

Chemistry

Refereed Publications:

William Feld, Dang, T.D.; Dalton, M.J.; Venkatasubramanian, N.; Johnson, J.A.; Cerbus, C.A.; Feld, W.A., "Synthesis and Characterization of Polyaryleneetherketone triphenylphosphine Oxides Incorporating Cycloaliphatic/cage Hydrocarbon Structural Units," *Journal of Polymer Science, Part A: Polymer Chemistry*, 42, 6134-6142 (2004).

William Feld, Scanlon, L.G.; Lucente, L.R.; Feld, W.A.; Sandi, G.; Balbuena, P.B.; Alonso, P.R.; Turner, A., "Composite Cathode with Li2Pc," *Journal of the Electrochemical Society*, 151, A1338-A1343 (2004).

William Feld, Grossie, D.A.; Feld, W.A., "Diethyl 4,5-bis(4-bromophenyl)-2-oxocyclopentadiene-1,3-dicarboxylate," *Acta Crystallographica, Section E: Structure Reports Online*, E60, o1017-o1018 (2004)

McGinty, K.M.; Feld, W.A., "Synthesis of Poly(ether ether ketone)s Containing a Tertiary Amine," *Polymer Preprints*, 45, 1044 (2004).

Eric Fossum, Czupik, M.; Bankey, N.; Fossum, E., "A Study of the Aryl-Aryl Coupling Reactions of (4-X-C6H4)Ph2P=O," *Synthetic Communications*, 34, 705 – 714 (2004).

Roger Gilpin, Gilpin, R.K.; Zhou, W., "Studies of the Thermal Degradation of Acetaminophen Using a Conventional HPLC Approach and Electrospray Ionization-Mass Spectrometry," *J. Chromatogr. Sci.* 42, 15-20 (2004).

Roger Gilpin, Zhou, W.; Gilpin, R.K., "Rapid ESI-MS Method for Examining the Thermal Decomposition of Pharmaceuticals," *J. Pharmaceutical Sci.*, 93, 1545-1556 (2004).

Roger Gilpin, Gilpin, R.K.; Zhou, W., "Infrared Studies of the Thermal Conversion of Mefenamic Acid Between Polymorphic States," *Vibrational Spectroscopy*, 37, 53-59 (2005). This article was available online Dec. 10, 2004.

Roger Gilpin, Gilpin, R.K., "Electrospray Ionization: Formation of Adduct Ions, LC Problem Solving and Troubleshooting," *J. Chromatogr. Sci.*, 42, 112-113 (2004)

Roger Gilpin, Gilpin, R.K., "Effect of Nonlinear Response on Linearized Calibration Curves," *LC Problem Solving and Troubleshooting*, *J. Chromatogr. Sci.*, 42, 225-226 (2004).

Roger Gilpin, Gilpin, R.K., "Potential Sample Loss in Low Volume Autosampler Vials, LC Problem Solving and Troubleshooting," *J. Chromatogr. Sci.*, 42, 398 (2004).

Roger Gilpin, Gilpin, R.K., "Electrospray Ionization: Performance Differences Between Difference Interface Designs, LC Problem Solving and Troubleshooting," *J. Chromatogr. Sci.*, 42, 508 (2004).

Roger Gilpin, Gilpin, R.K., "Effect of Different Binary Eluents on Operating Pressure, LC Problem Solving and Troubleshooting," *J. Chromatogr. Sci.*, 43, 560-511 (2004).

David Grossie, Riddle, G.B.; Grossie, D.A.; Turnbull, K., "The Sydnone Compound 4-Hydroxy-4-benzylsydno[3,4-a]indole." *Acta Crystallographica, Section E: Structure Reports Online* E60, o1568-o1570 (2004).

David Grossie, Grossie, D.A.; Feld, W.A., "Diethyl 4,5-bis(4-bromophenyl)-2-oxocyclopentadiene-1,3-dicarboxylate," *Acta Crystallographica, Section E: Structure Reports Online*, E60, o1017-o1018 (2004).

