



Monthly Membership Meeting

Our June meeting will be held virtually

WHEN: Wednesday, June 17, 2020; 6:00pm

TALK TITLE: "The Concept of Hierarchical Interactions in State Systems: Applications to Polyprotic Acids and Bases, and Hemoglobin Oxygen Binding Equilibria". Please see Page 2 for the Abstract

SPEAKER: Dr. Bill Gutheil; UMKC School of Pharmacy. Please see Page 2 for a short biography of Dr. Gutheil.

JOIN US: Here is the Zoom meeting link:

<https://umsystem.zoom.us/j/99096221991>

Meeting ID: 990 9622 1991



ACS

Chemistry for Life

THE ANNUAL SPENCER AWARD WILL BE HELD OCT. 8, 2020

Links for the latest COVID-19 Information.

<https://www.cdc.gov/>

<https://health.mo.gov/>

<https://www.who.int/>

<https://www.acs.org/content/acs/en.html>

Can Vaccine Development Be Safely Accelerated?

<http://www.processdevelopmentforum.com/articles/can-vaccine-development-be-safely-accelerated/>

- AMERICAN CHEMICAL SOCIETY 1876-2020
- 144 YEARS
- *Make sure to check out our website!!
- www.acs-kc.com

PLEASE JOIN US IN CONGRATULATING OUR 50 & 60 YEAR MEMBERS!!

THEY ARE:

Dr. Patricia N. Dalrymple (50 year)

Dr. Derek H. Ball (60 year)

Dr. Milton E. Noelken (60 year) and

Mr. Gerald I. Schwebke (60 Year)

THANK YOU ALL FOR YOUR MANY YEARS OF MEMBERSHIP & SERVICE!!

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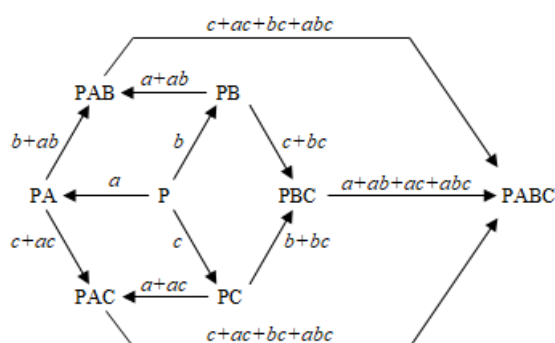
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ABOUT JUNE'S VIRTUAL SPEAKER

Dr. William Gutheil has been an ACS member since 1982. CURRENT POSITION: Professor, UMKC School of Pharmacy. EDUCATION: Bachelor of Science (1983), Biochemistry, California Polytechnic State University, San Louis Obispo, CA. Doctor of Philosophy (1989), Chemistry, University of Southern California; Postdoctoral Research Fellow (1989-1991), Harvard Medical School, Boston MA; Postdoctoral Research Associate (1991-1994), Department of Biochemistry, Tufts University School of Medicine, Boston MA; Career Publications: 55. RESEARCH: Dr. Gutheil established and directs the UMKC School of Pharmacy LC-MS/MS resource. His primary research focus is on antibacterial drug action, resistance, and new drug discovery. He also has a longstanding interest in theoretical and applied biophysics.

ABOUT DR. GUTHEIL'S PRESENTATION

Systems with multiple equilibria are common in chemical and biochemical systems. Examples include polyprotic acids, polyprotic bases, and hemoglobin oxygen binding. Classic methods for formulating these systems are inadequate for a deep understanding of their behavior, and this has impeded our ability to analyze and interpret their behavior. In this talk I will present a system for treating such systems based on the concept of hierarchical interaction. This approach has deep connections to probability theory, and statistical thermodynamics. This approach will be illustrated by its application to the analysis of the proton equilibria of a number of polyprotic acids and bases.



UPCOMING EVENTS/SAVE THE DATE

Annual Kenneth A. Spencer Award Banquet: October 8, 2020

Sponsored by the ACS-KC Section. Our Spencer Award Winner is

Dr. Jerry W. King. The Annual Award Presentation and Banquet will be held on Missouri Western State University's campus this year. Stay tuned to our newsletter this summer as the details emerge but please mark your calendar and plan on celebrating Dr. King's achievements with us!

