

Mark E. Jones

Company: MJPhD, llc

Title: Creative Director

Bio:

A love of science and a passion for chemistry propelled a farm kid from Virginia to a satisfying industrial career. Mark Jones retired in March 2021 as Executive External Strategy and Communications Fellow for The Dow Chemical Company, having spent a decade on the CTO's staff. He retired with responsibility, among other things, for next generation sustainability goals associated with innovation at Dow.



Mark is currently Creative Director at MJPhD, llc, an independent consulting business. Mark consults about the chemical industry, improving communications, presentation of quantitative data, and topics related to science. He now writes a monthly column for *Design World*, writes science articles for a variety of outlets, and does the occasional graphic arts project. Mark volunteers time with the American Chemical Society, AIChE, and other professional organizations. For ACS, he hosts webinars and blogs in *Industry Voices* and *Industry Matters*. Mark serves on the American Chemical Society's Committee on Public Relations and Communications and the Chemical Heritage Landmark Committee. He has also hosted webinars for the National Academies and other organizations. He continues to support the awards ecosystem, serving as a judge for the R&D 100s, Edison Innovation Awards and others. He frequently speaks at universities, both as a guest lecturer and as a keynote speaker.

Mark retired as Executive External Strategy and Communications Fellow for Dow Chemical, reporting directly to Dr. A.N. Sreeram, Corporate Vice President of Research & Development in March 2021. In September 2011, he assumed this role supporting then Dow Chief Technology Officer Bill Banholzer, with technical assessments and development of external communications. He provided guidance and evaluation for an R&D effort that exceeded \$1.7 billion at its peak. He was responsible for sustainability goals associated with innovation, having shaped the Company's goals through serving on multiple goal shaping teams. He provided technical expertise to teams focused on greenhouse gas reduction and improving circularity of products. He led efforts to promote Dow technology through awards, coaching Dow submissions and serving on a number of award selection committees to gain insights. He provided technical support for Dow's Renewable Chemistries Expertise Center from 2002 to 2018. In 2017, Mark was named as a Fellow of the American Chemical Society. Mark served on the Board of Directors of the Biotechnology Innovation Organization (BIO) Industrial and Environmental Section and was an active member of the American Chemistry Council's Biobased Chemistry Network. The White House's Advanced Manufacturing Partnership

was a multi-year focus, looking both at technology options and improving scale-up of new technologies. He spent much of his career developing catalytic processes. Mark served as co-chair of the National Academy's Chemical Sciences Roundtable and remains a member. He is a co-author on the National Research Council reports "Sustainable Development of Algal Biofuels in the United States" and "An Assessment of ARPA-E". He was a platform and program reviewer on several DOE Biomass Program reviews, including serving as chair.

Prior to accepting the role as Executive External Strategy and Communications Fellow, Mark served as a Technology Strategy Development Fellow within Performance Plastics, Hydrocarbons, Chemicals, Energy and Licensing R&D. In this role, Mark was responsible for developing alternative feedstock initiatives and technology exploration in energy, plastics, chemicals and hydrocarbons areas. Mark was named to the Renewable Chemistries Expertise Center (RCEC) due to his emphasis on developing feedstock options for the Company. He has worked to define options for cellulosic conversion, as well as a number of other nascent biomonomer options. Mark left a role leading the Process Scale-up and Implementation Team within the Energy Storage Devices platform to assume this role in Early 2011. During his two-year foray into batteries, Mark completed preliminary design and equipment selection for a battery materials production facility, worked with business leaders to develop a battery materials strategy, managed intellectual capital, and steered R&D efforts related to electrode and electrolyte materials. The Energy Storage role built on Mark's previous experience in the processing of inorganic materials, fuel cell development for portable power applications, and technology exploration. Mark left Hydrocarbons and Energy, Basic Plastics and Chemicals, Licensing R&D to assume the battery role in early 2009. From 2006 to 2009, Mark was Technology Strategy Development Scientist for Basic Plastics and Chemical / Hydrocarbons and Energy R&D, where he was involved in a variety of alternative feedstock and sustainability issues. He served on the ACS Corporation Associates and the Leading Others Working Group, as well as Committee on Public Relations and Communications and the Chemical Heritage Landmark Committee during his Dow career.

