

Curriculum Vitae

John R. Lakanen

Indiana Wesleyan University

Chemistry Department

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Education:

Undergraduate-Hope College, Holland Michigan

Degree: B.S. Chemistry, 1987

Graduate-The University of Michigan, Ann Arbor, Michigan

Degree: MS., Chemistry 1988

Degree: Ph.D., Chemistry April 1994

Graduate-Columbia International University, Columbia South Carolina

Certificate: Biblical Studies, May 1995

Work Experience:

Teaching Assistant, University of Michigan, 1987-1988;

Research Assistant, University of Michigan, 1988-1994

Volunteer Adjunct Faculty, Egbe Nursing School, Egbe Nigeria,

February 1994

Volunteer Adjunct Faculty, Titcombe College, Egbe Nigeria

February 1994

Adjunct Chemistry Faculty, Henry Ford Community College,

Dearborn Michigan, May 1994-July 1994.

Assistant Professor of Chemistry, Indiana Wesleyan University, Fall 1995 to
Spring 2008.

Coordinator of the Chemistry Department, Indiana Wesleyan University, 1998 to 2010.

Associate Professor of Chemistry, Indiana Wesleyan University, Fall 2008 to present.

Chair, Division of Natural Sciences, Indiana Wesleyan University, July 2010 to present.

Physics Department Coordinator, Indiana Wesleyan University, July 2012 to present.

Honors and Awards:

Sigma Xi 1987

Moses Gomberg Fellowship 1987

Indiana Wesleyan Professor of the Year 1997-1998

Indiana Wesleyan University President's Award for Meritorious Service 2012

Professional Memberships:

American Chemical Society since 1993

Indiana Academy of Science since 2011

Committee and Other Assignments:

Technology Committee 2004-2005; 2006-2007

Technology Council 2003-2004; 2006-2007; 2007-2008

Student Development Council Fall 2009-2010

CAS Academic Affairs Council Fall 2010 to present

Faculty Development Committee 2012-2013

Strategic Planning Committee 2012-2013.

First Science Hall Expansion Project: Chaired Natural Sciences Division Building Committee for the last year of the 2000 Burns Hall of Science expansion project.

Responsibilities included coordinating infrastructure needs from biology, chemistry, physics, and computer science departments for 43,000 sq. ft. addition to science building completed in the year 2000. Directly purchased over \$150,000 worth of chemistry analytical instrumentation and supplies for building addition. Designed lab layouts for organic lab, research labs, and instrumentation lab.

Second Science Hall Expansion Project: Represented the Natural Sciences Division as a Building Steering Committee member for a 42.8 million dollar; 111,250 gross square foot Science and Nursing Building construction at Indiana Wesleyan University to be completed in August 2014. Coordinated Natural Sciences Division departmental expansion for the project that involved new office and laboratory facilities.

Curriculum Advances:

Initiated Undergraduate Chemistry Research Program.

Expanded chemistry degree offerings to include a Bachelor of Arts in Chemistry.

Working draft completed of a non-majors chemistry guide titled, "Light, Matter, and Art: A Study Guide for Artists".

Developed B.S. major in physics in collaboration with IWU physics faculty.

Courses Taught:

Organic Chemistry I; II with laboratory sections

Biological Chemistry I

Analytical Chemistry

Upper level Inorganic chemistry

Research in Chemistry

Introduction to Organic and Biological Chemistry with laboratory sections

Introduction to Chemistry

Chemistry and Artists' Colors with lab

General Chemistry Lab

New Courses Developed:

Research in Chemistry

Inorganic Chemistry (junior level)

Chemistry and Artists' Colors

Administrative Experience:

Coordinating Assessment for Chemistry Department Programs

Coordinating Assessment for Division of Natural Sciences

Evaluating Teaching and Scholarship for Division of Natural Sciences faculty

Evaluating Laboratory Manager and Chemical Hygiene Officer

Chaired faculty hiring committees for Natural Sciences Division

Shepherding new courses and programs through assessment and curriculum committees

Developing budgets for Natural Sciences Division

Coordinating with Taylor University to link physics classrooms to support physics major at IWU.

Current Undergraduate Research:

Organic Synthesis of new enzyme inhibitors targeting DOXP reductoisomerase in the MEP pathway as novel anti-malarial drugs.

Use of Algae for the production of Biofuels

Community Involvement:

Upland Community Church Missions Committee 2013 to present.

Upland Community Church Stewardship Board 2002-2008.

Pastoral Prayer Coordinator 2010 to present

Publications:

Synthesis and Biochemical Evaluation of AdoSpermidine: a Nucleoside Polyamine Adduct Inhibitor of Spermidine Synthase, John R. Lakanen, James K. Coward, Anthony E. Pegg; *The Journal of Medicinal Chemistry*, **1994**, *38*, 2714-2727.

The role of hypusine depletion in cytostasis induced by Sadenosyl-L-methionine decarboxylase inhibition: New evidence provided by 1-methylspermidine and 1,12-dimethylspermine, Timothy L. Byers, John Lakanen, James K. Coward, and Anthony E. Pegg; *Biochem. J.*, **1994**, *303*(pt. 2): 363-368.

Enhancement of the Spermidine Uptake System and Lethal Effects of Spermidine Overaccumulation in Ornithine Decarboxylase overproducing L1210 Cells under Hypotonic Stress, Richard Poulin, James K. Coward, John R. Lakanen, and Anthony E. Pegg; *The Journal of Biological Chemistry* **1993**, *268*, 4690-4698.

α -Methyl Polyamines: Metabolically Stable Spermidine and Spermine Mimics Capable of Supporting Growth in Cells Depleted of Polyamines, John R. Lakanen, James K. Coward, and Anthony E. Pegg; *The Journal of Medicinal Chemistry* **1992**, *35*, 724-734.

Factors Determining Allyl Hapticity in Early Transition Metal Complexes: Synthesis, Structure, and Dynamics of Cp₂(η ^{1-1,2,3}-Me₃allyl)ZrBr and Cp₂(η ^{1-1,1,2}-Me₃allyl)ZrBr, Erlund J. Larson, Paul C. Van Dort, John R. Lakanen, Daniel W. O'Neill, Lori M. Pederson, Jill J. McCandless, and Michael E. Silver (Hope College); Steven O. Russo and John C. Huffman (Indiana University); *Organometallics* **1988**, *7*, 1183-1187.

Thermally Stable Allyl Zirconium Halide Compounds. Synthesis, Crystal Structure, and Dynamics of (η ⁵-C₅Me₅)(η ^{3-1,2,3}-Me₃allyl)ZrBr₂ and (η ⁵-C₅Me₅)(η ^{3-1,1,2}-Me₃allyl)ZrBr₂, Erlund J. Larson, Paul C. Van Dort, James S. Dailey, John R. Lakanen, Lori M. Pederson, and Michael E. Silver (Hope College); Steven O. Russo and James C. Huffman (Indiana University); *Organometallics* **1987**, *6*, 2141-2146.

Recent Student Research Presentations

Elizabeth A. Eckhardt, Philip T. Pifer, John Lakanen PhD *Production of Biofuels from Algae* 2011 Hodson Research Colloquium Indiana Wesleyan University.

Kean Reid (presenter), Kayla Ewert, Elizabeth Eckhardt and John Lakanen PhD *Production of liquid Biofuels from Algae* 2013 Butler University Undergraduate Research Conference.