



# 2020

AIChE<sup>®</sup>  
ANNUAL  
REPORT

**AIChE**   
The Global Home of Chemical Engineers



**June C. Wispelwey**  
AIChE Executive Director  
and Chief Executive Officer

2020 was a transformational year for AIChE, as the COVID pandemic affected the world and changed AIChE's workplace. In March of last year, we shifted all of our staff to working remotely. Fortunately, we rose to the challenge, displaying the flexibility and creativity necessary to quickly adapt to virtual modes of collaboration and delivery.

Amidst all these changes, one of the most remarkable things we will remember about the year of the pandemic is the resilience and strength demonstrated by AIChE and its members.

One of our biggest accomplishments in 2020 was our response to COVID. We closed our offices but kept our organization functioning, giving our teams the tools they needed to do their jobs remotely. We moved numerous conferences to virtual platforms, negotiated new agreements with hotels, and created an Institute-wide plan to mitigate conference losses due to the pandemic. We found that our online conferences allowed new engagement with industry and academia. And we didn't stop there; we adapted many of AIChE Academy's in-person training courses for virtual delivery, as we continued to train chemical engineers around the world.

AIChE's commitment to the lifelong professional and personal growth of chemical engineers was exemplified in 2020 by the formation of the Institute for Learning and Innovation (ILI). This new center is a link between industry and academia, and will provide chemical and related engineers with career-skills insights, new learning strategies, new professional credentials, and new skills – preparing them to tackle the emerging challenges they face within the chemical engineering profession and the workplace. Components of ILI include Career Discovery, courses from the AIChE Academy, credentialing, and something we call Practice+, which builds on the other components by offering opportunities to put learning into practice. In 2020, we held six Career Discovery workshops. We implemented a mini-module approach for all new hydrogen safety courses and expanded small modules to other courses. We also developed new process safety and process intensification credentials. Under Practice+, we developed ideas including data analytics internships and a Sustainable Energy Corps.

Also in 2020:

- ▶ AIChE refined its statement on equity, diversity and inclusion – reinforcing AIChE's position that anyone who wishes to be a part of the chemical engineering community should have an equal opportunity to pursue and achieve success. (Page 5)
- ▶ AIChE partnered on the creation and launch of the Future of STEM Scholars Initiative (FOSSI) for students studying STEM at Historically Black Colleges and Universities (HBCUs). FOSSI is the chemical industry's first major program to substantially increase the participation of underrepresented minorities within the STEM professions. More than \$10 million was raised for FOSSI's inaugural year. (Page 13)
- ▶ We revitalized CCPS's Vision 20/20 and developed new tools for members to self-assess process safety maturity. CCPS also gathered and disseminated COVID-related process safety best practices. Boot camps for students and faculty went virtual. Another virtual conference was our first African CCPS conference. CCPS also added six new member companies. (Page 11)
- ▶ We grew the Center for Hydrogen Safety to 60 member organizations, and developed several new training courses to support the emerging hydrogen economy. (Page 4)
- ▶ We worked to sustain RAPID beyond the DOE's original funding by refining the membership model, creating a database of process intensification pilot plant capabilities, and developing grants and educational programs. (Page 10)

As you read this report, you will discover the many ways that AIChE looked past the hardships of 2020, with our sights set on a bright future – both for the chemical engineering profession and the Institute. We look forward to a safer and more secure 2021 for everyone, and to our continued partnership as a united and vibrant community.

**June C. Wispelwey**  
AIChE Executive Director and Chief Executive Officer

**Monty Alger**  
2020 AIChE President

# Membership

AIChE members adapted to our in-person conferences and events, and were resilient in pursuing continued education through AIChE while maintaining meaningful connections through new virtual events and platforms.

AIChE continues its Community Counts program — a membership development effort to share curated technical content and generate engagement through the Institute's technical divisions. In 2020, the program welcomed the Catalysis and Reaction Engineering Division, the Environmental Division, the Safety and Health Division, and the Separations Division.