David Grossie, Riddle, G.B.; Grossie, D.A.; Turnbull, K., "3-(2-Biphenyl)sydnone," *Acta Crystallographica, Section E: Structure Reports Online*, E60, o977-o978 (2004).

David Grossie, Riddle, G.B.; Grossie, D.A.; Turnbull, K., "A New Sydnone Structure: 4-(Phenylamino)sydno[3,4-a]quinoxaline," *Acta Crystallographica, Section E: Structure Reports Online*, E60, o258-o259 (2004).

Steven Higgins, Higgins S. R.; Hu X.; Knauss K. G., "Kinetics of Elementary Steps on Cleaved Dolomite Surfaces in Undersaturated Alkaline Aqueous Solutions," *Water-Rock Interaction*, 1, 757-761 (2004).

Steven Higgins, Knauss K. G.; Eggleston C. M.; Higgins S. R.; Greer B., "Coupled Carbonate Mineral Dissolution and Growth: Reactive Transport Experiments and Modeling of Calcite Dissolution and Strontianite Growth," *Water-Rock Interaction*, 1, 555-559 (2004).

Suzanne Lunsford, Lunsford, S.K. "Integrated Lecture and Laboratory Chemistry Components of Science Education Program for Early and Middle Childhood Education Majors," *Journal of Chemical Education*, 81, 605-607 (2004).

Paul Seybold, Peterangelo, S.C.; Seybold, P.G., "Synergistic Interactions Among QSAR Descriptors," *Int. J. Quantum Chem.* 96, 1-9 (2004).

Paul Seybold, Hollingsworth, C.A.; Seybold, P.G.; Kier, L.B.; Cheng, C.-K., "First-Order Cellular Automata Simulations of the Lindemann Mechanism", *Int. J. Chem. Kinetics*, 36(4), 230-237 (2004).

Paul Seybold, Ma, Y.; Gross, K.C.; Hollingsworth, C.A.; Seybold, P.G.; Murray, J.S., "Relationships between Aqueous Acidities and Computed Surface Electrostatic Potentials and Local Ionization Energies of Substituted Phenols and Benzoic Acids," *J. Molecular Modeling*, 10, 235-239 (2004).

Kenneth Turnbull, Norris, P.; Sabol, J.S.; Turnbull, K.; Weintraub, P.M.; Annual Reports in Organic Synthesis - 2004, Academic Press, 2004.

Kenneth Turnbull, Riddle, G.B.; Grossie, D.A.; Turnbull, K., "The Sydnone Compound 4-Hydroxy-4-benzylsydno[3,4-a]indole." Acta Crystallographica, Section E: Structure Reports Online E60, o1568-o1570 (2004).

Kenneth Turnbull, Riddle, G.B.; Grossie, D.A.; Turnbull, K., "3-(2-Biphenyl)sydnone," Acta Crystallographica, Section E: Structure Reports Online, E60, o977-o978 (2004).

Kenneth Turnbull, Riddle, G.B.; Grossie, D.A.; Turnbull, K., "A New Sydnone Structure: 4-(Phenylamino)sydno[3,4-a]quinoxaline," Acta Crystallographica, Section E: Structure Reports Online, E60, o258-o259 (2004).

Presentations and Invited Talks

Dolson, D.A., "Molecular Billiards: Infrared Fluorescence Studies of Collisional Energy Transfer," invited presentation at the Physics Department of Wright State University, Wright State University, Dayton, OH, February 13, 2004.

Dolson, D.A., "Physical Chemistry Laboratory Experiments with a Green HeNe Laser," invited presentation at the Chemistry Department, Butler University, Indianapolis, IN, March 17, 2004.

Dolson, D.A.; Tabatabaian, F., "Electronic-to-Vibrational Energy Transfer from $\text{Cl}^*(2P_{1/2})$ to $\text{CF}_4(\Sigma^3)$," presented at the 4th Annual Kentuckiana Undergraduate Research Symposium, University of Louisville, Louisville, KY, April 3, 2004.

Feld, W. A.; McGinty, K.M., "Synthesis of Poly(ether ether ketone)s Containing a Tertiary Amine," 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004.

