

JOINT 006

CME  
NASA STEM  
SYMPOSIUM

PRES

# ACS Fall 2026 Chemistry in the Space Age



Speakers



Jack Szostak  
Nobel Laureate



Harriet Kung  
DOE Science



Paul Alivisatos  
UChicago



Chad Mirkin  
Northwestern

2026.08.24-25 · Chicago McCormick Place W194B · CME-STEM.org



# 8/24 · NASA, Student & Mentor Awards

Room W194B PRES COMSCI POLY PMSE BIOT PHYS I&EC YCC

## Chemistry in the Space Age

### 8/24 AM - JOINT006A - Chemistry & Space: Advanced Synthesis and Materials

8:00 AM	Stiers, Cristi	CME	Opening Remarks
8:05 AM	Mueller-Buschbaum, Peter	TUM	Degradation of organic solar cells during thermal cycling
8:30 AM	Rodriguez, Jose	BNL	Fundamental studies on the catalytic production of methanol on metal-oxide interfaces: From ultrahigh vacuum to high pressures conditions
8:55 AM	Marks, Tobin	Northwestern	Applying Ductile Electronics Strategies to Soft Matter Solar Cells
9:20 AM	Lin, Wenbin	UChicago	Metal-Organic Frameworks for Cancer Therapy
9:45 AM	Matyjaszewski, Krzysztof	Carnegie Mellon	Macromolecular Engineering by Controlled Radical Polymerization
10:10 AM	Intermission		
10:20 AM	Schepartz, Alanna	UC Berkeley	New molecules from nature's most sophisticated catalyst, the ribosome
10:45 AM	He, Chuan	UChicago	Chromatin regulation by RNA methylation
11:10 AM	Gellman, Samuel	U Wisconsin	Foldamers: Extrapolating from Proteins
11:35 AM	Stupp, Samuel	Northwestern	Emerging Life-Like Materials through Supramolecular Chemistry
12:00 PM	Stiers, Cristi	CME	Closing Remarks

### 8/24 PM - JOINT006B - Chemistry & Space, PMSE CME Students & Mentor Awards

2:00 PM	Takhistova, Ksenia	CME	Introductory Remarks
2:00 PM	Galli, Giulia	UChicago	Behind the scenes: stories of atoms forming next generation materials
2:25 PM	Wang, Xudong	U Wisconsin	Wearable and Implantable Nanogenerators for Biomedical Applications
2:50 PM	Kamat, Prashant	Notre Dame	Quantized photocatalysis with bandgap engineered metal halide perovskite nanocrystals
3:15 PM	Talapin, Dmitri	UChicago	Exploring the Intersections of Solid-State and Molecular Chemistry
3:40 PM	Intermission		
3:50 PM	Rodriguez, George	CME	CME PMSE: ACS Student & Mentor Awards
4:05 PM	Kitto, David	Argonne NL	Improving Ion-Exchange Membrane Designs by Achieving Ultrahigh Charge Densities
4:30 PM	Kamcev, Jovan	U Michigan	Specific ion effects on ion transport in charged polymer membranes
4:55 PM	Chen, Lei	U Manchester	Mechanical activation with rotaxane actuators
5:20 PM	De Bo, Guillaume	U Manchester	Macromolecular devices for force-controlled release and catalysis
5:45 PM	Takhistova, Ksenia	CME	Closing Remarks



# 8/25 AM · CME Lectures & Leadership Awards

Room W194B PRES COMSCI POLY PMSE BIOT PHYS I&EC YCC

## Chemistry in the Space Age

### 8/25 AM - JOINT006C - CME Lectures

8:00 AM	Takhistova, Ksenia	CME	Introductory Remarks
8:00 AM	Evans, Austin	U Florida	Thermally Conductive Polymeric Materials
8:25 AM	Alivisatos, Paul	UChicago	Colloidal quantum dots as building blocks for materials in space and how liquid cell electron microscopy is a decisive tool in their development
8:50 AM	Xia, Younan	JHU	Nanobottles for encapsulation and controlled release
9:15 AM	Mueller, Karl	Ames NL	From Spins to Space: Solid State NMR for Materials in Extreme Environments
9:40 AM	Intermission		
9:48 AM	Karim, Shah	CME	Introduction
9:50 AM	Mirkin, Chad	Northwestern	Megalibrary Data Engines for Catalyst Discovery: Learning from Hundreds of Millions of Experiments in a Single Afternoon
10:20 AM	Gogotsi, Yury	Drexell	What MXenes can do for space exploration
10:50 AM	Kung, Harriet	DOE Office of Science	Science for Energy in the Age of AI
11:20 AM	Rodriguez, George	CME	CME Lectures with STEM Leadership Awards Presentation to Nobel Laureate Jack Szostack, and Harriet Kung, Department of Energy Office of Science Deputy Director
11:30 AM	Szostak, Jack	UChicago	From Chemical Evolution to Darwinian Evolution
12:00 PM	Rodriguez, George	CME	Closing Remarks



