



virtuAIChE®

This month's meeting:

*Primary (with live discussion/live chat) Wednesday, Jan 26 at 9 pm ET (US) / 1 am GMT
Alternate 1 (with live discussion/live chat) Thursday, Jan 27 at 7 am ET (US) / 11 am GMT
Alternate 2 (with live discussion/live chat) Thursday, Jan 27 at 1 pm ET (US) / 5 pm GMT*

Biomimicry: Green Chemistry

Mark Dorfman

Senior Principal and Lead Chemist, Biomimicry 3.8

We may assume that the functions required by commercial chemicals and materials are different from the functions required by organisms. Upon closer look, however, the overlap of common functions may surprise you – everything from non-stick coatings to lightweight polymeric materials. Not only have organisms solved for the same set of functions, but after 3.8 billion years of R&D, the solutions are often elegant and sustainable. Organisms, after all, have to manage chemical and material production, use, and disposal in the same place where their offspring need to survive and thrive. Mark Dorfman's presentation will provide an overview of the key principles behind nature's life-friendly chemistry and share examples of biomimetic inventions inspired by nature's genius.



Mark Dorfman is a New York City-based Senior Principal and lead chemist at Biomimicry 3.8, where his work is centered on the premise that living organisms, by necessity, have developed sophisticated, highly effective, life-friendly chemistries that could inspire provocative, high-performing, sustainable technology for modern society. Mark seeks out and applies the design principles of nature's time-tested chemical strategies to the development of innovative solutions to the toxic chemical and material

challenges facing the 21st century. Prior to Biomimicry 3.8, Mark worked in the non-profit sector researching and writing case-studies on industrial chemical pollution prevention and wastewater management practices that ultimately influenced the creation of federal and state pollution prevention policies.

***Note that registration for VLS meetings is required.
Our meetings are still free to attend and open to all.***

January Meeting Registration Information

Primary	Alternate 1	Alternate 2
(Live Presentation/Live Chat)	(Recorded Presentation/Live Chat)	(Recorded Presentation/Live Chat)
Jan 26 at 9 PM EST / 1 AM GMT	Jan 27 at 7 AM EST / 10 AM GMT	Jan 27 at 1 PM EST / 5 PM GMT
Register in advance for the Primary Meeting	Register in advance for the Alternate 1 Meeting	Register in advance for the Alternate 2 Meeting

After registering, you will receive a confirmation email containing instructions for joining the meeting, along with add-to-calendar links.

U. S. National Engineers Week – February 20-26, 2022

Each year more than 70 United States engineering, education, and cultural societies, and more than 50 corporations and government agencies celebrate being an engineer during week of George Washington's birthday. In 2020, the week of February 20 – 26 had been declared "National Engineers Week" (Eweek) in the United States. Ireland (<http://www.engineersweek.ie/>) will celebrate Eweek the week of March 5 – March 11, 2022. Canada will honor engineers and engineering during the entire month of March (<https://nem-mng.ca/>). The website, <http://www.wfeo.org/engineersdays/>, tracks Eweek celebrations around world.

The goal of National Engineers Week (Eweek) is to promote engineering and the positive contributions engineers make to our lives especially at local schools and to the public. Depending on your location, events range from hosting competitions such Mathcounts, Future City, Robotics, Odyssey of the Mid, and Science and Engineering Fairs to honoring the top engineers, agencies and employers at banquets and dinners.

During my 40 plus years in the engineering field, I have judged science fair projects, introduced elementary, junior high and high schools students to environmental and chemical engineering, and organized award banquets to honor outstanding engineers and engineering projects.

My favorite event has been the "Introduce a Girl to Engineering" day. Using the process of baking cookies, I explain how engineers create the process, equipment and instructions to make millions of cookies each year. Even the safety department joins in by conducting a safety briefing on how to prevent burns, spills and fires when baking cookies at home. At the end of the day, most of the attendees including the chaperones and teachers understand engineering is more than building roads or power plants.

Another program that fits with being a virtual section is the Future City Completion. Even though I live about 250 miles (400 kilometers) from the nearest competition site, I can be a remote judge of the written presentations. For the 2021 Future City Competition, I reviewed 10 entries from the 6th -8th Grade level online using the guidance documents and scoring rubrics to record my scores. Some of the entries showed a true appreciation of the technical challenges to solving the problems a future city

would face. Visit <http://discovere.org/our-programs/future-city> for more information on how to become a judge for the Future City Competition.