Mark joined Dow in 1990 following a graduate career that had very little to do with his ultimate career path. After graduating with a BS in Chemistry from Randolph-Macon College, he received his Ph.D. in Physical Chemistry with Barney Ellison at the University of Colorado-Boulder studying gas-phase ion molecule chemistry - not an area of great industrial interest. Mark was introduced to catalysis during a post-doc with Bruce Koel, then at the Cooperative Institute for Research in Environmental Science in Boulder. He spent his early career in Catalysis in what is now Core R&D. Mark left Core R&D in 2006 to take the Strategy Fellow role in Hydrocarbons, Energy, and Basic Chemicals. Mark is the author of over 12 issued U.S. patents and numerous publications.

Employment:

4/21 to present – Creative Director at MJPhD, llc

9/11 to 3/21 – The Dow Chemical Company Corporate Research and Development – Executive External Strategy and Communications Fellow, reporting directly to the CTO

1/11 to 9/11 - The Dow Chemical Company, Performance Plastics, Hydrocarbons, Licensing and Basic Chemicals R&D

Job titles: Technology Strategy Fellow

5/09 to 1/11 - The Dow Chemical Company Corporate Ventures and Business Development/Energy Storage Materials

Job titles: Research Fellow, Process Scale-up and Implementation

4/06 to 5/09 - The Dow Chemical Company, Basic Plastics and Chemical / Hydrocarbons and Energy R&D

Job titles: Technology Strategy Fellow

8/91 to 4/06 - The Dow Chemical Company Corporate Research and Development – Catalyst Discovery Discipline (and various predecessors)

Job titles: Senior Research Chemist, Project Leader, Senior Research Specialist, Technical Leader, Scientist (Fellow)

4/90 to 8/91 - The Dow Chemical Company Research Assignments Program

Job title: Senior Research Chemist

Education:

Post-Doctoral experience, 1988-1990 at the Cooperative Institute for Research in Environmental Science (CIRES), Boulder, CO

Ph.D. in Physical Chemistry, University of Colorado-Boulder; Boulder, CO, 1988

B.S. in Chemistry, Randolph-Macon College; Ashland, VA, 1981

Publications:

Mark E. Jones, "COVID, the Sequel", *R&D World*, 29 August 2023.

Mark E. Jones, "The pizza box problem — and why it might kill everything from Teflon to drugs", *R&D World*, 26 April 2023.

Mark E. Jones, "Glowing rocks, a new sport, and what we can learn about different approaches", *R&D World*, 8 August 2022.

Mark E. Jones, "New dangers in the woods — and the hope that research offers us", *R&D World*, 29 June 2022.

Mark E. Jones, "Why There's A Neon Shortage and Why It Matters", *R&D World*, 19 April 2022.

Mark E. Jones, "Curling stones: Circular, but not part of the circular economy", *R&D World*, 24 March 2022.

Mark E. Jones, "The chemical cost of salting our roads", *R&D World*, 4 March 2022.

Mark E. Jones, "Can We Ever Get The Lead Out", *R&D World*, 1 November 2021.

Mark E. Jones, "Celebrating the invention of the GC-MS", *Chemicals Knowledge Hub*, August/September 2019 issue, page 52.

Mark Jones, "Celebrating the Invention of Gas Chromatography-Mass Spectrometry", *R&D Magazine*, 3 June 2019

Bob Maughon and Mark Jones, "R&D Efforts to Make Plastic More Sustainable", *R&D Magazine*, 29 January 2019.

Committee on Evaluation of ARPA-E (committee member), *An Assessment of ARPA-E*, National Academies of Sciences, Engineering, and Medicine. June 2017.

Mark E. Jones, "Yikes! I just increased my platinum footprint", *Sustainable Manufacturer Network*, 8 August 2016

Mark E. Jones and William F. Banholzer; "Solar flux, water, and land impose limits on biology", *Biotechnology and Bioengineering*, 111(6), June 2014, pages 1059-1061.

William Banholzer and Mark Jones, "Possible versus practical", *Chemistry World*, October 2013, page 41 and on-line 19 September 2013.

Mark E. Jones; "Why Big Always Wins: Examining the Economies of Scale", *Chemical Engineering*, 10 September 2013.