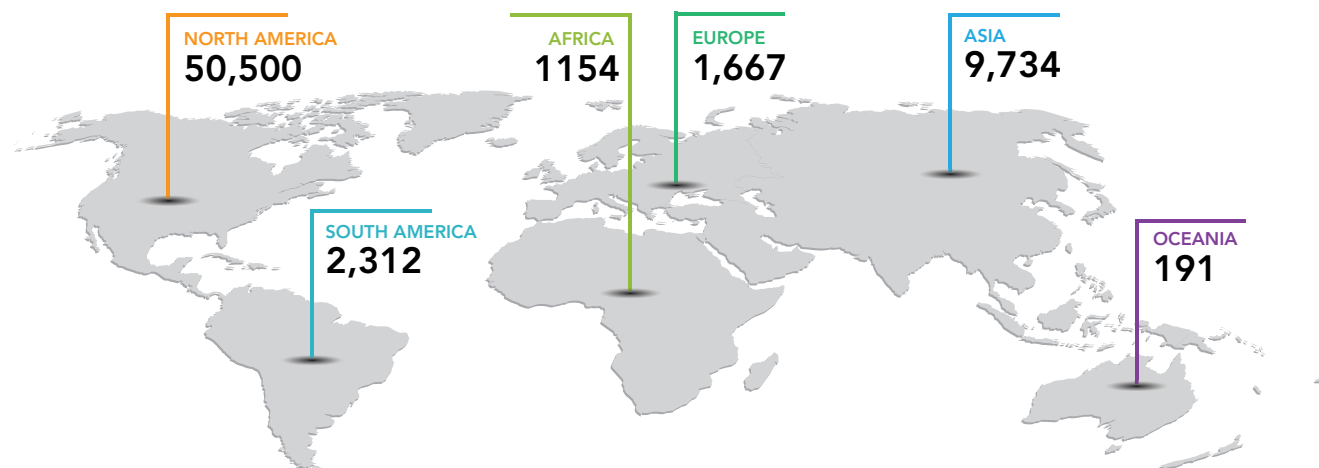
Members are able to join our many communities — such as divisions, forums, and local sections — in order to expand their networks and keep up with industry trends in their field and at a local level.

 **65K+**  
TOTAL MEMBERS

 **129**  
COUNTRIES

 **39.4K+**  
MEMBER PROFESSIONALS

## International distribution of all members



## Divisions and Forums

**11,000+**  
AIChE MEMBERS

are also members of at least one technical division or forum. Learn about **divisions and forums** at: [AIChE.org/divisions-and-forums](https://www.aiche.org/divisions-and-forums)

## Local Sections

**7,100+**  
MEMBER PROFESSIONALS

participate in **local sections** across North America and at international locations. [AIChE.org/local-sections](https://www.aiche.org/local-sections)

AIChE's **Virtual Local Section** stands as a forerunner of 2020's virtual meetings, and continues to help members connect online through its monthly meetings. [AIChE.org/virtual](https://www.aiche.org/virtual)

## Building communities

In 1908, a community of chemical engineers joined together to establish AIChE. Since then, members of the Institute have continued to affiliate through AIChE's many communities, fueled by their shared interests and expertise. Recently, AIChE has created even more of these communities, allowing like-minded engineers to exchange knowledge, shared technical interests, and pursue professional, societal, and personal development objectives.

In addition to entities based on geographic location or technical interest, AIChE is building distinct communities that serve process engineers, chemical engineers with disabilities, LGBTQ+ engineers, engineers working toward climate solutions, and more — helping members to strengthen the profession and thrive as individuals and engineers.

# Technical Entities

AIChE's technical entities organize dozens of specialty conferences each year, and continued to do so during the 2020 pandemic, transitioning nearly all of the conferences to virtual delivery platforms beginning in May. Only a few scheduled conferences were postponed or cancelled due to the pandemic. These included the Summer 2020 Synthetic Biology: Engineering, Evolution & Design (SEED) Conference and Metabolic Engineering 13.

