

## PROMOTION RECOMMENDATION

Approved by the Regents

May 17, 2007

**The University of Michigan-Dearborn  
College of Arts, Sciences, and Letters  
Department of Natural Sciences**

Yiwei Deng, assistant professor of chemistry, Department of Natural Sciences, College of Arts, Sciences, and Letters, is recommended for promotion to associate professor of chemistry, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

### Academic Degrees:

Ph.D.	1992	Environmental Sciences, Swiss Federal Institute of Technology (ETH, Zurich) and Swiss Federal Institute for Water Resources and Water Pollution Control (EAWAG, Duebendorf, Switzerland)
M.S.	1985	Environmental Chemistry, Institute of Environmental Chemistry, Chinese Academy of Sciences, Beijing, P. R. China
B.S.	1982	Wuhan University, Wuhan, P. R. China.

### Professional Record:

2001 to Present	Assistant Professor of Chemistry, Department of Natural Sciences, University of Michigan-Dearborn
1994 to 2000	Assistant Professor of Chemistry, Department of Chemistry, Florida International University (FIU), Miami, FL.
1992 to 1994	Postdoctoral Researcher, Department of Inorganic Chemistry, The Royal Institute of Technology (KTH), Stockholm, Sweden.
1985 to 1987	Assistant Researcher, Institute of Environmental Chemistry, The Chinese Academy of Sciences, Beijing, P. R. China.

### Summary of Evaluation:

**Teaching:** The review committee has rated Professor Deng's teaching as significantly capable. Her primary responsibility has been two required upper-level analytical chemistry courses, and an upper-level/graduate course in environmental chemistry. She has also taught lecture and laboratory sections of general chemistry and introduction to chemistry. Professor Deng developed an environmental chemistry course for the Master of Science in Environmental Science Program and has supervised Master's students. She also developed an articulate statement of her teaching objectives and goals, and ways of achieving them. Her teaching philosophy emphasizes developing creative/critical thinking and problem-solving skills. She has been an innovative teacher, creating several experiments based on capillary electrophoresis and high performance liquid chromatography and incorporating them into an instrumental methods of analysis course. Her students uniformly praise her patience in teaching and her willingness to help. She has involved many graduate, undergraduate and high school students in her research and several of them are co-authors on research publications.

**Research:** The review committee has rated Professor Deng's research as excellent. She is an environmental chemist interested in developing analytical methods for environmental and food applications, study of pathways, mechanisms and kinetics of chemical and photochemical

reactions, which affect the distribution, cycle and fate of trace metals, inorganic species and organic pollutants in both aquatic and atmospheric environments. Her research publications are mostly in environmental and food chemistry. Professor Deng's research has been supported by grants from National Science Foundation (Curriculum, and Laboratory Improvement, and Research in Undergraduate Institutions and Research Opportunity Awards) and American Chemical Society Petroleum Research Fund. She has active collaborations with researchers at other institutions, and has involved several graduate, undergraduate, and high school students in her work in addition to those with whom she has published. Her research productivity has been constant since 1993 and there is no doubt it will continue.