William F. Banholzer and Mark E. Jones; "Needed: ChEs to Solve Global Problems", *Chemical Engineering Progress*, August 2013, page 15.

William F. Banholzer and Mark E. Jones; "Perspective: Chemical engineers must focus on practical solutions", *AIChE Journal*, Volume 59, Issue 8, August 2013, pages 2708–2720.

Committee on the Sustainable Development of Algal Biofuels (committee member), "Sustainable Development of Algal Biofuels in the United States", National Research Council of the National Academies, 24 October 2012.

Jones, M.J.(typo); Kresge, C. T.; and Maughon, B. R.; "Alternative Feedstocks for Olefin Production: What Role Will Ethanol Play?", *Oil and Gas European Magazine*, 2010, (36:1), pages 34-39.

Hickman, Daniel A.; Jones, Mark E.; Jovanovic, Zoran R.; Olken, Michael M.; Podkolzin, Simon G.; Stangland, Eric E.; Thompson, R. Kirk; "Reactor Scale-up for Fluidized Bed Conversion of Ethane to Vinyl Chloride", *Industrial & Engineering Chemistry Research*, 2010, 49(21), 10674-10681.

Hickman, Daniel A.; Jones, Mark E.; Jovanovic, Zoran R.; Olken, Michael M.; Podkolzin, Simon G.; Stangland, Eric E.; Thompson, R. Kirk; Reactor Scale-up for

Fluidized Bed Conversion of Ethane to Vinyl Chloride, 21st International Symposium on Chemical Reaction Engineering, Philadelphia, PA, June 2010.

Jones, Mark (chair); McDermott, John; Kinoshita, Charles; Firevold, Robert; Krause, Curtis; Brown, Craig; "2009 Thermochemical Conversion Platform Review Report", December 2009.

Schoenung, Susan; Keller, Jay; Gutterson, Neal; Jaffoni, Terry; Jones, Mark; Knotek, Michael; Maher, Michael; Marshall, Liz; Miles, Tom; Tumbleson, Michael; Petok, Fred; Prince, Roger; "2009 Biomass Program Peer Review Report", December 2009.

Jones, Mark E.; "Will Stream Crackers Go the Way of the Dodo?", 21st Ethylene Producers' Conference 2009 AIChE Spring National Meeting, Tampa, FL, April 27, 2009.

Clavaliere, Ralph; Jaffoni, Terry; Barash, Irvin; Sonke, Daniel; Werpy, Todd; Stevens, Lyle; Johnson, Donald; Jones, Mark; Cruickshank, Bill; Tumbleson, Mike; Terry, David; Tyson, Shaine; "2007 Office of the Biomass Program Peer Review Summary Report", November 2008.

Banholzer, William F.; Watson, Keith J; Jones, Mark E.; "How Might Biofuels Impact the Chemical Industry?", *Chemical Engineering Progress*, 2008, Vol. 104 (No. 3), S7-S14.

van der Heijden, Alwies W. A. M.; Podkolzin, Simon G.; Jones, Mark E.; Bitter, Johannes H.; Weckhuysen, Bert M.; "Catalyzed Hydrogen-Chlorine Exchange between Chlorinated Hydrocarbons under Oxygen-Free Conditions", *Angewandte Chemie International Edition* 47(27), 5002-5004, 2008.

Jones, Mark (chair); Frederick, Jim; Myers, Lisa; Brown, Robert; Breault, Ron; Kelley, Steve; "Office of the Biomass Program Thermochemical Platform Peer Review Initial Reviewer Feedback: Summary of Results", July 10-11, 2007.

Jones, Mark E.; Hickman, Daniel A.; Olken, Michael M.; "The E2V Story: Novel Catalysts Enable the Dow Ethane-to-Vinyl Process" Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), COLL-515.

Podkolzin, Simon G.; Stangland, Eric E.; Jones, Mark E.; Peringer, Elvira; Lercher, Johannes A.; "Methyl Chloride Production Methane over Lanthanum-Based Catalysts", *Journal of the American Chemical Society*, 2007, 129(9), 2569-2576.

Peringer, Elvira; Podkolzin, Simon G. ; Jones, Mark E.; Olindo, Roberta; Lercher, Johannes A.; "LaCl₃-based catalysts for oxidative chlorination of CH₄", *Topics in Catalysis* 38(1-3), 211-220, 2006.