CME  
STEM Leadership  
AWARDS

Origins of Life

**Jack Szostak**  
Nobel Laureate in Medicine

Innovation &  
Scientific Stewardship

**Harriet Kung**  
DOE Office of Science



# 8/25 PM · Earth & Space Sustainability

Room W194B PRES COMSCI POLY PMSE BIOT PHYS I&EC YCC

## Chemistry in the Space Age

8/25 PM - JOINT006D - Earth & Space Sustainability: Reimagining Chemistry for the Space Age

2:00 PM	Takhistova, Ksenia	CME	Intro - Space Sustainability
2:01 PM	Christy, Allison	NASA Glenn	Biosynthesized Thermoplastic/Regolith Composites for Closed-Loop In-Space Manufacturing
2:15 PM	Vivod, Stephanie	NASA Glenn	Expanding the Horizons of Polymer Aerogels
2:30 PM	Berliner, Aaron	Cornell	From Resupply to Resourcefulness: Space Bioprocess Engineering Beyond Earth
2:45 PM	Wordsworth, Robin	Harvard	Materials for sustainable habitats beyond Earth: Challenges and prospects
3:00 PM	Kandadai, Nirmala	Oregon State	In-space manufacturing of electronics
3:15 PM	Christy, Allison	NASA Glenn	CME NASA Symposium: Space Sustainability Panel Discussion
4:00 PM	Intermission		
4:08 PM	Karim, Shah	CME	Intro - Earth Sustainability: Reimagining Chemistry for the Space Age
4:10 PM	Chen, Junhong	UChicago	Enabling a Circular Water Economy through Real-time Water Quality Sensors
4:25 PM	Jankowski, Eric	Boise State	Training and deploying efficient polymer simulations from atoms to extreme applications
4:40 PM	Averesch, Nils	U Florida	Carbon loops in space exploration
4:55 PM	McDonald, Karen	UC Davis	Figures of merit for plant-based biomanufacturing in space
5:10 PM	Chen, Junhong	UChicago	CME NASA Symposium: Earth Sustainability Panel Discussion
5:59 PM	Karim, Shah	CME	Closing Remarks
6:00 PM	End		



JOINT 006

CME  
NASA STEM  
SUSTAINABILITY

PRES

# CME NASA Earth Sustainability



## Speakers

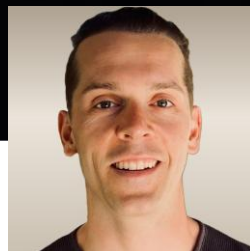
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Junhong Chen  
Argonne



Eric Jankowski  
Boise State



Nils Aversch  
U Florida



Karen McDonald  
UC Davis

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CME

NASA STEM  
SUSTAINABILITY

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# CME NASA Space Sustainability

## Speakers



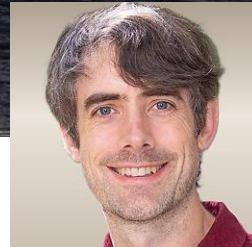
Allison Christy  
NASA Glenn



Stephanie Vivod  
NASA Glenn



Aaron Berliner  
Cornell



R. Wordsworth  
Harvard



N. Kandadai  
Oregon State

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# CME Lectures and STEM Talks

