

TYLER JAY GOEPFERT

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OBJECTIVE: Renewable Energy Research/Engineering Position or Graduate Study (MS/PhD).

EDUCATION: **Cornell University**, B.S. in Biological & Environmental Engineering. May 2003.

LICENSE: Passed Part I of the NCEES Fundamentals of Engineering (FE/EIT) for PE License.

INTERESTS: Renewable energy, sustainable development, bioprocess, tissue & environmental engineering, biking, classical music, art, culinary arts, volunteer work.

WORK EXPERIENCE:

University of Southern California – Biology Dept., Research Lab Specialist (Aug. 2007 – Aug. 2008):

Lab manager, graduate and undergraduate supervisor, field work, molecular biology (PCR, qPCR), epifluorescence microscopy, chemical oceanography instrumentation design (mass spectroscopy), sample processing and data analysis, manuscript preparation. Radiation safety certified Jan. 2008. Extensive class 100 clean room design and operation experience for trace-element research.

Woods Hole Oceanographic Institution – Chemistry Dept., Research Assistant (2004-2007):

Multidisciplinary research across several land-based labs and at sea. Instrumentation: flow injection analysis, chemiluminescence, mass spectrometry (ICP & LC), & capillary waveguide spectrophotometer. Experimental design including culture work & field studies. Molecular biology: primer design, PCR, gel electrophoresis, interpreting gene sequences & clone library development. Electrochemistry: CSV/ASV. At-sea skills: reverse engineering & technical solutions to at sea breakdowns. Circuit wiring, pc board trouble shooting, cable interface fabrication and terminations.

Cornell University – Campus Life, Program Assistant (2001-2002), Resident Advisor (2000-2001):

Coordinated programs within a complex of 490+ residents and across campus. Managed list serve of over 500 people. Composed new Program Model for staff of 10 Resident Advisors. Cooperatively established and maintained budget planning, and funding allocations within complex and in Residential Programming Board (RPB). Supervised Hall Council, and served on the RPB. Developed successful programs & facilitated hall policy regulation & enforcement. Dickson Hall RA, 2000-2001; Donlon Hall PA, 2001-2002.

Private Tutor – New York State Regents and Massachusetts MCAS (2000-Present):

Pembroke High School (NY), & private (MA). Applied & comprehensive teaching, improving students' mathematical understanding & grades, typically in preparation for high-stakes state exam.

PUBLICATIONS:

- **Goepfert, T.J.**, Ohnemus, D.C., Moffett, J.W., Shipboard Chemiluminescent ferrous iron detection method, *Journal TBD*. Manuscript in prep.
- Saito, M.A., **Goepfert, T.J.**, Ritt, J., Some thoughts on the concept of colimitation: Three definitions and the importance of bioavailability, *Limnol. Oceanogr.*, 53(1), 2008, 276-290.
- Saito, M.A. and **Goepfert, T.J.**, Zinc-cobalt colimitation of *Phaeocystis antarctica*, *Limnol. Oceanogr.*, 53(1), 2008, 266-275.
- Moffett, J.W., **Goepfert, T.J.**, and Naqvi, S.W.A., Reduced iron associated with denitrification in the Arabian Sea, *Deep-Sea Research I* 54, 2007, 1341–1349
- Dupont, C., **Goepfert, T.J.**, Lo, P., Wei, L., Ahner, B.A. Diurnal cycling of glutathione in marine phytoplankton: Field and culture studies *Limnol. Oceanogr.*, 49(4), 2004, 991-996

UNDERGRADUATE RESEARCH:

Cornell University, Ahner & Biomass Conversion Labs - Bio & Env'l Engineering Dept. (2001-2003):

Heavy metal sequestration and protection pathways in coastal and open ocean algae. Developed original experimental methods and chemical assays. Working knowledge of Atomic Absorption Spectrophotometer (AAS), High performance liquid chromatography (HPLC). Constructed and maintained bioreactor/chemostat for algae culture. Built hydroponics system for Phytoremediation project involving cadmium transport/uptake kinetics in *Brassica napus*.

PROFESSIONAL CONFERENCES & PRESENTATIONS:

- *The Center for Environmental BioInorganic Chemistry (CEBIC)* – Summer Conference - Poster Session June 10-13, 2007 · Princeton University, Princeton, NJ.
- *American Society of Limnology and Oceanography* – Global Challenges Facing Oceanography and Limnology. Poster Session. June 4-9, 2006 · Victoria, British Columbia, Canada.
- *The Center for Environmental BioInorganic Chemistry (CEBIC)* – Summer Conference - Poster Session June 12-15, 2005 · Princeton University, Princeton, NJ.
- *Cornell University Undergraduate Research Board, CURB* – 18th Annual Undergraduate Research Forum - Poster Session April 9, 2003 · Ithaca, New York.
- *Institute of Biological Engineering, IBE* – First Annual Bioengineering Research EXPO - Undergraduate Poster Competition, April 8, 2003 · Ithaca, New York.
- *American Society of Limnology and Oceanography* – The Earth's Eyes: Aquatic Sciences Through Space and Time. Presented at poster session. February 8-14, 2003 · Salt Lake City, Utah.
- *American Ecological Engineering Society Annual Meeting* – Ecological Engineering: Implementing the Profession. April 28-30, 2002 · University of Vermont, Burlington, Vermont.

AWARDS:

- 2006 Whelan Award, Woods Hole Oceanographic: research & professional development grant.

VOLUNTEER WORK & ORGANIZATIONS:

- Woods Hole Public Library February 2005 – present. tech support, restoration, travel talks.
- Graded & Marine Personnel Committee (GMPC) at Woods Hole Oceanographic Institution. Representative to Chemistry Department staff (2005-2007)
- Cornell Alumni Admissions Ambassador Network (CAAAN) – Cape Cod 2005-2007; Los Angeles 2008-present
- Solar Energy International (SEI) – Community Member since February 2008.

COMMUNITY ACTIVITIES:

- Cape Cod Curling Club, lead on Flynn Team 2005
- Falmouth Men's Choir 2004 season.
- Falmouth Town Band 2004 season.

LEADERSHIP EXPERIENCE:

- *Co-president* of Cornell Collegiate 4-H, conducted meetings and project plans 2000-2002. Managed an email list serve of over 100 subscribers. Also served as secretary 2002-2003.
- *Trombonist* in Cornell University Lab Ensemble (*CULE*) Jazz group II (2001).
- Successful *Drum Major* of award-winning Marching Dragons. Lead 100+ members in: 1 Disney World tour, 4 Kitchener-Waterloo Parades, 4 Homecoming shows, 6-8 Local Parades/year (1997-1999).
- *Managed* "Flash of Brass" Concerts for Senior Citizens, Churches, & Community Functions (1993-98).

RESEARCH TRAVEL & SEA EXPEDITIONS:

- 11 Research Cruise Expeditions, >275 days at sea experience on 8 vessels. Staging & post-cruise ops from 5 continents in 12 countries (additional expeditions pending).
- **Colby College**, Guest investigator, King Lab. Summer 2006.
- **Scripps Institution of Oceanography**, Guest investigator, Barbeau Lab. Spring 2006