Scanlon, L.G.; Feld, W.A., "Preparation of a Thin Film Solid-State Electrochemical Cell with Li_2Pc as the Electrolyte," 4th International Conference on Application of Conducting Polymers (ICCP-4), Como, Italy, February 18 - 20, 2004.

Scanlon, L.G.; Lucente, L.R.; Feld, W.A.; Sandí, G.; Balbuena, P.; Turner, A.; Scofield, J.; Tsao, B., "Preparation of a Thin Film Solid-State Electrochemical Cell with Li_2Pc as the Electrolyte," 205th Meeting of The Electrochemical Society, San Antonio, Texas, May 9-13, 2004.

Scanlon, L.G.; Lucente, L.R.; Feld, W.A.; Sandí, G.; Balbuena, P.; Turner, A., "Lithium Ion Conducting Channel as Solid-State Electrolyte for Rechargeable Lithium Batteries," ISPE 9, Mragowo, Poland, August 2004.

Scanlon, L.G., Rottmayer, M.A., Feld, W.A., Sandi, G., Balbuena, P.B., "Investigation of Lithium Corannulene Complexes via Ab Initio Calculations as Molecular System for Hydrogen Storage," 206th Meeting of The Electrochemical Society of Japan, 3-8 October 2004.

Bedrossian, L., Fossum, E., "Taking a Closer Look at Reaction Rates in Hyper-branching Polycondensation Reactions," American Chemical Society Dayton Section Poster Session, March 2, 2004. Awarded Best Undergraduate Poster.

Bedrossian, L., Fossum, E., "Determination of the Relative Reactivity Ratios of Monomer, Core, and Growing Polymer in Hyperbranching Reactions of AB₂ Monomers for Poly(arylene ether)s," 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004.

Hopkins, S., Fossum, E., "An Alternative Approach to Phenol Terminated Hyperbranched Poly(arylene ether phosphine oxide)s," 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004.

Guyo, J., Fossum, E., "Using Reactivity Ratios to Control Hyperbranching Polycondensation Reactions," 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004.

Bedrossian, L., Fossum, E., "Taking a Closer Look at Reaction Rates in Hyperbranching Polycondensation Reactions," Kentuckiana Undergraduate Research Symposium, Louisville, KY, April 2004. Awarded 1st Place Poster.

Bedrossian, L., Fossum, E., "Taking a Closer Look at Reaction Rates in Hyperbranching Polycondensation Reactions," presented at the 2nd Annual Ohio Valley Organic Chemistry Symposium, Dayton, OH, May 2004.

Guyo, J., Fossum, E., "Using Reactivity Ratios to Control Hyperbranching Polycondensation Reactions," presented at the 2nd Annual Ohio Valley Organic Chemistry Symposium, Dayton, OH, May 2004.

Hopkins, S., Fossum, E., "An Alternative Approach to Phenol Terminated Hyperbranched Poly(arylene ether phosphine oxide)s," presented at the 2nd Annual Ohio Valley Organic Chemistry Symposium, Dayton, OH, May 2004.

Fossum, E., "Reactivity Effects in the Synthesis of Hyperbranched Poly(arylene ether)s," invited presentation at the American Chemical Society International Workshop – Branched Polymers for Performance, Williamsburg, VA, May 2004.

Fossum, E., "Using ¹H, ¹³C, ¹⁹F, and ³¹P NMR Spectroscopy to Monitor Structural Development in Hyperbranching Polycondensation Reactions," invited presentation at the Ohio NMR Consortium Symposium, Columbus, OH, October 2004.

Gilpin, R. K., Zhou, W., "A Simple Infrared Method for Characterizing the Polymorphic States of Mefenamic Acid," Pittcon2004, Chicago, IL, March 2004.

Gilpin, R. K., Zhou, W., "HPLC and ESI-MS Studies of the Thermal Degradation of Mefenamic Acid by Alternate Mechanisms," Pittcon2004, Chicago, IL, March 2004.

Gilpin, R. K., Zhou, W., Gilpin, C. S., "Infrared Studies of the Thermal Conversion of Flufenamic Acid Between Polymorphic States," Pittcon2004, Chicago, IL, March 2004.