AIChE's Society for Biological Engineering (SBE) and the Institute for Sustainability (IfS) continue to expand their reach and technical content through conferences, peer-reviewed journals, credentials, awards, and educational offerings. Additional technical entities include the Center for Energy Initiatives (CEI), the International Metabolic Engineering Society (IMES), the International Society for Water Solutions (ISWS), the Center for Innovation and Entrepreneurship Excellence (CIEE), and the Regenerative Engineering Society (RE Society).

[AIChE.org/TEs](https://www.aiche.org/TEs)



Maria Eugenia Inda

Launched in 2019, AIChE's **Langer Prize for Innovation and Entrepreneurial Excellence** is named for biomedical pioneer Robert Langer (MIT). The prize — administered by AIChE's Center for Innovation and Entrepreneurship Excellence — provides an unrestricted grant to enable creative researchers and engineering entrepreneurs to pursue game-changing innovations.

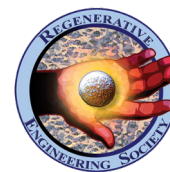
The 2020 fellowship was awarded to **Maria Eugenia Inda** of MIT, who is building biosensors to diagnose and treat disorders such as inflammatory bowel disease and celiac disease.



Connecting a Global Community

Established in 2019, AIChE's Center for Hydrogen Safety (CHS) guides chemical industry stakeholders in the transition to the hydrogen economy by promoting the safe handling and use of hydrogen. It provides international partner organizations with resources that address traditional uses of hydrogen as a feedstock as well as hydrogen's growing use as a fuel source.

CHS experienced a successful year in 2020 amidst the challenges created by the pandemic. CHS more than doubled its membership, with 49 members at the end of 2020. In addition to growing membership, CHS added four hydrogen safety training courses; formed three working groups; launched the members-only website; created a technical bulletin called The Elemental; debuted its LinkedIn showcase page; and held two virtual conferences. CHS also started several projects, including the development of a body of knowledge, and established many member leads, to create a healthy pipeline for 2021.



# Student Membership

AIChE saw continued expansion of its undergraduate student activities in 2020, with the establishment of 25 new student chapters — including five in India, four in Peru, two in Ecuador, and two in Indonesia. AIChE also launched its first chapters in Bolivia, Ghana, Morocco, Paraguay, and Portugal, plus new chapters in Brazil, Canada, Colombia, Egypt, Iraq, Nigeria, and Spain.

One new AIChE Regional Student Conference was held in Brazil in January of 2020. AIChE transitioned its remaining Student Regional Conferences to a virtual format, and held virtual events for nine North American regions, as well as for the Latin America and India regions.



**26,000+**  
STUDENT MEMBERS



MORE THAN  
**365**  
STUDENT CHAPTERS



ACROSS  
**107**  
COUNTRIES



ACROSS  
**50**  
COUNTRIES

[AIChE.org/Students](https://www.aiche.org/students)



AIChE undergraduate student membership is subsidized through the generosity of its ScaleUp sponsor organizations. Thank you to our ScaleUp program sponsors for their generous support in helping to enrich the next generation of chemical engineers.

[AIChE.org/ScaleUp](https://www.aiche.org/scaleup)

## PLATINUM



## GOLD



New in 2020

## An IDEAL Path to Equity, Diversity and Inclusion

In 2020, AIChE revised its statement on equity, diversity and inclusion. Replacing a statement issued in 2015, the new document incorporated views compiled by members of AIChE's operating councils and the Board of Directors. The statement articulates AIChE's belief that all who wish to be a part of the chemical engineering community should have equal opportunity to pursue and achieve success.