Jones, Mark E.; Hickman, Daniel A.; Olken, Michael M.; "The E2V Story: Novel Catalysts Enable the Dow Ethane-to-Vinyl Process", Abstracts, 38th Central Regional Meeting of the American Chemical Society, Frankenmuth, MI, United States, May 16-20, 2006, CRM-119.

Panja, Chameli; Jones, Mark E.; Heitzinger, John M.; Gebhard, Steven C.; Koel, Bruce E.; "Bi Adsorption and Poisoning on Ni(100) Surface as Probed by CO Chemisorption", *Journal of Physical Chemistry B*, 2000, 104(14), 3130-3139.

Jones, Mark E.; "A Simple-to-Build Thermal-Conductivity GC Detector", *Journal of Chemical Education*, 1994, 71(11), 995-6.

Mitchell, Gary E.; Dekoven, Benjamin M.; Speth, David R.; Jones, Mark E.; Curphy, James J.; Schmidt, Donald L.; Yeh, Alvin T.; Gland, John L.; Fischer, Daniel A.; "Characterization of Polymers and Their Surfaces Using Ultra-Soft X-ray Absorption Spectroscopy", *Materials Research Society Symposium Proceedings*, 1993, 304(Polymer/Inorganic Interfaces), 215-20.

Simonson, R. J.; Paffett, M. T.; Jones, M. E.; Koel, B. E.; "A Vibrational Study of Borazine Adsorbed on Platinum (111) and Gold (111) Surfaces", *Surface Science*, 1991, 254(1-3), 29-44.

Parker, Deborah Holmes; Jones, Mark E.; Koel, Bruce E.; "Determination of the Reaction Order and Activation Energy for Desorption Kinetics Using TPD Spectra: Application to Deuterium Desorption Silver (111)", *Surface Science*, 1990, 233(1-2), 65-74.

Jones, Mark E.; Heitzinger, John M.; Smith, Randall J.; Koel, Bruce E.; "Temperature Programmed Desorption of Bismuth on Nickel(100)", *Journal of Vacuum Science & Technology, A: Vacuum, Surfaces, and Films*, 1990, 8(3, Pt. 2), 2512-16.

Jones, Mark E.; Koel, Bruce E.; Weppner, Richard T.; "Small-Scale Electrochemical Cleaning of Molybdenum to Improve Spotwelding Characteristics", *Review of Scientific Instruments*, 1989, 60(9), 3067-8.

Jones, Mark E.; Ellison, G. Barney; "A Gas-Phase E2 Reaction: Methoxide Ion and Bromopropane", *Journal of the American Chemical Society*, 1989, 111(5), 1645-54.

Jones, Mark E.; Barlow, S. E.; Ellison, G. B.; Ferguson, E. E.; "Reactions of Carbon (1+), Helium (1+), and Neon (1+) with Vibrationally Excited Hydrogen and Deuterium", *Chemical Physics Letters*, 1986, 130(3), 218-23.

Jones, M. E.; Ellison, G. B.; "Safer Way to Start a Microwave Discharge", *Rev. Sci. Instrum.* 57 (1986), 1432-3.

Jones, Mark E.; Kass, Steven R.; Filley, Jonathan; Barkley, Robert M.; Ellison, G. Barney; "Alkylation of Enolate Ions", *Journal of the American Chemical Society*, 1985, 107(1), 109-15.

Oakes, John M.; Jones, Mark E.; Bierbaum, Veronica M.; Ellison, G. Barney; "Photoelectron Spectroscopy of Anions CCO- and HCCO-" *Journal of Physical Chemistry*, 1983, 87(24), 4810-15.