Gilpin, C. S., Zhou, W., Solch, J. G., "Studies of the Thermal Fragmentation of Fenamates under ESI-MS Conditions," Pittcon2004, Chicago, IL, March 2004.

Solch, J. G., Gilpin, R. K., Wagel, D. J., "Integrating Web-Based Simulations for Chemistry with a Commercial Distance Learning Program," Pittcon2004, Chicago, IL, March 2004.

Bose S.; Higgins S. R., "Step Velocities and Rates of Dissolution at Different Saturation Indices and Varying Ionic Ratios Studied During Dissolution of Celestite (SrSO₄)," contributed oral presentation, Geological Society of America Annual Meeting, Denver, CO, 2004.

Higgins S. R., "Experimental Advances and Applications in Scanning Probe Microscopy for in-situ Characterization of Solid-Liquid Interfaces," invited speaker at Surface Analysis 2004, Pacific Northwest National Laboratory, Richland, WA, June 16-18, 2004.

Hu X.; Higgins S. R., "Dolomite Surface Kinetics and Composition from Supersaturated and Undersaturated Non-stoichiometric Solutions," contributed oral presentation to the V. M. Goldschmidt Conference, Copenhagen, Denmark, June 5-11, 2004.

Knauss K. G., Eggleston C. M., Higgins S. R., Greer B., "Coupled Carbonate Mineral Dissolution and Growth: Reactive Transport Experiments and Modeling of Calcite Dissolution and Strontianite Growth," poster presentation at the 11th International Water-Rock Interaction Symposium, Saratoga Springs, NY, 2004.

Higgins S. R., Hu X., Knauss K. G., "Kinetics of Elementary Steps on Cleaved Dolomite Surfaces in Undersaturated Alkaline Aqueous Solutions," oral presentation at the 11th International Water-Rock Interaction Symposium, Saratoga Springs, NY, 2004.

Greer B., Eggleston C. M., Higgins S. R., "Cobalt Reactive Transport and Solid Solution at the Calcite-Water Interface at 40° C," paper contributed to the V. M. Goldschmidt Conference, Copenhagen, Denmark. June 5-11, 2004.

Hu X., Higgins S. R., "Scanning Force Microscopy Investigations of Heteroepitaxial Growth on Dolomite Surfaces," contributed poster, 227th ACS National Meeting, March 28-April 1, Anaheim, CA, 2004.

May, M., Popp, B., Dyar, H., Krall, H., Davidson, A., Reitz, T., Katovic, V., "Application of Imidazolium Based Room-Temperature Ionic Liquids as Solvents for Electrochemical and Spectroelectrochemical Studies," 14th Int. Symposium on Molten Salts, Honolulu, Hawaii, Oct. 2004.

Caja, J., Dunstan, D., Katovic, V., "Development of Low Melting Ionic Liquid Compositions Using Mixtures of Imidazolium and Pyrazolium Ionic Liquids," 14th Int. Symposium on Molten Salts, Honolulu, Hawaii, Oct. 2004.

Katovic, V., "Electrochemistry of Nb(V) in Sulfuric Acid and The Directed Electrochemical Generation of "Nb₃O₂" Type Clusters by Double Potential Electrolysis," The Ohio State University, Department of Chemistry, 2004.

Katovic, V., "Electrochemistry in Ionic Liquids," DePauw University, Department of Chemistry, Indiana, 2004.

Katovic, V., "Electrochemical and Spectroelectrochemical Investigation in Room-Temperature Ionic Liquids," Wright Patterson Air Force Base, Dayton, Ohio, 2004.

Ketcha, D.M., Taylor, R.T., Marine, S.S., "Combinatorial Chemistry and the Undergraduate Curriculum" 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004, in the symposium "NSF Catalyzed Innovations in the Undergraduate Curriculum" (Division of Chemical Education).

Ketcha, D.M., Charlesworth, C.E., "Structural Diversity via the Solid-phase Nenitzescu Indole Synthesis," 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004,

Ketcha, D.M., Malwitz, D.J., "Rare-earth Metal Catalyzed Sulfonylation Reactions of N-(Phenylsulfonyl)pyrroles," 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004.