This revised statement was further advanced by AIChE Director Dr. Cato Laurencin (University of Connecticut), who proposed the concept of the IDEAL Path, characterized by inclusion, diversity, equity, anti-racism, and learning. The IDEAL approach emphasizes anti-racism and learning as crucial additions to the inclusion, diversity, and equity components, in order to create a more fair and just society.

The core of the statement reads:

*AIChE is committed to creating, nurturing and expanding an inclusive, respectful and welcoming environment where people of all backgrounds and identities are valued and respected and can achieve their full potential, regardless of:*

- (i) race, ethnicity, or national origin;
- (ii) religious or spiritual practice, or absence thereof;
- (iii) sex, gender identity and expression, or sexual orientation;
- (iv) family or relationship structure;
- (v) any type of disability or perceived disability, past or present;
- (vi) age;
- (vii) any ascribed status or visible or invisible difference.

Read the complete statement at:  
[AIChE.org/EDStatement](https://www.aiche.org/EDStatement)

# Education

## AIChE ACADEMY

AIChE Academy continues to deliver training to chemical engineers and their organizations worldwide. In 2020, the Academy responded to the COVID-19 pandemic by adapting many of its in-person courses for online presentation.

Examples of new Academy offerings in 2020 included:

- ▶ Webinar: “Social Distancing for Your Plant”
- ▶ E-Learning course: “Equity, Diversity and Inclusion: Why it Matters in STEM and Engineering”
- ▶ “First Responders MicroTraining Learning Plan” and certificate. This four-part course is a collaboration with the Center for Hydrogen Safety, and aims to better inform incident responders and support the safe handling of hydrogen in fuel cell applications.

Members and non-members alike use the Academy’s live and archived courses, webinars, conference presentations, and other eLearning resources to improve their professional skills, train teams, and brush up on trending topics. Many Academy products offer continuing education units (CEUs) and professional development hours (PDHs).

[AIChE.org/Academy](https://www.aiche.org/academy)

## Awards and Honors



Robert C. Armstrong

AIChE and its entities continued to honor the breadth of chemical engineering accomplishments through award programs. The most prestigious honors are the Board of Directors’ and Institute awards — presented at the Honors Ceremony during AIChE’s Annual Meeting.

The Board of Directors’ 2020 **Founders Award** was presented to **Robert C. Armstrong** of the Massachusetts Institute of Technology for landmark contributions to research and education, as well as for advancing the transition to a low-carbon future. The BOD’s **Van Antwerpen Award for Service to the Institute** was presented to **T. Bond Calloway, Jr.**, of the University of South Carolina, who has been a key driver of energy related initiatives within AIChE.



T. Bond Calloway, Jr.

The 2020 Honors Ceremony was held as a virtual event, and can be viewed at [AIChE.org/2020/awards](https://www.aiche.org/2020/awards).



Learn about all of AIChE’s awards and 2020 honorees at [AIChE.org/awards](https://www.aiche.org/awards).

## AIChE INSTITUTE FOR LEARNING & INNOVATION

In support of AIChE’s strategic objective to promote lifelong learning across the profession, the Institute for Learning & Innovation (ILI) was conceived as the horizontal integrator between universities and the workplace — connecting learners, educators, and employers. Beyond the excellent AIChE Academy, ILI’s vision goes beyond a laundry list of courses and aims to address learning more holistically — from classroom to the boardroom, from learning to doing, from career discovery to skills development, addressing the needs of those who don’t know what they want to do as well as those who do.

ILI’s vision is anticipated to be realized by delivering content and services along four dimensions:

- ▶ **Career discovery & services**
- ▶ **Educational training** (courses via the existing and well know AIChE Academy)
- ▶ **Certification & Credentials**
- ▶ **“Practice +”** (internships and other opportunities to learn by doing).

