

## Biographical Summary (Updated on January 13, 2012)

**Thomas J. Wenzel** is the Charles A. Dana Professor of Chemistry at Bates College in Lewiston, Maine. Dr. Wenzel received his B.S. degree in chemistry from Northeastern University, Boston, Massachusetts in 1976. He obtained his Ph.D. degree in analytical chemistry in 1981 from the University of Colorado, Boulder. His thesis research was recognized through his receipt of the University of Colorado Award for Creative Research. His appointment at Bates College began in 1981. He has served terms as chair of the Science Division, Chemistry Department, Biochemistry Program and the interdisciplinary Environmental Studies Program.

- 2010 – American Chemical Society Research at an Undergraduate Institution Award
- 2003-2005 and 1990-1991 – Camille and Henry Dreyfus Scholar.
- 2002 – Council on Undergraduate Research Fellows Award, the first chemist to be so recognized.
- 1999 – J. Calvin Giddings Excellence in Education Award from the Analytical Division of the American Chemical Society.
- 1997 – Carnegie Foundation College Professor of the Year for the State of Maine.

Dr. Wenzel has been the recipient of research and/or educational grants from the National Science Foundation, Research Corporation, the Petroleum Research Fund, the Camille and Henry Dreyfus Foundation, and the Pittsburgh Conference and Exposition. He has carried out research with the aid of undergraduate students in the areas of chiral NMR shift reagents, lanthanide luminescence detection in liquid chromatography, and selective sorbents for gas chromatography. He has a total of 147 publications; 80 on research activities, 29 on educational activities, and 38 others mostly having to do with his efforts to promote undergraduate research. External grants for research and education total over \$2.6 M.

Highlights of his **research activities** are as follows:

- Research currently funded through NSF-RUI (20 consecutive years).
- 80 publications on research and research-related activities, 57 of which have undergraduate student co-authors. These publications include a book on chiral NMR shift reagents (2007), book on NMR shift reagents (1987), and four other book chapters on NMR shift reagents or liquid chromatography.
- 74 different undergraduate students and four high-school chemistry teachers have co-authored papers describing work undertaken in his lab
- 153 presentations (132 invited) on his research and educational activities. These include keynote/plenary addresses at three International Chirality Conferences (2007,2002,1995) and a distinguished scientist lecture (Vaughn Lecture) at Belmont University.
- Appointed to the editorial board of the journal *Chirality* in May of 2005 (first member ever from an undergraduate institution)
- Since 1992, students conducting research with him have given 37 presentations on their work at national or international conferences

- Active in encouraging women and minorities to pursue careers in science. 67 of the 104 students who have done research with him at Bates have been women; 10 have been from minority groups historically underrepresented in the sciences

Highlights of his **educational activities** are as follows:

- Education activities currently funded through NSF-TUES (Type 2, Development of E-Learning Modules for Analytical Chemistry)
- Recipient of six NSF curriculum development grants
- Over 60 publications on educational topics involving the teaching of science and analytical chemistry or on efforts to promote undergraduate research.
- Two invited articles in the journal *Analytical Chemistry* describing the methods he utilizes in his undergraduate courses (1995, 67, 470A-475A, 1998, 70, 790A-795A)
- A Contributing Editor for *Analytical Chemistry* from 1999-2003. Wrote a regular column with a focus on educational topics
- Two book chapters (2007) on his educational methods
- Invited article in *Environmental Science and Technology* on the use of environmental topics in analytical and general chemistry courses, including a description of his own work in both areas.
- He was the featured speaker at an Education Forum at the University of Huddersfield, UK in 2002, organized by the Royal Society of Chemistry. He was a featured speaker at a conference on general education in the sciences held at Union College in 2004.
- He has conducted or chaired 13 workshops and 2 short courses on the use of problem-based learning in analytical chemistry at regional, national, and international conferences
- Was one of three individuals invited to deliver a "Best Practices" address at a National Science Foundation-sponsored workshop entitled "Curricular Development in Analytical Sciences." Is a member of the Advisory Board for the Analytical Sciences Digital Library (initially funded through NSF-now funded through Analytical Division of the American Chemical Society).
- One of his student's project-based labs is featured as Chapter 0 in Daniel Harris' textbooks to exemplify the nature of problem solving in analytical chemistry

Highlights of his **professional activities** are as follows:

National Science Foundation – Chemistry Division

- Research Sites for Educators Workshop in Chemistry, Arlington, VA, March 8-10, 2002
- Undergraduate Research Centers Workshop, Arlington, VA, March 30- April 1, 2003
- Workshop on the Post-doctorate, Arlington, VA, May 11-13, 2003 (Member of the Steering Committee)
- Undergraduate Research Summit, Bates College, Lewiston, ME, August 2-4, 2003 (Host and Meeting Chair) – Recommendations for enhancing the quality and quantity of research in the chemical sciences in the chemical sciences at predominantly undergraduate institutions. The report is available on line at:

(<http://www.bates.edu/x50817.xml>). Organized over twenty symposia and workshops at national and regional meetings to promote the outcomes of the Summit.

- Research Experiences for Undergraduates Program Leadership Group – Chemistry, 2007-2010

#### Council on Undergraduate Research (CUR)

- Has served as a Councilor for CUR since 1990
- Served as President of the Council in 1996-97
- Edited the Fifth Edition of "Research in Chemistry at Primarily Undergraduate Institutions" that was published by the Council in 1993
- Co-chaired for the Fifth National Conference of CUR and First National Conference of CUR Kids that was held at Bates College in June of 1994
- Workshop and poster coordinator for the Seventh National Conference of CUR held at Occidental College in June of 1998
- Started the CUR Institutes Program in 1996
- Co-chair for the 10<sup>th</sup> National Conference of CUR
- Editor-in-Chief for the *CUR Quarterly* (September 2001-March 2005)
- Led full-day workshops on proposal writing at 2009-2011 CUR Dialogue meeting

#### American Chemical Society

- Committee on Professional Training, 2011-
- Analytical Division - Coordinated a speaker's fund for the regional meetings, 2002-2006

#### Petroleum Research Fund

- External Review Workshop, Jan. 10-11, 2007

#### Research Corporation

- Models in Academic Leadership Conference, July 29-31, 2004 – special guest

#### Beckman Foundation

- Executive Committee Member, Beckman Scholars Program, 2005-2009