Ketcha, D.M., Taylor, R.T., "Combichem: Pedagogical to Practical," 2nd Annual Ohio Valley Organic Chemistry Symposium, Wright State University Student Union, Dayton, OH, May 14, 2004.

Ketcha, D.M., Taylor, R.T., "NSF-sponsored Faculty Workshop in Combinatorial Chemistry," 18th Biennial Conference on Chemical Education, Ames, IA, July 18-22, 2004, in the symposium NSF-Sponsored Faculty Workshop Series and their Role in Curriculum Development.

Ketcha, D.M., "Microwave Expedited Heterocyclic Chemistry," Biotage User Group Meeting, Chicago, IL, October 7, 2004.

Ketcha, D.M., "Combinatorial Heterocyclic Chemistry," Xavier University, Cincinnati, OH, February 13, 2004.

Ketcha, D.M., "Combinatorial Heterocyclic Chemistry," Wilberforce University, Wilberforce, OH, March 3, 2004.

Ketcha, D.M., "Combinatorial Heterocyclic Chemistry," University of Toledo, Toledo, OH, September 20, 2004.

Ketcha, D.M., "Combinatorial Heterocyclic Chemistry," Kenyon College, Gambier, OH, November 9, 2004.

Lunsford, S., "Study of Various Crown Ethers Utilized to Detect Catechol," 206th Meeting of The Electrochemical Society, Sensor Division, October 7, 2004.

Lunsford, S., "Modular Physical Science Professional Development Program," Hawaiian International Science Conference, January 17, 2004.

Lunsford, S., Turner, H., Bargerhuff, M., "Adapting General Math and Science Classroom for Students With Disabilities," Teacher Education Council Meeting, September 22, 2004.

Dean, G.L., McGowin, A.E., "Hot Pressurized Liquid Water Chromatographic Separation of Polycyclic Aromatic Hydrocarbons, 11th International Symposium & Exhibit on Supercritical Fluid Chromatography, Extraction & Processing, Pittsburgh, PA, August 1-4, 2004.

Pacey, G., Widera, J., Pucket, S., McGowin, A.E., Klingshirn, C., Bunker, C., Gord, J., Phelps, D., "Development of Technologies for Smart Nozzle Applications", Air Force Research Laboratories/Dayton Area Graduate Studies Institute Research Symposium, Dayton, OH, March 2, 2004.

McGowin, A.E., "Water as a Tunable Solvent," Ohio Wesleyan University, March 4, 2004. (Invited talk).

Portlock, D.E., "Introduction to Combinatorial Chemistry: Solid and Solution Phase Chemistry," NSF sponsored Combinatorial Chemistry Workshop, Wright State University Student Union, Dayton, OH, August 3, 2004. (Invited talk).

Portlock, D.E., "Combinatorial Chemistry: What is it, Why is it important, How can it accelerate Drug Discovery?" Modern Medicinal Chemistry and Drug Development symposium, University of New Haven, October 1, 2004. (Invited talk).

Portlock, D.E., "Practical Methods for Generating Large Diverse Libraries Using Multi Component Condensation Reactions," Kenyon College, Gambier, OH, October 19, 2004. (Invited talk).

Seybold, P.G., "Cellular Automata Models for Chemical Education," 56th Southeastern Regional Meeting of the American Chemical Society, Research Triangle Park, NC, November 12, 2004. (Invited talk).

Seybold, P.G., "Complexity in Chemistry," Center for the Study of Biological Complexity, Virginia Commonwealth University, Richmond, VA, Nov. 4, 2004.

Seybold, P.G., "Chemical Applications of Cellular Automata", Wright-Patterson AFB, February 27, 2004.

Turnbull, K., Weisner, A.J., "o-Alkynyl-sydnonones as Versatile Intermediates for Heterocyclic Synthesis," Dayton Section of the American Chemical Society Poster Session, March 2, 2004.