ABOUT OUR KENNETH A. SPENCER AWARD WINNER, DR. JERRY KING

Jerry King was born on February 19, 1942. Dr. King has over 55 years of experience in supercritical fluid technology, chemical separations, chromatography, and applied chemical engineering & chemistry. He is a native of Indianapolis, Indiana, graduating from Butler University in 1965 with a B.S. in Chemistry. Dr. King continued with graduate studies at Butler University and the University of Utah, where he worked with Professor J. Calvin Giddings on supercritical fluid chromatography. In 1973, Dr. King received his Ph.D. in surface characterization studies using chromatographic methods from Northeastern University in Boston,

Massachusetts under the direction of Professor Barry Karger. He then conducted postdoctoral research in physical chemistry under Professor Daniel Martire at Georgetown University in Washington, DC.

Dr. King currently is a R&D Consultant at CFS in Fayetteville, AR. Prior to this, he held an Endowed Professorship in the Department of Chemical Engineering at the University of Arkansas from 2005-2012., From 2002-2005, he was Program Manager/Research Scientist in the Supercritical Fluid Facility at the Los Alamos National Laboratory. Dr. King was also the Lead Scientist of the Critical Fluid Technology Group at the National Center for Agricultural Utilization Research (NCAUR) in Peoria, Illinois for 16 ½ years. His research interests include the development of critical fluid technology for food and agro-material processing, materials science, and analytical applications. He has authored over 275 publications (205 are peer-reviewed, including three patents) in SFE, SFC, and related separation techniques; and has lectured extensively on these subjects over the past 40 years at national and international symposia, including the ACS Short course on SFE/SFF/SFC with Professor Larry Taylor. Dr. King has organized many symposia on SFE and SFC, including the well-known International Symposia on SFC and SFE. He serves on the editorial board of the Journal of Supercritical Fluids, Italian Journal of Food Science, Journal of the American Oil Chemical Society, INFORM, and is a member of ACS, AIChE, AOCS, IFT, AOAC, ASTM, and US or international critical fluid technology groups. He is a Vice President of the International Society for the Advancement of Supercritical Fluids (ISASF).

Dr. King has also worked at several industrial companies and R & D organizations. These have included Arthur D. Little, Inc. (Cambridge, Massachusetts), Union Carbide Corporation (Bound Brook, New Jersey), and CPC International (Summit-Argo, Illinois). His activities while with ADL involved technical support to chemistry, food & agribusiness sectors of the company, and collaboration with the supercritical fluid venture development team. At CPC, he was in charge of HPLC methods development for biotechnology, installation of a process chromatography, and industrial analysis of saccharides and starch polymers. While at USDA and Los Alamos, Dr. King interacted extensively with industrial partners via CRADA and SBIR collaborations to commercialize processes dealing with environmentally-benign production of value-added agricultural and botanical materials and CO₂ – based cleaning and microelectronics production. His R & D activities have involved extensive interaction with government regulatory agencies such as FSIS, FDA, FGIS, EPA, and DOE as well as Euro-based agencies.

In 1993, Dr. King was named Scientist of the Year at NCAUR, and in 1994 was elected a corresponding member of the Accademia dei Georgofili in Florence, Italy. Dr. King has been awarded the Chicago Chromatography Discussion Group's Merit Award for significant contributions to chromatography and elected to Who's Who in America. He was awarded AOAC's prestigious Harvey Wiley Award in 1997 for his research in analytical SFE. In 1998 he received the the Merit Award from the Midwest SFC Group/Tri-State Discussion Group for consistent contributions in the supercritical fluid technology field, and the Award of Excellence at the 8th International Symposium on SFC/SFC for "pioneering achievement, leadership, and enthusiasm in the development of supercritical fluid technology and the education of others". He was awarded an Underwood Fellowship in 1999 for sabbatical study in the United Kingdom. In the year 2000, he received the Keene P. Dimick Award at Pittcon for his contributions to the field of gas and supercritical fluid chromatography. Dr. King has also awarded the 1st Place Award for Consumer Products from the Federal Laboratory Consortium for Technology Transfer - Midwest Region. He also has been awarded the Herbert J. Dutton Award from the American Oil Chemists' Society for his contributions to the analysis and processing of lipids and oils. He was selected for a Marie Curie Chair by the European Union in Brussels, Belgium in 2004. Dr. King has been Adjunct Professor in the Department of Food Science at the University of Arkansas. In 2007 he was the Outstanding Researcher in the Department of Chemical Engineering at the University of Arkansas. In 2008 he was appointed as the Mariwala Visiting Professorship at UICT in Mumbai, India. In 2009, Dr. King chaired and organized the 10th International Symposium on Supercritical Fluids,