Issued US Patents:

- US8674149B2 Oxidative mono-halogenation of methane
Bowman, Robert G. | Stangland, Eric E. | Jones, Mark E. | Millar, Dean M. | Podkolzin, Simon G. | Stears, Brien A. | Wehmeyer, Richard M.
Publication Date 2014-03-18
Assignee Dow Global Technologies LLC, Midland, MI,
- US8088957B2 Conversion of a multihydroxylated-aliphatic hydrocarbon or ester thereof to a chlorohydrin
Krupey, Jr., William J. | Schreck, David J. | Kearns, Kenneth L. | Varjian, Richard D. | Jones, Mark E. | Campbell, Robert M. | Hook, Bruce D. | Briggs, John R. | Hippler, Jeffrey G.
Publication Date 2012-01-03
Assignee Dow Global Technologies LLC
- US6984763B2 Oxidative halogenation and optional dehydrogenation of c3+hydrocarbons
Schweizer, Albert E. | Jones, Mark E. | Hickman, Daniel A.
Publication Date 2006-01-10
Assignee Dow Global Technologies Inc., Midland, MI,US
- US6909024B1 Process for the conversion of ethylene to vinyl chloride and novel catalyst compositions useful for such process
Jones, Mark E. | Olken, Michael M. | Hickman, Daniel A.
Publication Date 2005-06-21
Assignee The Dow Chemical Company, Midland, MI,US
- US6933417B1 Process for vinyl chloride manufacture from ethane and ethylene with partial HCl recovery from reactor effluent
Henley, John P. | Jones, Mark E. | Hickman, Daniel A. | Marshall, Kenric A. | Reed, Daniel J. | Clarke, William D. | Olken, Michael M. | Walko, Lee E.
Publication Date 2005-08-23
Assignee Dow Global Technologies Inc., Midland, MI,US
- US6821924B2 Oxyhalogenation process using catalyst having porous rare earth halide support
Gulotty, Jr., Robert J. | Jones, Mark E. | Hickman, Daniel A.
Publication Date 2004-11-23
Assignee Dow Global Technologies Inc., Midland, MI

- US6797845B1 Process for vinyl chloride manufacture from ethane and ethylene with immediate HCl recovery from reactor effluent
Hickman, Daniel A. | Henley, John P. | Jones, Mark E. | Marshall, Kenric A. | Reed, Daniel J. | Clarke, William D. | Olken, Michael M. | Walko, Lee E.
Publication Date 2004-09-28
Assignee Dow Global Technologies Inc., Midland, MI
- US6680415B1 Oxyhalogenation process using catalyst having porous rare earth halide support
Gulotty, Jr., Robert J. | Jones, Mark E. | Hickman, Daniel A.
Publication Date 2004-01-20
Assignee Dow Global Technologies Inc., Midland, MI
- US6452058B1 Oxidative halogenation of C1 hydrocarbons to halogenated C1 hydrocarbons and integrated processes related thereto
Schweizer, Albert E. | Jones, Mark E. | Hickman, Daniel A.
Publication Date 2002-09-17
Assignee Dow Global Technologies Inc., Midland, MI
- US5637548A Preparation of bimetallic catalysts for hydrodechlorination of chlorinated hydrocarbons
Ito, Larry N. | Jones, Mark E. | Bare, Simon R.
Publication Date 1997-06-10
Assignee The Dow Chemical Company, Midland, MI,US
- US5391803A Production of dimethyl carbonate using copper zeolite catalysts
King, Stanley S. T. | Jones, Mark E. | Olken, Michael M.
Publication Date 1995-02-21
Assignee The Dow Chemical Company, Midland, MI,US
- US5387708A Production of dialkyl carbonates using copper catalysts
Molzahn, David C. | Jones, Mark E. | Hartwell, George E. | Puga, Jose
Publication Date: 1995-02-07
Assignee The Dow Chemical Company, Midland, MI,US

Presentations (Selected Recent):

Upper Penninsula ACS Local Section, *'Avoid Foam' and Other Consequences of Living in a World with PFAS*, 6 September 2023,

ACS National Meeting in San Francisco, *We'd Likely Make the Same Mistakes Again: What have we learned from Thomas Midgley?*, 14 August 2023, talk 3921690-HIST

Queens University, *Exceptional Presentations In Spite of PowerPoint*, 31 May 2023 (virtual)

University of Illinois, *Effective Communication of Scientific Data* for Chemistry 593, Advanced Professional Development Monday, February 27, 2023 (virtual)

Central Michigan University, *"Avoid Foam" and Other Consequences of Living in a World with PFAS*, 16 February 2023

Mid-Michigan AIChE Monthly Meeting, *Tradeoffs on the Road to Sustainability*, 31 January 2023 (virtual).

