

# Thomas J. Cochell

Chemical & Materials Engineering  
163A F. Paul Anderson Tower  
Lexington, KY 40506-0046  
(859) 257-5076  
thomcochell@uky.edu  
<http://www.engr.uky.edu/cme/>

## Professional Preparation

University of Texas at Austin, Material Science and Engineering, Ph.D., 2013  
Colorado School of Mines, Metallurgical and Materials Engineering, B.S., 2008

## Appointments

2013-present	Lecturer, University of Kentucky (UK)
2015-present	Summer Researcher, UK and SRI (with Alexandre Martin)
2014	HERE Summer Faculty Program, Oak Ridge National Laboratory
2013	Postdoctoral Research Associate, University of Texas at Austin

## Courses Taught

MSE 201 – Materials Science	Fall 2013 – 2017, Spring 2015
MSE 351 – Material Thermodynamics	Spring 2016 – 2018
MSE 401G – Metal and Alloys	Fall 2014 – 2016
MSE 403G – Ceramic Engineering and Processing	Spring 2014 – 2018
MSE 407 – Materials Laboratory I	Spring 2014 – 2018
MSE 408 – Materials Laboratory II	Fall 2013 – 2018
MSE 585 – Materials Characterization Techniques	Fall 2018

## Statement of Teaching Philosophy

My teaching philosophy has evolved over the five years I have taught at the University of Kentucky coming straight from graduate school. It has evolved as I have learned from colleagues and students alike. I have learned to adapt to different teaching and learning styles as I have taught different courses in the Materials Science and Engineering (MSE) curriculum. My teaching philosophy has evolved over time, but the main focus has always remained the same: student success.

I believe student success at the university-level is achieved by student-centered education that takes place through inquiry-based instruction. As an educator, my job is to lay the groundwork, apply structure to the classroom setting, and to guide the students as they work through the course objectives. The students, ultimately, hold the responsibility for their own education. That said, educators must: treat students with

respect, make themselves available outside the classroom setting, be flexible to different learning styles, be responsive to feedback and inspire their students.

## Professional Development

- Sharing Ideas in STEM – Fall 2018
- Teaching Innovation Study Group – Fall 2017
- Workshop on Transforming Undergraduate Education in Engineering – Oct 12, 2017
- National Effective Teaching Institute (NETI) 1B Workshop – June 23 – 25, 2016
- Presentation U! Multimodal Communication Faculty Fellow Cohort #2 – 2014 – 2015
- Research Associate, University of Kentucky/SRI/Oak Ridge – Summer 2014 – 2018

## Outreach Activities

- First Year Engineering Program MSE Information Sessions – 2017
- Faculty Advisor to the UK Bladesmithing Team – 2016
- Exhibit at Stonewall Elementary Science Night – Spring 2016
- Live Learning Program Game Night – Spring 2015
- Exhibit at E-Days – Spring 2014
- Promotion of E-Days on morning TV show – Spring 2014
- Exhibit at Stonewall Elementary Science Night – Spring 2014
- Ingles Hall Game Night – Fall 2013
- Elkhorn Crossing School Recruitment Visit – Fall 2013
- Materials Advantage Corning Glass Harrodsburg Tour – Fall 2013

## Publications and Presentations

F. Panerai, J. White, **T. Cochell**, O. Schroeder, N. Mansour, M. Wright, A. Martin, *International Journal of Heat and Mass Transfer* **101**, 267-273 (2016).

A. Ievlev, S. Jesse, V. Iberi, **T. Cochell**, V. Protopopescu, R. Unocic, O. Ovchinnikova, S. Kalinin, *Microscopy and Microanalysis* **22**, 794-795 (2016).

A. Ievlev, S. Jesse, **T. Cochell**, R. Unocic, V. Protopopescu, S. Kalinin, *ACS Nano* **9**, 11784-11791 (2015).

White, J. D., Panerai, F., **Cochell, T. J.**, and Martin, A., *7th Ablation Workshop*, No. AW15-108, Tullahoma, TN, October 2015.

Martin, A., White, J. D., Panerai, F., and **Cochell, T.**, Early Stage Innovations 2014 Annual presentations, November 2015.

**T. Cochell** and A. Manthiram, *Langmuir* **28**, 1579-1587 (2012).

**T. Cochell**, W. Li, and A. Manthiram, *Journal of Physical Chemistry C* **117**, 3865-3873 (2013).

W. Li, **T. Cochell**, and A. Manthiram, *Scientific Reports* **3**, 1229 (2013).

W. Li, X. Zhao, **T. Cochell**, and A. Manthiram, *Applied Catalysis B: Environmental* **129**, 426-436 (2013).

Y. S. Su, Y. Fu, **T. Cochell**, and A. Manthiram, *Nature Communications* **4**, 2985 (2013).