

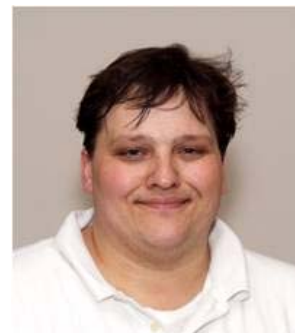
## BIOGRAPHICAL SKETCH

### Jeremy P. Wilburn, Ph.D

Physical Address:  
Department of Chemistry  
Indiana University  
Simon Hall MSB  
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### Postdoctoral Fellow



INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Memphis / Memphis, TN	B.S.Ch.	2000	Chemistry
University of Memphis / Memphis, TN	M.S.	2002	Analytical Chemistry
Vanderbilt University / Nashville, TN	Ph.D.	2010	Analytical Chemistry

### A. Positions and Honors

#### *Professional Employment*

2010 **Postdoctoral Fellow**, *Indiana University*, Analytical and Materials Chemistry, Department of Chemistry  
1998 **Internship**, Voxcom/Wisconsin Label Corporation, Memphis, TN

#### *Professional Activities*

Memberships: American Chemical Society, Society for Electroanalytical Chemistry, Electrochemical Society, International Union of Pure and Applied Chemistry, Scientists Without Borders.

#### *Awards and Honors*

2000 Honorable Mention (3<sup>rd</sup> Place) Poster Session, 197<sup>th</sup> International Electrochemical Society Convention  
2000 Travel Award, Electrochemical Society, to attend 197<sup>th</sup> International Convention, Toronto, Canada  
1999 1<sup>st</sup> place Oral Presentation, 19<sup>th</sup> Annual Undergraduate Research Conference, University of Memphis  
1999 Undergraduate Award in Analytical Chemistry, American Chemical Society  
1999 Travel Award, Electrochemical Society, to attend 196<sup>th</sup> International Convention, Honolulu, Hawaii

### B. Peer Reviewed Publications (reverse chronological order)

1. Competing Electrochemical and Chemical Dissolution of Aluminum in Photopolymerized Acrylic Hydrogels," Wilburn, J.P.; Durham, C.; Ciobanu, M.; Patrut, A.; Lowy, D.A. *Studia Univ. Babeş-Bolyai, Chem.* (in press).
2. Ciobanu, M.; Taylor, D. E.; Wilburn, J. P.; Cliffel, D. E., *Glucose and lactate biosensors for scanning electrochemical microscopy imaging of single live cells*. *Analytical Chemistry*, 2008, **80**(8): p. 2717-2727.
3. Wilburn, J.P.; Brown, K.L.; Cliffel, D.E., *Mercury-free analysis of lead in drinking water by anodic stripping square wave voltammetry*. *Journal of Chemical Education*, 2007, **84** (2): p. 312-314.
4. Ciobanu, M.; Wilburn, J.P.; Krim, M.; Cliffel D.E. "Chapter 1: Fundamentals." in "Handbook of Electrochemistry.", edited by C.G. Zoski, Elsevier Science, 2007, pp 934.
5. Wilburn, J.P.; Wright, D.W.; Cliffel, D.E., *Imaging of voltage-gated alamethicin pores in a reconstituted bilayer lipid membrane via scanning electrochemical microscopy*. *Analyst* (Cambridge, United Kingdom), 2006. **131**(2): p. 311-316.
6. Ciobanu, M.; Wilburn, J.P.; Lowy, D.A., *Miniaturized reference electrodes. II. Use in corrosive, biological, and organic media*. *Electroanalysis*, 2004. **16**(16): p. 1351-1358.

7. Wilburn, J.P.; Ciobanu, M.; Lowy, D.A., *Characterization of Acrylic Hydrogels by Open Circuit Potential Monitoring*. Journal of Applied Electrochemistry, 2004. **34**(7): p. 729-734.
8. Wilburn, J.P.; Ciobanu, M.; Buss, N.I.; Franceschetti, D.R.; Lowy, D.A., *Miniaturized reference electrodes with stainless steel internal reference elements*. Analytica Chimica Acta, 2004. **511**(1): p. 83-89.
9. Ciobanu, M.; Wilburn, J.P.; Buss, N.I.; Ditavong, P.; Lowy, D.A., *Miniaturized reference electrodes based on Ag/Ag<sub>i</sub>X internal reference elements. I. Manufacturing and performance*. Electroanalysis, 2002. **14**(14): p. 989-997.
10. Ciobanu, M.; Wilburn, J.P.; Lowy, D.A., *Miniaturized reference electrodes based on UV-cured acrylic-type polymer gels*. Proceedings - Electrochemical Society, 1999. **99-23** (Chemical Sensors IV): p. 62-68.