[AIChE.org/ili](https://www.aiche.org/ili)

# Publications

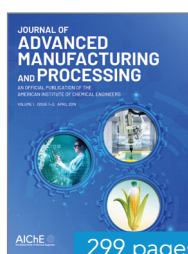
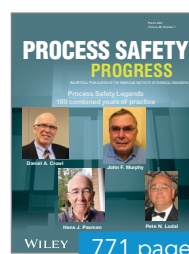
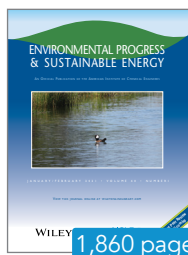
## Journal Highlights

In 2020, downloads decreased for most of AIChE's six journals — *AIChE Journal*, *Bioengineering & Translational Medicine*, *Biotechnology Progress*, *Environmental Progress & Sustainable Energy*, *Process Safety Progress*, and the *Journal of Advanced Manufacturing and Processing (JAMP)* — likely due to the impact of the pandemic. Of the journals, *JAMP* and *Bioengineering & Translational Medicine* were the only ones to show increased article downloads, with popular articles for those journals related to the development and deployment of vaccines.

Other highlights from AIChE's journals in 2020 include:

- ▶ *AIChE Journal* published its seventh Founders Tribute issue highlighting the work of Nobel Laureate Frances Arnold.
- ▶ *Bioengineering & Translational Medicine (BioTM)* completed its fourth year of publication, further expanding AIChE's footprint in Open Access.
- ▶ *BioTM* debuted the first of its editorial series introducing the journal's Editorial Board members, and will continue running these introductions in future issues.
- ▶ *Environmental Progress & Sustainable Energy* published a special issue on waste valorization
- ▶ AIChE and its publishing partner, Wiley, continue to navigate changes in Open Access policies to remain globally competitive.

[AIChE.org/journals](https://www.aiche.org/journals)



## CEP Highlights

**Chemical Engineering Progress (CEP)** — the Institute's flagship monthly magazine — reached more chemical engineers than ever in print, online, and via the *CEP* app. In 2020, *CEP* online logged over 1 million pageviews, more than double the number of pageviews in 2019. In addition, the number of users visiting *CEP* webpages grew by 31% over the past year — to 375K.

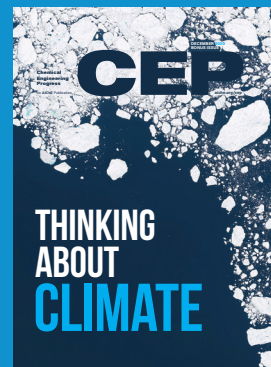
Among the highlights for *CEP* in 2020 were the launch of the digital flipbook and the publication of the special issue on climate change, as well as publication of four special sections:

- ▶ **Process Intensification** (March)
- ▶ **Energy Storage and Batteries** (May)
- ▶ **Society for Biological Engineering: Cosmetics and Consumer Products** (July)
- ▶ **Society for Biological Engineering: Microbiome Engineering** (October)

[AIChE.org/CEP](https://www.aiche.org/cep)

MORE THAN  
**375K**  
USER SESSIONS

## Thinking About Climate



In December 2020, *CEP* published a special digital issue that takes an in-depth look at climate through a chemical engineering lens. It covers observations, modeling, and impacts of climate change, and explores a wide range of potential solutions. The issue is available open access, and members are encouraged to share it widely.

[AIChE.org/cep/climate-issue](https://www.aiche.org/cep/climate-issue)

## New in 2020

### CEP Launches Digital Flipbook



Introducing the *CEP* digital flipbook: an exact replica of the print edition that can be viewed on nearly any device with a web browser. Readers can access the latest issue by clicking the *CEP* Digital Flipbook button on the navigation bar of the *CEP* homepage ([AIChE.org/cep](https://www.aiche.org/cep)) and signing in with their AIChE member credentials.