For the Annals of Civilization



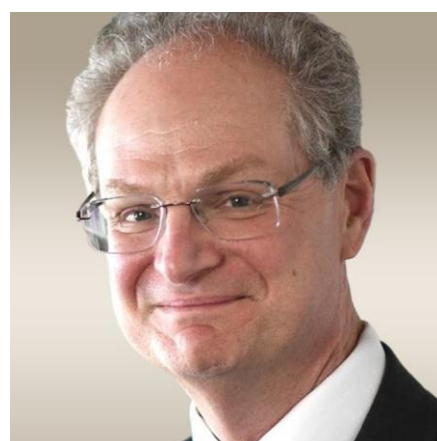
**Harriet Kung**  
DOE Science Programs

Deputy Director



**Jack Szostak**  
University of Chicago

2009 Nobel Prize in Medicine



**Paul Alivisatos**  
University of Chicago

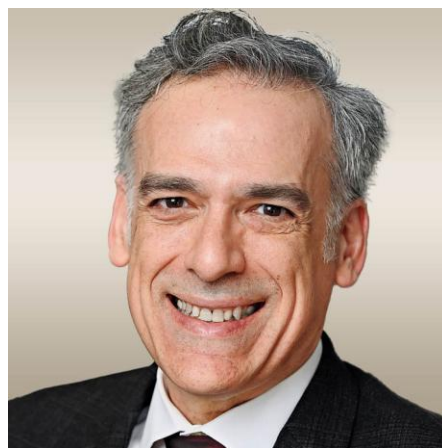
President

Recommended by



**Dorothy Phillips**  
American Chemical Society

2025 President



**Rigoberto Hernandez**  
American Chemical Society

2026 President



**Christina Bodurow**  
American Chemical Society

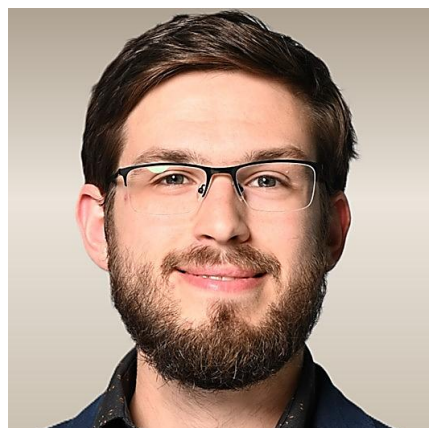
2026 President-Elect



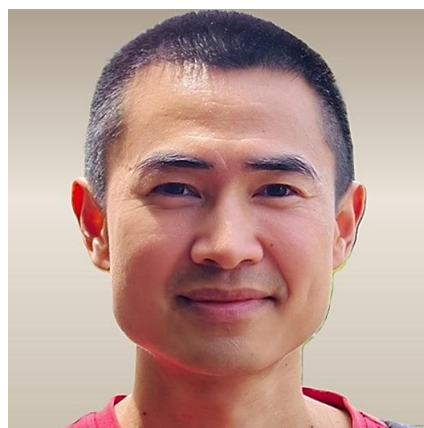


## 2026 CME PMSE Student & Mentor Awards

ACS Global Outstanding Student & Mentor in Polymer Science & Engineering

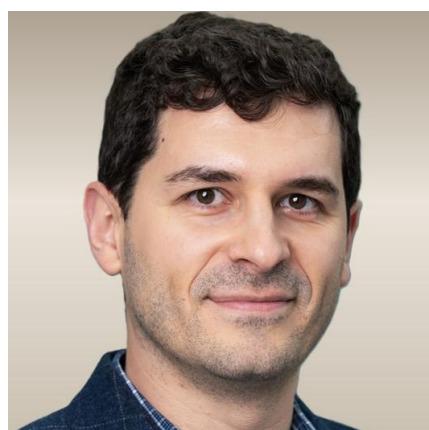


**David Kitto**  
University of Michigan  
USA Graduate Student



**Lei Chen**  
University of Manchester  
International Graduate Student

Celebrating the fundamental human innovation unit



**Jovan Kamsev**  
University of Michigan  
USA Mentor



**Guilleame De Bo**  
University of Manchester  
International Mentor

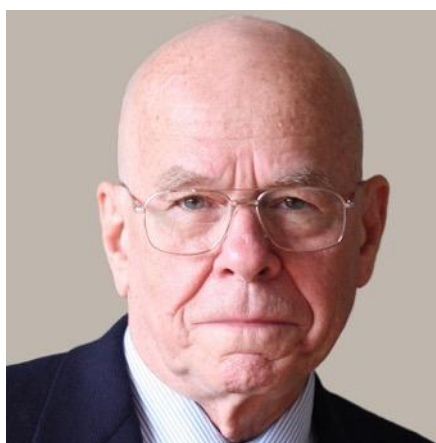


## 2017-2026 CME Nobel Lectures

Partial List of Eminent Thought Leaders



**Omar Yaghi**  
University of California Berkeley  
2025 Nobel Prize in Chemistry



**Barry Sharpless**  
Scripps Research Institute  
2001 and 2022 Nobel Prize in Chemistry



**Frances Arnold**  
Caltech  
2018 Nobel Prize in Chemistry



**Ben Feringa**  
University of Groningen  
2016 Nobel Prize in Chemistry



**Carolyn Bertozzi**  
Stanford  
2022 Nobel Prize in Chemistry



**Jack Szostak**  
University of Chicago  
2009 Nobel Prize in Medicine



# Thank You for Supporting Quantum AI & Space-Age STEM Programs



Celebrating Leadership in  
STEM Innovation since 1954