## C. Presentations

### Oral Presentations

1. Cliffel, D. E.; Wilburn, J. P.; Ciobanu, M. *Elucidating Cancer Cell Metabolism using Scanning Electrochemical Microscopy and Microfluidic Physiometry*. PITTCON, Chicago, IL, March 8 – 13, 2009.
2. Cliffel, D. E.; Wilburn, J. P.; Ciobanu, M. "Cellular Energy Metabolism of Single Cells using SECM." PITTCON, Chicago, IL, February 25 – March 1, 2007.
3. Wilburn, J. P.; Cliffel, D. E.; Wright D. W. "Imaging of Voltage-gated Pores in a Bilayer lipid Membrane via Scanning Electrochemical Microscopy." PITTCON, Orlando, FL, March 12-17, 2006.
4. Wilburn, J. P.; Cliffel, D. E.; Wright D. W. "Imaging of Voltage-gated Pores Inserted in Bilayer Lipid Membranes." SW/SERMACS, Memphis, TN, November 1-4, 2005.
5. Lowy, D. A.; Ciobanu, M.; Wilburn, J. P.: "Miniaturized Reference Electrodes Based on Ag/Ag<sub>i</sub>X Internal Reference Elements Incorporated in a Hydrogel Matrix", Plenary Lecture in the Symposium "New Directions in Electroanalysis", at the annual Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Nashville, TN, Sept. 24-28, 2000.
6. Ciobanu, M.; Wilburn, J. P.; Lowy, Daniel A. "Miniaturized reference electrodes based on UV-cured acrylic-type polymer gels." Oral presentation, 196th Meeting of the Electrochemical Society, Honolulu, Hawaii, October 17-22, 1999.
7. Lowy, D. A.; Wilburn, J. P.; Durham, C. E. "The Electrochemistry of Aluminum in Polyacrylic Hydrogels. I. Voltammetric Studies" Presentation at SERMACS-99, Knoxville, TN, Oct. 17-20, 1999 (Program and Abstracts, No.86).
8. Wilburn, J. P.; Durham, C. E. I.; Lowy, D. A. "Electrochemical vs. Chemical Corrosion at UV-Cured Hydrogel / Metal Interfaces", The 195th Meeting of the Electrochemical Society, Seattle, May 2-6, 1999, [Presented as an undergraduate].

### Poster Presentations

1. Jenkins, J.; Hood, J.; Soni, A.; Cliffel, D. E.; Wilburn, J. P.; Sundaram, S. "Development of Neural Protectants Against Organophosphorus Compound (OPC) Neurotoxicity." Biomedical Engineering Society Meeting, Chicago, IL, October 11-14, 2006
2. Wilburn, J. P.; Ciobanu, M.; Cliffel, D.E. "Scanning Electrochemical Microscopy of Single Pancreatic Islets." The 4<sup>th</sup> Workshop on Scanning Electrochemical Microscopy, Falcade, Italy, September 3-6, 2006.
3. Wilburn, J. P.; Cliffel, David E.; "Non-invasive Imaging of Ion Channels via Scanning Electrochemical Microscopy." PITTCON, Orlando, FL, Feb. 26 – March 4, 2005.
4. Buss, N. I.; Lowy, D. A.; Wilburn, J. P.; Ciobanu, M. "Miniaturized reference electrodes based on stainless steel internal reference." Poster presentation, Pacificchem 2000 (ACS), Honolulu, Hawaii, Dec. 14-19, 2000.
5. Ciobanu, M.; Wilburn, J. P.; Lowy, D. A., "Miniaturized Reference Electrodes with Ag/Ag<sub>i</sub>X Internal Reference Element Imbedded in a Hydrogel-Type Electrolyte", Poster presentation, 197th Meeting of The Electrochemical Society, Toronto, Canada, May 14-18, 2000. [Received honorable mention / 3rd place].
6. Lowy, Daniel A.; Wilburn, J. P., "Electrochemistry of aluminum in organic-hydrogel systems." Poster presentation, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000.
7. Lowy, D. A.; Ciobanu, M.; Wilburn, J. P., "Miniaturized reference electrodes based on Ag/Ag<sub>i</sub>X internal reference elements." Poster presentation, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000.

8. Lowy, D. A.; Wilburn, J. P.; Durham, C. E.; Ciobanu, M., "Electrochemical vs. Chemical Corrosion at UV-Cured Hydrogel/Metal Interfaces." Poster presentation 196th Meeting of the Electrochemical Society, Honolulu, Hawaii, October 17-22, 1999 [Presenting author].
9. Lowy, D. A.; Wilburn, J. P.; Durham, C. E.; Ciobanu, M., "Electrochemistry of Aluminum in Acrylic-Type Hydrogels." Poster presentation 196th Meeting of the Electrochemical Society, Honolulu, Hawaii, October 17-22, 1999 [Presenting author].

#### D. Teaching Experience

2004 – 2005	Lab Teaching Assistant	Chemistry 212: Instrumental Analytical Chemistry
2003 – 2004	Lab Teaching Assistant	Chemistry 102: General Chemistry
2001	Lecturer	Chemistry 4604/6604: Instrumental Methods
2000 – 2001	Lab Teaching Assistant	Chemistry 4604/6604: Instrumental Methods
1999 – 2000	Lab Teaching Assistant	Chemistry 1010/1101: General Chemistry