



Continuous Chemical Methods: An Essential Set of Tools for Modern Synthesis

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Chemical and Life Science Engineering, Virginia Commonwealth University, Richmond, VA, USA

Day 1: The Basic Information You Need to Use Continuous Methods

- a. Comparing Batch and Continuous
- b. Principles of Fluids in Small Channels
- c. When to Use Continuous Methods
- d. How to Build Simple Continuous Systems

Day 2: Case Studies of Continuous Chemistry Applied to Small Organic Molecules

- a. Flash Chemistry – Using Fast Mixing to Your Advantage
- b. Atypical Conditions – Beyond Boiling Points and Normal Pressures
- c. Photochemistry – Getting the Most Out of Light
- d. Contemplating Multistep Processes as Single Systems

Day 3: Looking at Some Frontier Areas

- a. Continuous Inorganic Chemistry
- b. Producing Particles
- c. Polymer Synthesis
- d. Making More Complex Materials Continuously
- e. Conclusions and Future Outlook

SHORT CV

Professor D. Tyler McQuade

University address: Chemical and Life Science Engineering Virginia Commonwealth University

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a. Education

Professional Preparation

1998 Ph.D., University of Wisconsin-Madison. Major: Chemistry. Organic Chemistry. Supervisor: Professor Samuel H. Gellman.

Further studies of 1,6 methano[10]annulene-derived contrafacial amphiphiles and synthesis of tripod detergents for membrane protein solubilization and crystallization. Unpublished doctoral dissertation, University of Wisconsin-Madison.

1993 BS, University of California - Irvine. Major: Chemistry and Biology Double Major. Organic Chemistry and Cell Biology. Supervisor: Professors Moore and Lynch.

Postdegree Education and Training

1998–2001 NIH Post-doctoral Fellow Massachusetts Institute of Technology.

with Professor Timothy M. Swager.

b. Professional Experience

2017-2017 Deputy Director and Acting Director, Defense Sciences Office, Defense Advanced Research Projects Agency. DARPA-USA

2013-2017 Program Manager, Defense Sciences Office, Defense Advanced Research Projects Agency, DARPA-USA

2013-2015 Professor, Chemistry and Biochemistry, Florida State University

2012–2013 Visiting Professor Max Planck Institute of Colloids and Interfaces.

With Professor Peter Seeberger.

2010–2011 Visiting Professor ETH-Zurich.

With Professor Shana Sturla.

2007–2013 Associate Professor, Chemistry and Biochemistry, Florida State University

2001–2007 Assistant Professor, Chemistry and Biochemistry, Cornell University

c. Publications (Lifetime H-Factor = 35; >500 citations per Year)