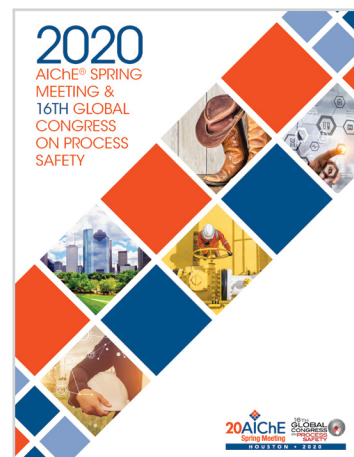
# Events

In 2020, AIChE's major conferences were held virtually, and continued to attract chemical engineers and allied professionals working in industry, labs, and academia around the world. Strong technical programs consisting of live and recorded presentations were rounded out with a variety of technical and fun networking activities, all housed in a virtual platform resembling a convention center.

## 2020 AIChE Spring Meeting & 16th Global Congress on Process Safety

The Spring Meeting is AIChE's key technical conference for practicing chemical engineers. Emphasizing technology in core and emerging areas, the 2020 meeting was held virtually, August 17–21, and showcased sessions devoted to ethylene production, distillation, Industry 4.0, leadership skills, clean energy, gas utilization, refinery processing, and more. The Global Congress on Process Safety (GCPS) addresses the needs of process safety practitioners, with programming dedicated to loss prevention, plant safety, process safety management, and global perspectives.

[AIChE.org/Spring](https://www.aiche.org/spring)



### New in 2020



Bhavesh V. (Bob) Patel

- ▶ **Bhavesh V. (Bob) Patel** of LyondellBasell presented the **AIChE Government and Industry Leaders (AGILE) Award** keynote lecture. His talk reflected on the disruptions caused by the COVID-19 pandemic, and how related forces and factors might impact the global petrochemicals industries into the future.
- ▶ **Frontlines of COVID-19: Lead, Learn and Cure** — a diverse panel of experts shared their experiences in managing COVID-19 risks through applying robust corporate leadership and culture, transforming incident investigation techniques, and learning from recent healthcare developments.
- ▶ The **Heat Exchangers Topical Conference** made its debut at the 2020 AIChE Spring Meeting. The topical provided a forum for heat transfer specialists to meet and discuss the latest technologies, software, and best practices in heat exchanger design, monitoring and operations.
- ▶ In addition to the lecture by Patel, the conference featured daily keynotes covering cybersecurity, disaster recovery, and advanced manufacturing.

## 2020 Annual Student Conference

Attendance at the Virtual Annual Student Conference (November 13–16), topped 1,400. Highlights included a welcome keynote by Udit Batra, President and CEO of Waters Corporation, as well as career sessions, competitions, and networking events. New events in 2020 included mock interviews and a LGBTQ+ & Allies Panel.

[AIChE.org/ASC20](https://www.aiche.org/asc20)

## 2020 Annual Chem-E-Car Competition®

Twenty-four teams participated in the 22nd Annual AIChE Chem-E-Car Competition® — the first to be held virtually. Defending champions Virginia Tech won the performance competition with "Car-ona," reaching the exact target distance of 17.4 meters. The award for best video went to the University of Pittsburgh team, which also received the award for outstanding sportsmanship. The competition is sponsored by Chevron. The \$2,000 first prize is funded by the H. Scott Fogler Endowment, named for the competition's founder.



## 2020 AIChE Annual Meeting

AIChE's premier educational forum for chemical engineers interested in innovation, collaboration, and professional growth, the 2020 AIChE Annual Meeting was hosted virtually for the first time November 16–20, with attendees from 53 countries and 49 U.S. states (and Puerto Rico). The meeting featured a mix of live and pre-recorded content from 22 of AIChE's divisions and forums as well as several of AIChE's communities.

[AIChE.org/Annual](https://www.aiche.org/annual)

### New in 2020

The meeting featured a live panel session: "Meet the Leaders: Engineering for Inclusion."