Burke, A.R., Cooper, T.M., Fratini, A., Hall, B.C., Rogers, J.E., Turnbull, K., Weisner, A.J., "Synthesis and Characterization of Novel Platinum Acetylide Oligomers", Dayton Section of the American Chemical Society Poster Session, March 2, 2004.

Turnbull, K., Weisner, "o-Alkynylsydnonones as Versatile Intermediates for Heterocyclic Synthesis" A.J., 5th Florida Heterocyclic Chemistry Conference, Gainesville, Florida, March 7-10, 2004.

Invitations to Participate in or Chair Symposia

Feld, W.A., chaired the 1st Ohio NMR Consortium Symposium, October 2, 2004.

Higgins, S.R., organized the Mineral Surface Reactivity Symposium held at the 2004 V.M. Goldschmidt Conference in Copenhagen, Denmark, June 5-11, 2004.

Portlock, D. E., served as an organizing committee member for the Second Annual Ohio Valley Organic Chemistry Symposium, held at Wright State University, May 14-15, 2004.

Editorial Board memberships

Seybold, P.G., Editorial Advisory Board of Chemistry & Biodiversity, published by Verlag Helvetica Chimica Acta, Zurich.

Seybold, P.G., Editorial Advisory Board, Current Computer-Aided Drug Design, published by Bentham Science Publishers, The Netherlands & the U.S.A.

Turnbull, K., ARKIVOC (electronic journal), scientific editor & Control Board member.

Granting Agency Study Section Memberships

Roger Gilpin, NIH Study Section: SSS6 Technology Transfer and Innovative Research Review Committee (2 times in Washington in 2004).

Daniel Ketcha, Review Panel, National Science Foundation's Course, Curriculum, and Laboratory Improvement (CCLI) program, Division of Undergraduate Education, Washington, DC, July 28-31, 2004.

Kenneth Turnbull, U.S. Civilian Research and Development Foundation (CRDF), Chemistry (2 times in Washington in 2004).

Offices in Professional Organizations:

Daniel Bombick, American Chemical Society/Analytical Division Awards committee.

William Feld, Ohio NMR Consortium, Chair, 2003 – present.

Suzanne Lunsford, Ohio Project Director, representing Wright State University "Enhancing Undergraduate Education in the State of Ohio."

Kenneth Turnbull, Chair of American Chemical Society (ACS) Dayton Section, Long Range Planning Committee.

Special Events, Symposia, or Colloquia in 2004:

Higgins, S.R., organized the Mineral Surface Reactivity Symposium held at the 2004 V.M. Goldschmidt Conference in Copenhagen, Denmark, June 5-11, 2004.

Ketcha, D.M., Workshop Co-Organizer, National Science Foundation Workshop in the Chemical Sciences, "Solid Phase Synthesis and Combinatorial Chemistry", Wright State University, August 1-6, 2004 (with Taylor, R.T., Miami University)

Ketcha, D.M., Organizer, 2nd Ohio Valley Organic Chemistry Symposium, Wright State University, Dayton, OH, May 14-15, 2004.

Lunsford, S., "Take your Sons and Daughters to Work Day, "Chemistry in Our Everyday Lives" April 2004.

Portlock, D. E. served as a Symposium Organizer for the 2nd Annual Ohio Valley Organic Chemistry Symposium (OVOCS) to be held at Wright State University, 14-15 May 2004.

Faculty, Staff, and Student Awards

Faculty

Eric Fossum, CoSM Outstanding Teaching Award

Paul G. Seybold, External Fellow of the Center for the Study of Biological Complexity at Virginia Commonwealth University, Richmond, VA.

Staff

Mary Sparks, Wright State President's Award for Excellence in Service.

