

**Maria Thandi Buthelezi, Ph.D.**

Department of Chemistry

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**a. Professional Preparation**

Williams College	Williamstown, MA	Chemistry	B.A. Honors, 1991
University of Florida	Gainesville, FL	Physical Chemistry	Ph.D., 1997
UIUC	Urban-Champaign, IL	Postdoc Research Associate	1997 – 1999

**b. Appointments**

Professor, Department of Chemistry, July 2019 - present

Chair, Department of Chemistry, Wheaton College, Norton, MA; July 2016 – June 2019

Visiting Scientist, Department of Chemistry, Tufts University, Medford, MA, Aug-Dec 2015

Associate Professor, Tenured, Department of Chemistry, Wheaton College, MA; July 2013 - present

Assistant Professor, Department of Chemistry, Wheaton College, Norton, MA; July 2008 – June 2013

Associate Professor, Tenured, Chemistry, Western Kentucky University; Aug. 2005-June 2008

Assistant Professor, Department of Chemistry, Western Kentucky University; Aug. 1999 – Jun. 2005

**c. Publications**

**Textbook:** *“Chemistry: Matter and Change”*; Thandi Buthelezi, Laurel Dingrando, Nicholas Hainen, Cheryl Winstrom, Dinah Zike; Glencoe/McGraw-Hill, ©2008

**Research Papers:** Co-authored more than twenty-five published peer-reviewed research papers.  
(\* Undergraduate student co-authors)

- “M. Bartolotta\*, M.T. Buthelezi, Molecular polarity effect on the association constant of cyclodextrin- pyrimidine nucleobases in water”, *J. Photochem. Photobiol. A Chem.* 371, **2019**, 382–386.
- “Thermosolvatochromism of nitrospiropyran and merocyanine free and bound to cyclodextrin”, Kathryn Burke\*, Caterina Riccardi\*, and Thandi Buthelezi, *J. Phys. Chem. B*, **2012**, 116 (8), 2483.
- “Spectroscopic investigations of molecular association of cyclophanes with anthracene”, Kamia K. Smith\*, Amanda V. Iwunze\*, Kathryn A. Burke\*, Pillhun Son, Malgorzata Sroweic, and M. Thandi Buthelezi, *Arkivoc*, (vii) **2010**, 179. *Invited commemorative issue for Prof. Richard A. Bartsch.*
- “Molecular association of benzene with a new cyclophane receptor”; Christopher Davies\*, Li Ren, Ryan Gustafson\*, Thandi Buthelezi, Richard A. Bartsch, Malgorzata Surowiec; *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, 61, **2008**, 347.

#### d. Synergistic Activities

Seminar Presentation at Worcester State University, Chemistry Department, *“Analysis of Arsenic in Aqueous Media Using Absorption and Fluorescence Spectroscopy”*, February 15, 2018.

##### Membership in Professional Societies

- Chair, Central Massachusetts Section of the ACS, January 2021 - present
- American Chemical Society (ACS) Fall 1995 – present
- Council on Undergraduate Research (CUR) Fall 2009 – present
- National Assessment of Educational Progress (NAEP) Science Standing Committee 2008 – 2017

##### Teaching, Advising, and Student Engagement

- I collaborated with colleagues at Wheaton and we piloted a collaborative first-year seminar during the fall of 2016 that involved joint hands-on laboratory exercises. During the laboratory periods all students from the three FYS sections were placed in one large group then divided into three mixed groups that had equal number of students from each of the three sections. I taught a section of FYS entitled *“Nanotechnology in Everyday Life”* while my colleagues taught *“Eyes to the Universe: A Full Spectrum View of Our World”* and *“Cancer: Exploring the Enemy Within”*. Students completed hands-on activities using microscopes, 3D printers, and molecular modeling software.
- Academic advisor to 14 undergraduate students and research mentor to 7 undergraduate students during the spring of 2021.
- Advisor for the Wheaton American Chemical Society Student Chapter.

##### Service to the Community

- Member, Wheaton College Committee on Faculty Scholarship and Promotion, August 2020 - present

##### Participated in several panels at the National Science Foundation (NSF) including

- NSF/GRFP- Panelist for the review of graduate research fellowship proposals, Jan. 2016, 2017, 2021
- NSF/DRK-12 Panel Chair for the review of proposals submitted to the DRK-12 program, March 2013
- NSF/DRK-12 Panelist for the review of proposals submitted to the DRK-12 program, Mar. 2011, Mar. 2012, and Mar. 2019

##### Judging—Partook in science events as a judge of students’ projects:

- Massachusetts State Middle School Science and Engineering Fair, Worcester Technical High School, Worcester, MA, Every First Saturday of June 2012 – 2016.
- Massachusetts State High School Science and Engineering Fair, MIT, Cambridge, MA, Every First Friday of May, 2014-2017.
- International Science and Engineering Fair; Louisville, KY; May 2002, online March 2019.