For information on the events in your location, check some of the websites listed below or contact your local engineering societies, school districts and private schools and governmental agencies for more information.

www.aiche-metrony.org/Engineers/Week.html

www.facebook.com/EngineersWeek

www.futurecity.org

www.discovere.org/ur-programs/girl-day

<https://msachievers.mdek12.org/2020-national-engineers-week-nasa>

www.carnegiesciencecenter.org/calendar/event-details/?eventID=2187

<https://www.ashrae.org/government-affairs/grassroots-advocacy/national-engineers-week-eweek>

www.engineeringfamilyday.org

www.dvewc.org/about

<https://www.sandiegoengineers.org/>

<https://www.army.mil/article/120306>

<http://www.wichitaengineers.net/>

www.wfeo.org/engineersdays (International Dates and host organizations)

Australia: <https://www.facebook.com/EngineersAustralia>

Canada: <http://www.nem-mng.ca/>

India: <https://www.ieindia.org/en>

Ireland: www.engineersweek.ie

AICHe News

The AICHe hosts technical conferences around the world. Check www.aiche.org/conferences for registration and presentation information for this year's events.

Dates	Event
Jan 19	Modeling and Simulation of Fuel Cells and Electrolyzers
Jan 26	Digital Transformation to Achieve PSM Excellence
Feb 9	February 2022 TSC Meeting
Feb 9 – 10	2022 Ethylene Middle East Technology Conference (EMET)

Upcoming VLS Meetings

The VLS has monthly meetings. The following meetings have firm dates and speakers.

Dates	Topic
Jan 2022	Biomimicry: Green Chemistry Innovations Inspired by Nature
Feb 2022	Student Intern Competition
Mar 2022	Reality Checking Processes using chemical engineering fundamentals

Past VLS Meetings

The VLS records its monthly meetings and archives them on the AIChE Academy website in case you missed a meeting or are looking for a particular topic. See below for current recordings.

Date	Event
Ago 2021	How can nuclear energy help fight climate change?
Jul 2021	Automation of Process Simulation and Data Analytics with MATLAB
Jun 2021	Chemical Fuels in Carbon Neutral Energy system
Apr 2021	Impactful Online Meetings
Feb 2021	Overcoming the Challenge of Applying Chemical Engineering Principles to the Art of Winemaking
Jan 2021	DIERS Technology Fundamentals II: VLS January 2021 Webinar
Nov 2020	Protecting Lives and Livelihood: Hazardous Materials Classification and its Impact to the Supply Chain
Oct 2020	Chemical Safety Board (CSB) Accidental Release Reporting Rule
Sep 2020	Internships and Undergraduate Education
Aug 2020	Physical Property Models to Design Better Chemical Products
Jul 2020	Julia - A Fresh Approach to Technical Computing
Jun 2020	The Next Digital Leap to AI (An Interactive Webinar)
May 2020	Challenges and Benefits of Remote Operator Training using Cloud-Deployed High-Fidelity, First-Principles Based Standard Operator Training Simulators (SOTS)
Apr 2020	NASEM Chemical Engineering in the 21st Century Study: Give your input!
Mar 2020	Is Your Focus Your Magic!
Feb 2020	DIERS data/standards in HAZOPS of two phase flow
Jan 2020	A Brief History of Measurement
Nov 2019	Using Thermal Imaging to Guard Industrial Facilities
Oct 2019	Python for chemical engineers: Getting started
Aug 2019	Reactive Chemical Hazards
Jul 2019	Should I Py or Should I Fortran?
Jun 2019	Design Considerations for Organic Electronic Materials and Devices
May 2019	Why Can't You Compete Without Virtual/Augmented Reality in Your Plant
Apr 2019	The Chemistry of Bourbon: The "spirit" of molecules
Mar 2019	Demystifying Professional Engineering Licensure and How to Put it to Work for you
Feb 2019	Municipal Wastewater and Sludge Are a Resource, Not a Waste: Coping with Tightening Water Supplies and Limited Landfill Availability

We're in this Together

The ongoing COVID-19 situation has provided us with a reminder that even in uncertain times, AIChE is a diverse community of people who lead, create, inspire and learn—together. AIChE is here to help. Knowing that many of our members are working virtually, AIChE has created this page to act as a hub for online content, access to communities, and communication updates. [Learn more.](#)

The Virtual Local Section's Executive Committee

Officers

Chair: [Steve Treese](#)
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Did You Know?

You can visit [the VLS website](#) for more information on the Virtual Local Section's mission, activities, and membership. Also at this website, AIChE student members and VLS members can watch previous webinars for free.

Subscription Information

Current fully paid members of the Virtual Local Section receive this newsletter. If you wish to update your email address, contact the AIChE's New York Office for Permanent Address Corrections at xpress@aiiche.org or 1-800-242-4363.

Continuing Education Credits

Members of AIChE can receive 1 hour of continuing education/professional development credit for attending Virtual Local Section webinars. Send your name, the certificate number on your professional engineer's license, and the licensing entity (state or country) in which you are licensed to our Secretary, lg_environmental@bellsouth.net, to receive one hour of continuing education credit for attending this meeting.