

Paul Chin, Ph.D.

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Profile / Summary

- Extensive experience in traditional and photo-active heterogeneous catalytic reactions and kinetic modeling
- Hands-on skill in constructing and maintaining lab-scale experimental and characterization systems
- Ability to adapt quickly to new research areas
- Solid interpersonal skills exemplified by collaboration with academic researchers and industrialists
- Lengthy track record of leadership roles in academic and extracurricular activities

Education

Aug 04 to Apr 08 Raleigh, NC	NORTH CAROLINA STATE UNIVERSITY Ph.D., Chemical and Biomolecular Engineering	GPA: 3.60 / 4.0
Aug 01 to Aug 04 Raleigh, NC	NORTH CAROLINA STATE UNIVERSITY M.Sc. (Thesis), Chemical Engineering	GPA: 3.54 / 4.0
Aug 97 to May 01 Ithaca, NY	CORNELL UNIVERSITY B.S., Chemical Engineering	GPA: 3.27 / 4.0

Research Experience

Jan 02 to May 08 Raleigh, NC	GRADUATE RESEARCH ASSISTANT <ol style="list-style-type: none">1. Preferential oxidation of carbon monoxide on structured supports2. Photocatalytic destruction of organic materials using titanium dioxide<ul style="list-style-type: none">• 7 refereed publications; 6 first authored• 22 conference presentations: 17 oral, 5 poster; 17 as primary presenter• <u>Techniques</u>: NDIR, UV-Vis, and FTIR spectroscopies; GC; QCM, TGA, DSC, BET, TPD, chemisorption, SEM, AFM, XRD, ellipsometry, thermal and mechanical cycling
Aug 00 to May 01 Ithaca, NY	UNDERGRADUATE RESEARCH ASSISTANT Particle separation at capillary bifurcations in low Reynolds numbers

Work Experience

Jun 05 to Mar 06 Raleigh, NC	CONSULTING WORK WITH HELMS MULLISS & WICKER, PLLC Calculated thermodynamic equilibrium values, researched inorganic salts, and performed literature review.
Aug 99 to Aug 01 South Brunswick, NJ Allentown, PA	AIR PRODUCTS AND CHEMICALS, INC. (<i>Intern/Co-op Student</i>) <ul style="list-style-type: none">• Evaluated production process for improvements, standardized product database, and supervised high school student.• Evaluated OPHR/ORI items, created PSV design basis, and developed plant P&ID standard.• Evaluated safety considerations in chemical plants and wrote a HAZOP tutorial.

Work Status

U.S. Citizen

Leadership Experience

May 05 to Jan 08	Club President, V.P. Education, Mentor – Toastmasters International, Raleigh club
Oct 02 to Aug 03	ChE Graduate Student Recruiting Captain– North Carolina State University
Oct 02 to Aug 03	ChE Graduate Student Association Vice President – North Carolina State University
May 00 to May 01	Club President – Alpha Phi Omega, Gamma chapter, Cornell University

Teaching Experience

Jan 07 to May 07	Teaching Assistant, ChE 596T – Technical Literacy
Oct 03 to May 06	Science Olympiad Coach at Cathedral School
Summer 02, 06	Mentored undergraduate students for summer NSF REU program
Aug 01 to May 02	Teaching Assistant, ChE 330 & 331 – Unit Operations Laboratory

Skills

Computer Applications, Programming Languages	Microsoft Access, VISIO Technical Drawing, LabTech; (basic) Matlab, Microcal Origin, SimSci Pro II, Aspen, ICARUS Process Evaluator, SAS programs (Statistical Analysis), Visual Basic, Pascal, Java, HTML, familiarity with C/FORTRAN
Foreign Languages	Basic spoken Chinese (Cantonese)

Professional Affiliations

AIChE – American Institute of Chemical Engineers
ACS – American Chemical Society
NACS – North American Catalysis Society
AWMA – Air and Waste Management Association
ISPE – International Society of Pharmaceutical Engineers
TI – Toastmasters International

Extracurricular Activities

Volleyball (captain), Softball (captain), Dodgeball (captain), Running, Triathlon, Duathlon, Weight training

Refereed Publications

1. Roberts G.W., Chin P., Sun X., Spivey J.J., “*Preferential Oxidation of Carbon Monoxide with Pt/Fe Monolithic Catalysts: Interactions Between External Transport and the Reverse Water-Gas-Shift Reaction*”, Applied Catalysis B – Environmental, 2003, **46** (3), p. 601-611
2. Chin P., Yang L.P., Ollis D.F., “*Formaldehyde Removal from Air via a Rotating Adsorbent Combined With a Photocatalytic Reactor: Kinetic Modeling*”, Journal of Catalysis, 2006, **237** (1), p. 29-37
3. Chin P., Sun X., Roberts G.W., Spivey J.J., “*Preferential Oxidation of Carbon Monoxide with Iron-promoted Platinum Catalysts Supported on Metal Foams*”, Applied Catalysis A – General, 2006, **302** (1), p. 22-31
4. Chin P., Ollis D.F., “*Decolorization of Organic Dyes on Pilkington ActivTM Photocatalytic Glass*”, Catalysis Today – M.A. Vannice Festschrift, 2007, **123** (1), p. 177-188
5. Chin P., Roberts G.W., Ollis D.F., “*Kinetic Modeling of Photocatalyzed Soot Oxidation on Titanium Dioxide Thin Films*”, Industrial & Engineering Chemistry Research – Alberto Cassano Festschrift, 2007, **46** (23), p. 7598-7604
6. Chin P., Ollis D.F., “*Design Approaches for a Cycling Adsorbent/Photocatalyst System for Indoor Air Purification: Formaldehyde Example*”, Journal of the Air & Waste Management Association, 2008, **58** (4), p. 494-501
7. Chin P., Grant C.S., Ollis D.F., “*Quantitative Photocatalyzed Soot Oxidation on Titanium Dioxide*”, submitted to Journal of Catalysis, 2008.

References and a Full List of Publications and Presentations are Available upon Request.