

# Daniel J. Hawrysz

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## Summary

Chemical Engineer has experience in LNG process development, gas plant operational support, capital project support, process evaluation, and distillation tower internals design and inspection.

## Experience

### ExxonMobil Production Company (April 2006 - Present)

- Lead process engineer supporting Piceance Creek gas plant
- Improved operational effectiveness of amine and glycol systems
- Initiated and stewarded downtime reduction projects and coordinated planned shutdowns
- Provided training for operations staff

### ExxonMobil Upstream Research Company (June 2001 – April 2006)

- Provided process engineering support for LNG projects from pre-FEED through EPC
- Developed LNG process technology, under evaluation for new projects
- Designed and inspected fractionation equipment and equipment installation
- Provided operational engineering support for gas plants
- Supervised contractor work for small-scale research projects

### Argonne National Laboratory (Summers 1996, 1997)

- Economic recovery, via electro dialysis, of salt from salt cake waste generated in the recycling of aluminum. Supervised by Dr. John Hryn with the support of the aluminum industry and the Department of Energy. Supervised two summer research students.

### Academic Experience

- Assistant Lecturer of Chemical Engineering Thermodynamics II - Texas A&M University
- Initiated and supervised undergraduate research project - Texas A&M University
- Teaching Assistantship for Chemical Engineering Unit Operations Lab - Purdue University
- Teaching Assistantship for Mass Transfer Operations - University of Illinois

## Education

### Purdue University, West Lafayette, IN

- Doctor of Philosophy in Chemical Engineering Awarded May 2001, GPA: 3.92/4.00
- Ph.D. Thesis: Bayesian Approach to the Inverse Problem in Contrast-Enhanced Three Dimensional Biomedical Optical Imaging Using Frequency Domain Photon Migration supervised by Prof. E.M. Sevick-Muraca

### University of Illinois at Urbana-Champaign, Urbana, IL

- Bachelor of Science in Chemical Engineering Awarded May 1997
- Graduated cum laude and with highest distinction in the curriculum, GPA: 3.78/4.00
- B.S. Honors Thesis Project: "Thermal Desorption of Carbon Monoxide from Polycrystalline Palladium Foil." Supervised by Dr. James W. Ledbetter and Prof. Richard I. Masel

## Honors, Awards, and Affiliations

American Institute of Chemical Engineers - Member  
DoD National Defense Science and Engineering Graduate Fellowship Honorable Mention 1998  
Purdue New Graduate Student Fellowship  
University of Illinois Arthur W. Sloan Award for Academic Achievement  
University of Illinois Dean's List 6 semesters  
University of Illinois Edmund J. James Scholar for Academic Years 1993-1994 and 1994-1995

## Publications

A.B. Thompson, D.J. Hawrysz, and E.M. Sevick-Muraca, "Near-infrared contrast-enhanced imaging with area illumination and area detection: the forward imaging problem," *Applied Optics*, **42** (19), 4125-4136, 2003.

M.J. Eppstein, D.J. Hawrysz, A. Godavarty, and E.M. Sevick-Muraca, "Three dimensional near infrared fluorescence tomography with Bayesian methodologies for image reconstruction from sparse and noisy data sets," *Proc. Nat. Acad. Sci.*, **99**, 9619-9624, 2002.

A. Godavarty, D.J. Hawrysz, R. Roy, and E.M. Sevick-Muraca, "The influence of the index-mismatch at the boundaries measured in fluorescence-enhanced frequency-domain photon migration imaging," *Optics Express*, **10**, 653-662, 2002.

D.J. Hawrysz, M.J. Eppstein, J.Lee, E.M. Sevick-Muraca. "Error consideration in contrast-enhanced three-dimensional optical tomography." *Opt. Lett.*, **26** (10).

D.J. Hawrysz, E.M. Sevick-Muraca. "Developments towards diagnostic breast cancer imaging using near-infrared optical measurements and fluorescent contrast agents." *Neoplasia*, **2** (5), 388-417, cover article.

D.J. Hawrysz, M.J. Eppstein, E.M Sevick-Muraca. "Measurement and model error assessment of a single pixel, frequency domain photon migration apparatus and diffusion model for imaging applications." In *Photon Migration, Diffuse Spectroscopy, and Optical Coherence Tomography*. **SPIE 4160**, 2000.

M. Gurfinkel, A.B. Thompson, W. Ralston, T.L. Troy, A.L. Moore, T.A. Moore, J.D. Gust, D. Tatman, J.S. Reynolds, B. Muggenberg, K. Nikula, R. Pandey, R.H. Mayer, D.J. Hawrysz, E.M. Sevick-Muraca. "Pharmacokinetics of ICG and HPPH-car for detection of normal and tumor tissue using fluorescence, near-infrared reflectance imaging: A case study." *Photochem. and Photobiol.*, **72**, 94-102, 2000.

M.J. Eppstein, D.E. Dougherty, D.J. Hawrysz, E.M. Sevick-Muraca. "Three-dimensional Optical Tomography." In *Optical Tomography and Spectroscopy of Tissues III*, eds. B. Chance, R.R. Alfano, and B.J. Tromberg. **SPIE 3597**, 1999.