.com) | Commerce City, CO | 2015-2017*

Design & control of continuous metals manufacture **>3000° F**.  
Pilot plant instrumentation & interfacing.  
Business development, **\$1.1M raised**.

## Process Engineer

*Process Science Tech. Center | Austin, TX | 2012-2013*

Distillation modeling in a pilot plant environment.  
Experiments for algal biofuels feasibility.

## COOP

*Genentech | South San Francisco, CA | 2011*

Pilot plant experiments for strain improvement.  
High Cell Density Culture (HCDC).

# Honors

## Invited Talk

*Process Sci. Tech. Center Biannual Conference | 2018*

"Paths for the Integration of Solar in Commodities Chemicals."

## Best Session Paper

*AIChE Conference (paper 753b) | 2017*

"Experiment Driven Choices in the Fab. of a 45kW Solar Simulator."

## Invited Talk

*Switch at the Alliance Center | 2016*

"Biofuels, Potential versus Practicality."

## Invited Talk

*Tinkermill, Longmont, CO | 2016*

"Do it Yourself Concentrated Solar Power."

## Fellowship

*University of Colorado | 2014-2015*

Department of Education GAANN Graduate Assistantship.

## Best Talk

*STaRS industry/Academic Expo CU Boulder | 2017, 2014*

"Pilot Experiments for Hybrid Renewable & Conventional Utilities."

"Novel Parallel Time Adaptive Model Predictive Control."

## Fellowship

*University of Colorado | 2013*

Dean's Assistantship.

## Invited Talk

*farmscapedgardens.com | 2013*

"Agriculture in the Urban Environment."

# Other

## Acoustic and Electric Cello

1992-...

## Salsa, Swing & Contra Dancing

2017-...

## Secretary (Elected)

*Tau Beta Pi Engineering Honorary, Texas Alpha | 2013*

# Publications

- Singh H & Rowe SC**, "Toppings Refinery Retrofit." AiChE Annual Design Competition & Rules, (August 2020).
- Rowe SC, Cathleen SI & Clough DE**. "A Framework to Guide the Instruction of Industrial Programmable Logic Controllers in Undergraduate Chemical Engineering Education." Education for Chemical Engineers, vol. 31 (April 2020)
- Rowe SC**. (2019) US62926477. Washington, DC: USPTO.
- Chubukov BA, Rowe SC, Palumbo AW, Wallace MA, & Weimer AW**. "Investigation of Continuous Carbothermal Reduction of Magnesia by Magnesium Vapor Condensation onto a Moving Bed of Solid Particles." Powder Tech vol. 365 (April 2020).
- Rowe SC, Hischier I, Palumbo AW, Chubukov BA, Wallace MA, Viger R, Lewandowski A, Clough DE & Weimer AW**. "Nowcasting, predictive control, and feedback control for temperature regulation in a novel hybrid solar-electric reactor for continuous solar-thermal chemical processing." Solar Energy vol. 174,1 (Nov 1<sup>st</sup> 2018).
- Rowe SC, Wallace MA, Lewandowski A, Fisher RP, Cravey WR, Clough DE, Hischier I, Weimer AW**. "Experimental Evidence of an Observer Effect in High Flux Solar Simulators." Solar Energy vol. 158 (Nov 5th 2017).
- Rowe, SC, Wallace MA, Lewandowski A, Fisher RP, Cravey R, Clough DE, & Weimer AW**. (2017). "Evidence of an Observer Effect Predicted in High-Flux Solar Simulators, but not High-Flux Solar Furnaces." In Optics for Solar Energy (pp. RTh2B-5). Optical Society of America.
- Racolta A, Nodine MD, Davies K, Lee C, Rowe S, Velazco Y, Wellington R & Tax FE**. "A Common Pathway of Root Growth Control and Response to CLE Peptides Through Two Receptor Kinases in Arabidopsis." Genetics vol. 208, 2 (Nov 29th 2017).
- Weimer AW, Palumbo AW, Hischier I, Groehn AJ, Chubukov BA, Rowe SC, Fisher R**. (2016) PCT WO2017003528A1. Washington, DC: USPTO.
- Rowe SC, Groehn AJ, Palumbo AW, Chubukov BA, Clough DE, Weimer AW & Hischier I**. "Worst-case losses from a cylindrical calorimeter for solar simulator calibration." Optics Express vol. 23,19 (Sept. 21th 2015).
- Chubukov BA, Palumbo AW, Rowe SC, Wallace MA, & Weimer AW**. "Enhancing the Rate of Magnesium Oxide Carbothermal Reduction by Catalysis, Milling, and Vacuum Operation" Industrial Engineering Chemistry Research vol. 56, is. 46 (Oct. 25th 2017).
- Chubukov B, Rowe S, Palumbo A, Hischier I & Weimer A**. "Experimental Investigation of Continuous Magnesium Production by Carbothermal Reduction." In Magnesium Technology, pp. 199-202. Springer International Publishing (2017).
- Hischier I, Chubukov BA, Wallace MA, Fisher RP, Palumbo AW, Rowe SC, Groehn AJ, & Weimer AW**. "A novel experimental method to study metal vapor condensation/oxidation: Mg in CO and CO<sub>2</sub> at reduced pressures." Solar Energy vol. 139, 389 (December 1<sup>st</sup> 2016).
- Chubukov BA, Palumbo AW, Rowe SC, Hischier I, Groehn AJ & Weimer AW**. "Pressure dependent kinetics of magnesium oxide carbothermal reduction." Thermochimica Acta vol. 636, 23 (July 20th 2016).
- Khan S, Rowe S, & Harmon FG**. Coordination of the Maize

# Publications

Transcriptome by a Conserved Plant Circadian Clock. BMC Plant Biology vol. 10, 126 (June 24th 2010).  
*Belkhadir Y, Durbak A, Wierzba M, Schmitz RJ, Aguirre A, Michel R, **Rowe SC**, Fujioka S, & Tax FE.* "Intragenic Suppression of a Trafficking-Defective Brassinosteroid Receptor in Arabidopsis. Genetics vol. 185, 1283 (May 10th 2010).