#### **Recent and Significant Publications:**

- Y. Deng, K. Zhang, H. Chen, T. Wu, M. Krzyaniak\*, A. Wellons\*\*, D. Bolla\*\*\*, K. Douglas\* and Y. Zuo, Iron-catalyzed photochemical transformation of benzoic acid: Product identification and reaction mechanisms, *Atmospheric Environment*, 40, 3665 (2006).<sup>†</sup>
- Y. Deng, K. Zhang and Y. Zuo, Occurrence and photochemical degradation of 17 $\alpha$ -ethinylestradiol in Acushnet river estuary, *Chemosphere*, 63, 1583 (2006).<sup>†</sup>
- Y. Deng, A. Wellons\*\*, D. Bolla\*\*\*, M. Krzyaniak\* and H. Wylie\*, Separation and identification of photodegradation products of benzoic acid by capillary zone electrophoresis, *Journal of Chromatography A*, 1013, 191(2003).<sup>†</sup>
- Y. Deng and X. Fan, Separation and identification of aromatic acids in soil and wetland sediment samples using solid-phase microextraction followed by capillary zone electrophoresis, *Journal of Chromatography A*, 979, 417 (2002).<sup>†</sup>
- Y. Deng, Y. Zuo, H. Chen and, Simultaneous determination of catechins, caffeine and gallic acids in green, Oolong, black and pu-erh teas using HPLC with a photodiode array detector, *Talanta*, 57, 307 (2002).
- Y. Deng, Y. Zuo and H. Chen, HPLC separation and determination of flavonoid and phenolic antioxidants in cranberry juices, *Journal of Chromatography A*, 913, 387 (2001).
- (\*undergraduate, \*\*\*graduate and \*\*high school students. <sup>†</sup>Y. Deng is the primary author)

**Service:** The review committee has rated Professor Deng's service as excellent. For five years she has served on the Environmental Programs Committee, Environmental Science Graduate Program Committee and Building User Committee. She was elected to the Department Executive Committee as member-at-large, and has served on a Faculty Search Committee and as a Faculty Secretary. Professionally she has been active as manuscript reviewer for *Journal of Agriculture and Food Chemistry*, *Journal of Geophysical Research*, *Analytica Chimica Acta* and *Atmospheric Environment*. She has also served on panels of the National Science Foundation's Course, Curriculum, and Laboratory Improvement Program, and has reviewed grant proposals for National Science Foundation's Major Research Instrumentation Program, and American Chemical Society Petroleum Research Fund. She was also a member of the Planning Committee for the Project Kaleidoscope (PKAL) National Assembly.

#### **External Reviewers:**

Reviewer (A)

"Dr. Deng's publications are in high quality chemistry and environmental chemistry journals. The latter publications are largely populated by very large groups at major research institutions.

The publication's quality speaks for themselves...work is solid in general, those in *Atmospheric Environment* and *Journal of Chromatography A* are notable."

Reviewer (B)

"Her individual papers have been cited, which indicates that her papers are having an impact among her scientific colleagues and the quality of her publications. For example, her 2002 paper in *Talanta* has been cited by others 43 times."

Reviewer (C)

"She has done an excellent job in terms of achieving a focus in the overlapping field on environmental science and analytical chemistry. Her work published in *Atmospheric Environment* correlates very well with her analytical studies in the *Journal of Chromatography A*, for example. I consider the paper in the *Journal of Chromatography A* to stand out above the others."

Reviewer (D)

"I have examined each paper. They all seem to be thorough research efforts."

Reviewer (E)


"The quality of Dr. Deng's work is reflected by the quality of the journals in which she has published. Both *Chemosphere* and *Atmospheric Environment* are well regarded journals in the area of environmental chemistry, and the *Journal of Chromatography A* is an equally good journal in the area of analytical chemistry."


Reviewer (F):

"...identify the paper on the identification of aromatic acids in soil (X. Fan and Y. Deng, *J. Chromatography. A*, 979 [2002] 417-424) as the most interesting. Here the authors develop a method that interfaced solventless sampling with capillary electrophoresis at a time when two techniques were rarely used in combination."

**Summary of Recommendation:**

Professor Deng has been rated excellent in research and service, and significantly capable in teaching. She is a good teacher and a creative scholar who has made excellent contributions to the chemistry program, and to the department. Her service to the chemistry profession is highly valued. We are very pleased to recommend, with the strong support of the College of Arts, Sciences, and Letters Executive Committee, Yiwei Deng for promotion to associate professor of chemistry, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

  
Kathryn Anderson-Levitt  
Dean  
College of Arts, Sciences, and Letters

  
Daniel Little  
Chancellor  
University of Michigan-Dearborn

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