SciencePalooza 2022 (ACS Wooster, Lorain Community College and Ashland University), *Tradeoffs on the Road to More Sustainable*, 30 September 2022 (virtual).

ACS Houston seminar, *Development of a New Pasta: Product development lessons for the chemical industry*, co-presented with Steve Hahn, 29 September 2022 (virtual).

University of South Carolina seminar, *Effective Communication of Scientific Data*, 16 September 2022

Texas A&M guest lecture *Integration: Critical at the Start of the Industry, No So Much Now* on 8 September 2022, repeat 5 September 2023.

Michigan State University Organic Seminar. *Chicken and Broken Glass*, 30 March 2022

University of Wisconsin CHEM 505/CBE505: Aspects of Industrial Chemistry and Business Fundamentals lecture, Topic: Sustainability and the Chemical Industry, 3 March 2022.

ACS Webinar *Before You Press Send! more effective email communication*, 26 January 2022

AIMCAL keynote on 18 October 2021, *The Journey to 'More Sustainable*. Orlando meeting

ACS Webinar, *Grateful for Chemistry* on 15 July 2020

ACS Webinar, *Better Communication in the Digital Age: Writing with Brevity and Clarity* on 23 June 2020.

ACS Webinar, *Better Communication in the Digital Age* on 29 April 2020.

University of Wisconsin guest lecture, *Sustainability and Its Impact on the Chemical Industry*, 30 January 2020

R&D 100 conference in San Mateo: *Writing an Effective R&D 100 Nomination*. 4 December 2019

Keynote for Chemicals America / SOCMA meeting in Fort Worth, TX, 13 February 2019: *Sustainability Initiatives: How Expectations of a Circular Economy Strain the Chemical Industry*

R&D 100 Conference November 16, 2018. *Exceptional Presentations In Spite of PowerPoint*

ACS Webinar *Exceptional Presentations In Spite of PowerPoint: The Sequel* on 17 May 2018

ACS National Meeting New Orleans *Promoting safety culture through sharing—a Dow perspective* on 19 March 2018

ACS Webinar *Exceptional Presentations In Spite of PowerPoint: How to Communicate in the Digital Age* on 15 March 2018

R&D 100 Conference, 16-17 November 2017 in Orlando, FL. Invited talk: *Robotics and Artificial Intelligence: Can They Make Today's Researchers Obsolete?*

Keynote at the Southern Aerosol Technical Association (SATA) Fall Meeting, 20-22 September 2017 in Hilton Head, SC. Invited talk: *The good, The bad and the uncertain: Public perception of the chemical enterprise*

ACS National Meeting on 21 August 2017 PRES 12: *Improving safety in the chemical enterprise through transparent sharing of best safety practices: The Dow Laboratory Safety Academy delivers safety information to all*

ACS Webinar on 13 April 2017 *The Good, The Bad and the Uncertain: Public Perception of the Chemical Enterprise*

AAAS 2017 Annual Meeting in Boston, 17 February 2017. *Advancing Your Scientific Career With Personal Branding and Social Media Savvy.*

CalTech Invited Lecture, 14 February 2017. *Going in Circles: Implications for Individuals, Industry and the Ecosystem.*

R&D 100 Conference, November 2-4 in Washington, D.C. Thought Leadership Session 4-C *Forces Shaping Industry: Shale and Sustainability Are Creating Change*

August 2016 Fall ACS National Meeting Multidisciplinary Program Planning Group - Chemical industry communication efforts panel discussion, 23 August 2016 (invited)

University of Michigan Department of Chemistry Karle Symposium opening keynote, 25 July 2016, *Forces Shaping the Chemical Industry: Shale and Sustainability are Creating Change* (invited)

March 2016 Spring ACS National Meeting, *Presentations in the digital age: How to make exceptional presentations in spite of PowerPoint*, 13 March 2016(invited).

