

## Kevin Edward O'Shea

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### a. Professional Preparation

California State University, Sacramento, B.S. in Chemistry (with Honors) 1980-1984  
University of California, Los Angeles, Ph.D in Chemistry (Organic) 1984-1989  
University of Texas, Austin, Postdoctoral Fellow in Chemistry (Organic) 1989-1991

### b. Appointments

Associate Professor - Florida International University (1996-present)  
Visiting Associate Professor - Georgia Institute of Technology (1997-1998)  
Assistant Professor - Florida International University (1991-1996)  
Visiting Assistant Professor - Florida State University (Summer 1995)  
Postdoctoral Fellow – University of Texas at Austin (1989-1991)

### c.i. Five Relevant Publications

- 1) "Degradation of Chemical Warfare Agent Simulants in Aqueous Solutions by Cobalt-60  
Gamma Irradiation: Similarities with TiO<sub>2</sub> Photocatalysis", Kevin E. O'Shea, David V. Kalen, William J. Cooper, Ivelitza Garcia, and Martha Aguilar in *Environmental Applications of Ionizing Radiation*, Cooper, W. J.; Curry, R.; O'Shea, K. E.; Eds.: John Wiley and Sons, New York; 1998, 569.
- 2) "The Reaction Pathways and Kinetic Parameters of the Sonolytically induced Oxidation of Dimethyl Methylphosphonate in Air Saturated Solutions", Kevin E. O'Shea, Ailette Aguila, K. Vinodgopal, and Prashant V. Kamat (*Res. Chem. Intermed.* **1998**, *24*, 6, 695)
- 3) "The Radiation Chemistry of Alternative Fuel Oxygenates: Substituted Ethers", Stephen P. Mezyk, William J. Cooper, David M. Bartels, Kevin E. O'Shea, and Taixing Wu (*J. Phys. Chem. A* **2001**, *105*, 3521)
- 4) "Pulse Radiolysis of Dimethyl Methylphosphonate and Diethyl Methylphosphonate. An Investigation of Hydroxyl Radical Mediated Reaction Pathways", Ailette Aguila, Kevin E. O'Shea, Tom Tobien and Klaus-Dieter Asmus (*J. Phys. Chem. A* **2001**, *105*, 7834)
- 5) "The Degradation of MTBE and Related Gasoline Oxygenates in Aqueous Media by

Ultrasound Irradiation”, Duk Kyung Kim, Kevin E. O’Shea and William J. Cooper (*J. Environ. Eng.* **2002**, 128, 806)

**c.ii. Five additional publications**

1)“Radiolytic Reduction and Oxidation of Diethyl benzyl phosphonate. A Pulse Radiolysis Study”, Ailette Agulia, Kevin E. O’Shea, and Prashant V. Kamat (*J. Adv. Oxid. Technol.* **1998**, 37)

2)“The Influence of Mineralization Products on the Coagulation of TiO<sub>2</sub> Photocatalyst”, Kevin E. O’Shea, Enrique Pernas, and James Saiers, (*Langmuir*, **1999**, 15, 2071)

3)Odor Control in Wastewater Treatment: The Removal of Thioanisole from Water- A Model Case Study by Pulse Radiolysis and Electron Beam Treatment”, Thomas Tobien, William J. Cooper, Michael G. Nickelsen, Enrique Pernas, Kevin E. O’Shea, and Klaus – Dieter Asmus (*Environ. Sci. Technol.* **2000**, 34, 1286)

4)“TiO<sub>2</sub> Photocatalysis of Gasoline Oxygenates. Kinetic Parameters and Effects of Catalyst Types and Loading on Degradation of MTBE”, Kevin E. O’Shea, Taixing Wu and William J. Cooper in *Oxygenates in Gasoline*, Diaz, A.F.; Drogos, D. L. Ed; ACS Symposium Series No. 799; American Chemical Society, Washington DC, 2001., pg 165.

5)“Gamma Radiolysis of Methyl t-Butyl Ether (MTBE). A Study of Hydroxyl Radical Mediated Reaction Pathways”, Taixing Wu, Vivian Cruz, Stephan Mezyk, William J. Cooper, and Kevin E. O’Shea (in press *J. Rad. Phys. Chem.* **2002**)

**d. Synergistic Activities**

- 1) Guest Editor for Journal Radiation Physics and Chemistry 2001
- 2) Co-chair of two symposia on “Environmental Applications of Ionizing Radiation” the first at Pacificchem 1995: resulted in an edited book; over 60 papers were presented at the the second symposium, at Pacificchem 2000 and will be published in Radaition Physics and Chemistry.
- 3) Guest Editor for Journal of Advanced Oxidation Technologies 1997, 2000

**e. Collaborators & other affiliations**

Dr. Klaus-Dieter Asmus  
Dr. William J. Cooper  
Dr. Phashant Kamat  
Dr. James Saiers  
Dr. Nongin Tao  
Dr. Yesim Darici  
Dr. Kenneth G. Furton

Dr. Yong Cai

B.S. Thesis Supervisor – Dr. David M. Forkey

Ph.D. Dissertation supervisor. DR. Christopher S. Foote

Postdoctoral Mentor, Professor and Chancellor Marye Ann Fox

#### Students

Undergraduate; Eduardo Campos (senior); Kathy Habib (freshman); Cathy Loftis (junior); Katherine Quinones (junior)

M.S. -Vivian Cruz

M.S. - Sahar Motemedi

Ph.D. - Duk Kyung Kim

Ph.D. – Weihua Song