



Dean R. Wheeler

Professor
Chemical Engineering
Brigham Young University

330 EB
Provo, UT 84602
phone: (801) 422-4126
email: dean_wheeler@byu.edu



Research Area: Electrochemical Engineering

Modeling and experiments of battery electrode microstructure, ionic and electronic transport, silicon electrodes, lithium-oxygen cells.

● Prospective graduate students

If you are interested in coming to BYU and joining my group to earn a Ph.D. or M.S. degree, [please read this](#).

● News Feed

- On August 18, 2024, Prof. Wheeler gave a [3-hour invited tutorial on electrochemical modeling](#) at the 75th ISE Meeting in Montreal, Canada
- As of March 21, 2018, Prof. Wheeler is active on Instagram! [@dean_r_wheeler](#)
- On Sept. 22, 2017, Prof. Wheeler [spoke about battery technology](#) with a committee of the Utah Legislature. The associated Powerpoint file is [here](#).
- Prof. Wheeler [discussed battery safety on BYU radio](#) in March 2017
- Prof. Wheeler's latest research was featured in [June 2015 on BYU Radio](#)
- Prof. Wheeler's research was featured on the BYU homepage in [Nov. 2007](#) and [Sept. 2009](#)

● Classes Taught

- Univ 101 - Foundations for Student Success
- Ch En 170 - Intro to Chemical Engineering
- Ch En 263 - Problem Solving Techniques
- Ch En 285 - ChemE Fundamentals Laboratory - Part 1
- Ch En 345 - ChemE Fundamentals Laboratory - Part 2
- Ch En 373 - Thermodynamics
- Ch En 376 - Heat and Mass Transfer
- Ch En 378 - Materials Science for Engineers
- Ch En 391 - Career Skills for Chemical Engineers
- Ch En 498R - Student Projects
- Ch En 531 - Thermodynamics of Multicomponent Systems

- Ch En 533 - Transport Phenomena
- Ch En 693R - Electrochemical Engineering

• [Research Activities](#)

• [Publications and Presentations on Google Scholar](#) and an older (and less-maintained) [list](#)

• [Curriculum Vitae](#)

• Graduate Students Advised

- Clint Guymon, [Ph.D. 2006](#) - currently a professor at BYU
- Indrajeet Thorat, [Ph.D. 2009](#)
- Elliott Bird, [M.S. 2009](#)
- David Stephenson, [M.S. 2008](#) and [Ph.D. 2011](#) - currently at PNNL
- Stan Moore, [Ph.D. 2012](#) - currently at Sandia National Lab
- Abhishek Asthana, [Ph.D. 2012](#)
- Dane Hansen, [Ph.D. 2012](#) - currently at Intel
- Yining "Claire" Pan, [M.S. 2013](#) - currently at Intel
- Doug Nevers, [M.S. 2013](#)
- Serena W. Peterson, [Ph.D. 2015](#) - currently at Saft America
- Chien-Wei "Ben" Chao, [M.S. 2015](#) - currently at BD Medical
- Mehdi Forouzan, [Ph.D. 2018](#)
- Fezzeh Pouraghajan, [Ph.D. 2020](#)
- Emilee Hunter, [M.S. 2020](#)
- Mojdeh Nikpour, [Ph.D. 2022](#)
- Baichuan Liu, [Ph.D. 2022](#)
- Amir Sina Hamed, [Ph.D. 2023](#)
- Nathan Clarke, [M.S. 2023](#)
- Fei Sun, [Ph.D. 2024](#)
- Eric Oldham, Ph.D. (begun 2021)
- Kyle Manwaring, Ph.D. (begun 2022)
- Lizbeth Zurita-Garcia, Ph.D. (begun 2022)
- Naakaii Tsosie, Ph.D. (begun 2024)

• Resources for students

- [Guide to writing scientific papers](#) and other technical writing
- [Guide to writing a graduate prospectus](#) for my students
- A summary of [how to do confidence intervals](#)
- [Corrosion protection principles](#)
- [Non-Newtonian fluid math](#)
- [Tank blowdown math](#)
- [Chemical Hazard Assessment Form](#) for students to record chemical safety information for our laboratory procedures
- Writing large scientific documents with Microsoft Word is hazardous to your sanity. Consider using [Lyx](#) or [Overleaf](#), which are graphical interfaces for a publishing system known as LaTeX. Some helpful LaTeX files for formatting BYU theses and dissertations are [here](#).
- [Inkscape](#) is a nice (and free) package for doing line drawings, also known as vector graphics.

- [Application](#) for undergraduates to do research in my group

● Miscellaneous

- [15 great hikes near Provo, Utah](#)
- [Water rockets](#)
- [Classroom demonstrations](#) of engineering principles
- [Chemical engineers in movies](#)
- [My wife and children \(2014 photo\)](#)