held in San Francisco, CA, May 13-16, 2012. He serves as USA liaison to Innovation Fluides Supercritiques, a French organization for the promotion of supercritical fluids. In May 2012, he was elected a fellow of the American Oil Chemists' Society. In 2013, he was also elected a Fellow of the Industrial & Engineering Division of the American Chemical Society. In 2015, Dr. King was appointed to a Visiting Fulbright Research Chair at the University of Alberta. In 2018, he was the Chairman of the Separation Science & Technology a Sub-Division of the ACS. He currently serves as the Program Chair for the ACS sub-division on Cannabis Chemistry. In August, 2020, he will receive the Kenneth A. Spencer Award from the American Chemical Society for his contributions to agricultural & food technology based on his research in the use of "green" analysis and processing technologies related to environmental sustainability and consumer safety.

***OPEN POSITION:** Our Secretary position is now open. If you would be interested in filling that role for us, please email Sara Leibowitz: sleibowitzacs@gmail.com. Thank you!

2020 UNITED STATES NATIONAL CHEMISTRY OLYMPIAD

The competition will be held in Istanbul, Turkey July 6-15, 2020.

Congratulations to those students who qualified to take the 52nd international chemistry Olympiad exam!!

Due to COVID-19, there was a two-part Digital National Exam administered and taken April 26 & May 3 online from home. The students who qualified to take Part One of the Digital National Exam are (in no particular order):

Luke Chen, Blue Valley North High School
Rishab Gaur, Pembroke High School
Wade Boohar, Olathe High School
Suhan Syeed, Blue Valley Northwest High School
Alan Abraham, Blue Valley West High School
Noah Lively, Liberty High School
Samuel Liu, Olathe High School
Drake Smith, Blue Valley Northwest High School
Abihith Kothapalli, Blue Valley West High School
Kendal McMullen, Liberty High School

We are pleased to announce and congratulate two of these students who qualified to take Part Two of Digital National Exam on May 3!! Nationwide, only the top 150 students from Part One were invited to take Part Two this year!

Those students are: **Abihith Kothapalli, Blue Valley West High School (Bradley Banning, Teacher)** and **Alan Abraham, Blue Valley West High School (Bradley Banning, Teacher)**.

We would like to congratulate Abihith Kothapalli who made it to the top 50 "High Honors List" of all students who participated in Part Two of the National Chemistry Olympiad exam. Thank you Abi for making us proud and placing the KC Local Section Olympiad on the ACS radar.

Please join us in congratulating these two students and their teacher for this accomplishment! Thank you, also, to all the mentors who continue to help our students prepare for this challenging competition.

Congratulations to you all and best wishes!

ACS-KC Section Standing Committees & Chairs

Please consider volunteering on one (or more) of our committees! We welcome your thoughts, ideas and contribution!

*Please contact Sarah Leibowitz at: sleibowitzacs@gmail.com if you are interested in joining one of the committees, or chairing one of the "open" committee positions. We thank you and welcome your input and assistance!!



Check us out on **FACEBOOK**: ACS-KC and **LINKEDIN**: ACS-KC

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FINANCE.....	Dr. Jeffrey Woodford, MWSU
LONG RANGE PLANNING.....	OPEN
MEMBERSHIP.....	Dr. Jeffrey Woodford, MWSU
MINORITY AFFAIRS.....	OPEN
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PUBLIC RELATIONS.....	Dr. Gary Clapp, MWSU
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SENIOR CHEMIST.....	OPEN
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WEBMASTER.....	Dr. Gary Clapp, MWSU
WOMEN CHEMISTS.....	Ms. Michele Sanders, Harcross Chemicals

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