Students

Brian Brumfield, Graduate Council Fellowship (2nd year)

Laura Bedrossian - Best Undergraduate Poster award at the Dayton ACS Patterson Awards meeting

Kristen N. Wrenn – Analytical Chemistry Award

James Guyo, Outstanding Chemistry Graduate Teaching Assistant - 2004

Stephanie Makselan, Outstanding Chemistry Graduate Teaching Assistant - 2004

Benjamin Southerland, 2004 Patterson Award Winner, (outstanding junior WSU chemistry student)

Kathryn McGinty, “Best Graduate Poster” at the Dayton ACS Patterson Award Meeting

Chrissy Charlesworth, Outstanding Chemistry Graduate Student- 2004

Stefanie Ward – CRC Outstanding Freshman Chemistry Student Award

Laura Bedrossian – First Place Undergraduate Poster at the Kentuckiana Student Research Meeting

Outreach Programs

Project RISE "Rural Integrated Science Education" by S. Lunsford and W. Slattery, to teachers (pursing a masters degree in science) expanding around Wright State University over 150 mile radius. 24 Teachers were participants, impacting over 5000 students in science education. Also, web course developed and attached with RISE experience to ensure that all science experiences taught in RISE are being utilized in the teachers' school classrooms.

Chem Demo Program. This program, led by Profs. Emeriti Rubin Battino and John Fortman, with the assistance of Andrea Burns, students, and staff, reaches roughly 7500-8000 high school, junior high, and grade school students each year with multiple presentations in December and March. It is, so far as we can determine, the largest chemistry outreach program in the nation (and possibly the world). Students are shown demonstrations of exciting chemical phenomena, with a lively dialog of information and humor.

Student clubs and activities

CLASS Project Club "Developing chemistry lessons for students with physical disabilities", S. Lunsford, coordinating with teachers of education, college of science and mathematics and office of disability at Wright State University.

Chemistry Club. The Chemistry Club is a highly active student organization. Its activities include 30-minute meetings every other week, a monthly calendar available to all students, presentations of posters at scientific meetings, field trips to chemical companies, an active Demo Team that presents shows to area elementary schools; plus assorted volunteer and social events.

Undergraduate honors students

Sharlene Hopkins, University Honors Graduate “Alternative Approach to Phenol Terminated Hyperbranched Poly(Arylene Ether Phosphine Oxide)s,” Eric Fossum, Advisor.

Larry Williams, Jr., University Honors Graduate “Synthetic Routes to Polyalkylated Indoles,” Daniel Ketcha, Advisor.

Off campus or special interest courses

Suzanne Lunsford

Directing teachers around the greater Cincinnati and Dayton, Ohio area with chemistry lessons that are inquiry-based.

Graduate Students

Christine Charlesworth, “Heterocyclic Chemistry in the Multiple Parallel Mode”, June 2004, (Daniel Ketcha)

Xiao Cui, “Synthesis of An AB₂ PBO Monomer Precursor: 5-(6-hydroxy-5-nitrobenzoxazol-2-yl)isophthalic Acid”, July, 2004, in Ph.D. program at Indiana University. (William Feld)

Amanda J. Davidson, “Electrochemical Stud of Ethanol Oxidation in Ionic Liquids”, June 2004, in Ph.D. program at Texas A&M. (Vladimir Katovic)

James Guyo, “Using Reactivity Ratios To Control Hyperbranching Polymerization Reactions”, August 2004, employed at Girindus America. (Eric Fossum)

Christopher D. Klingshirn, “Electrochemical Behavior of Aviation Fuel in Ionic Liquids”, November 2003, employed at Wright Patterson Air Force Base. (Audrey McGowin)

Bradley E. Kohane, “Microwave-Mediated Heterocyclic Chemistry”, July 2004. (Daniel Ketcha)

Hrvoje Lusic, “UV-Curable Water Soluble Hyperbranched Polyesters”, July 2004, in Ph.D. program at University of North Carolina, Charlotte. (Eric Fossum)

Stephanie D. Makeslan, “Development of an Undergraduate/Graduate GC/MS Experiment Utilizing Perfumes”, August, 2004, employed at Battelle. (Daniel Bombick)

David J. Malwitz, "Diversity Oriented Synthesis of Pyrrole Aryl Sulfones and Sulfonamides", June 2004, employed at Wyeth. (Daniel Ketcha)

Kathryn M. McGinty, "Synthesis of Poly(ether) ketone)s Containing a Tertiary Amine Subunit", June, 2004, in Ph.D. program at University of Akron. (William Feld)