Opening plenary talk at *The Changing Landscape of Hydrocarbon Feedstocks for Chemical Production: Implications for Catalysis, A Workshop* sponsored by the National Academy's Board on Chemical Sciences and Technology, 7-8 March 2016 at the National Academy, Washington, D.C. (invited)

Keynote at 2015 Chemicals American, Charleston, SC, 10 September 2015: *No Respect: American Manufacturing* (invited)

Spring ACS meeting, Denver, CO. Cellulosics session Research on Renewable Materials: US and EU Perspectives Plenary Talk, Thursday, 26 March 2015. "4D product: Integration over time is the only way to understand sustainability" (invited)

Plenary speaker at Plastics Recycling Conference (Plenary Session 5), 25 February 2015, Dallas, TX. "Sustainability is More Than Just End of Life" (invited)

Keynote at 2014 Chemicals American, Charleston, SC, 8 September 2014: "Chemical Industry Sustainability and Shale Gas Trends" (invited)

for more complete list, visit www.mjphd.net/Presentations.html

Web Published:

3 November 2022	Woodpecker Chemistry	<u>ACS Industry Matters</u>
11 August 2022	Meetings: None of us is as dumb as all of us	<u>ACS Industry Matters</u>
14 July 2022	Testing the Limits of Recycling - Part 2	<u>ACS Industry Matters</u>
16 June 2022	Limits to Circular	<u>ACS Industry Matters</u>
26 May 2022	New Dangers in the Woods	<u>ACS Industry Matters</u>
5 May 2022	A Little Despair on Earth Day	<u>ACS Industry Matters</u>
14 April 2022	Good Luck With That!	<u>ACS Industry Matters</u>
24 March 2022	Smelly Buckets	<u>ACS Industry Matters</u>
3 March 2022	The Magnesium Shortage Is No Typical Supply Chain Issue	<u>ACS Industry Matters</u>
10 February 2022	George Curme: A name every industrial chemist should know	<u>ACS Industry Matters</u>
20 January 2022	Better for Travel, Worse for the Environment	<u>ACS Industry Matters</u>
16 December 2021	Sustainability for the Holidays	<u>ACS Industry Matters</u>
18 November 2021	Get the Lead Out	<u>ACS Industry Matters</u>
4 November 2021	Shifting from a Fuel-Intensive, to a Material-Intensive World	<u>ACS Industry Matters</u>
14 October 2021	Life-Giving and Life-Taking Chemistry: Toxic is sometimes what you want	<u>ACS Industry Matters</u>
26 August 2021	Developing A New Pasta	<u>ACS Industry Matters</u>

5 August 2021	Plastic Everywhere	ACS Industry Matters
1 July 2021	Vaccinated Not Invincible	ACS Industry Matters
17 June 2021	Toxic Credit Cards	ACS Industry Matters
13 May 2021	Reason for Optimism	ACS Industry Matters
8 April 2021	More Gratitudes for Chemistry published on ACS Industry Matters	ACS Industry Matters
17 July 2015	Ambiguous Definitions Are The Enemy Of Agreement: a comparison of the concepts safe and sustainable	ACS Industry Voices
5 June 2015	The Paradox of Making Something Everyone Needs: eggs are related to chemical production	ACS Industry Voices
24 April 2015	Retractions: perils of the patent literature, where nothing is retracted, are outlined	ACS Industry Voices

Awards / Appointments:

Chair of the Midland Local ACS Section, November 2020.
 Named Fellow of the American Chemical Society, 2017.
 National Academies of Science and Engineering Chemical Sciences Roundtable co-chair, December 2016-present
 National Academies Board on Science, Technology, and Economic Policy committee for Evaluation of the Advanced Research Projects Agency - Energy (ARPA-e), April 2015-2017.
 BIO Industrial and Environmental Governing Board, November 2013-2018
 National Academies Board on Energy & Environmental Systems committee for Sustainable Development of Algal Biofuels, February 2011 to October 2012
 Dow Excellence in Science Award, October 2002
 Dow Special Recognition Awards – Six Total for various contributions including Six Sigma Project with >\$27,000,000 single year improvement, Development of Chemical Sciences Web Site, Development of New Reactor Technology, and Project Leadership.
 Arizona State Research Institute Postdoctoral Fellowship, 1988.
 University of Colorado Graduate Foundation Award, Fall 1984.
 University of Colorado Chemistry Department Fellowship, Fall 1981.
 American Chemical Society Award for Outstanding Achievement in Chemistry, April 1981.
 Randolph-Macon Award Scholar, 1977-1981.

Revision October 2023