The **John M. Prausnitz AIChE Institute Lecture** capped off the 2020 Virtual AIChE Annual Meeting on November 18. **Michael F. Doherty** of the University of California, Santa Barbara, presented the 72nd annual lecture, entitled "Innovation at the Frontiers of Chemical Engineering Practice and Science."

Among recently inaugurated lectures, the second **Presidential Lecture** was presented by **Frances Arnold** of the California Institute of Technology. Arnold discussed her work in engineer new enzymes through directed evolution. The second **William R. Schowalter Lecture** was presented by **Alice P. Gast** of Imperial College London.

Additional live lectures from the profession's leading lights included talks by **Arturo Hernandez-Maldonado** (Univ. Puerto Rico- Mayagüez), **Cato Laurencin** (UConn), **Massimo Morbidelli** (Politecnico di Milano), and **Michael Strano** (MIT).

New topical conferences covered emerging topics such as the evolving role of gender dynamics, the handling of waste plastics, and the COVID-19 pandemic response.



Michael F. Doherty



Frances Arnold



Alice P. Gast



Arturo Hernandez-Maldonado



Cato Laurencin



Massimo Morbidelli



Michael Strano

## K–12 STEM Showcase and Outreach Competition

Grade school students, parents, and teachers were inspired by hands-on demonstrations of chemical engineering concepts at AIChE's second K–12 STEM (Science, Technology, Engineering, Math) Showcase and Outreach Competition, held online during the 2020 Virtual Annual Meeting on November 15.

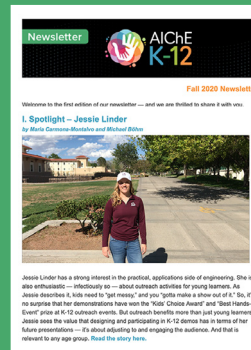
Twenty teams — consisting of AIChE member undergraduates and professionals — exhibited tabletop demos and participated in mentoring sessions. Volunteers judged the entries for originality, technical content, safety, and suitability for classroom use. AIChE will archive the top entries in its online STEM outreach database, containing lesson plans that can be used by anyone who wants to stimulate STEM interest among future engineers and scientists.

This year's event was organized by AIChE's K–12 and Executive Student committees, and supported by the AIChE Foundation and 3M.

[AIChE.org/k12](https://www.aiche.org/k12)



## AIChE's K–12 Community



With more than 6,000 members, AIChE's K–12 Community is pursuing its mission to support and promote the good works of AIChE members and grassroots groups engaging in STEM (science, technology, engineering, math) educational outreach.

In addition to co-hosting the STEM Showcase and Outreach Competition, in 2020 the leaders of AIChE's K–12 Committee published the group's first newsletter to constituents — highlighting activities that bring the wonders of STEM to future generations, and the AIChE people who are mentoring future generations.

[AIChE.org/k12](https://www.aiche.org/k12)

# Industry Technology Groups

## RAPID™ Manufacturing Institute

In 2016, the U.S. Department of Energy established AIChE's Rapid Advancement in Process Intensification Deployment (RAPID) Institute. One of the Manufacturing USA institutes, RAPID's public-private collaborations focus on breakthrough process-related technologies aimed at boosting energy productivity and energy efficiency by 20% over five years. Process intensification (PI) is any technology development that leads to smaller, cleaner, or more energy efficient processes.

RAPID's Education and Workforce Development initiative aims to leverage existing training resources to enable the workforce to research, develop, and operate processes that incorporate new PI and modular chemical process intensification (MCPI) technologies.

[AIChE.org/RAPID](http://AIChE.org/RAPID)



**87**  
MEMBER ORGANIZATIONS

2020 IMPACT



**38**  
RESEARCH PROJECTS TO DATE



**153**  
PROJECT PROPOSAL SUBMISSIONS TO DATE



**24**  
WEBINARS TO DATE

POTENTIAL IMPACT



**\$150MM**  
PUBLIC-PRIVATE INVESTMENT



**2,800+**  
PEOPLE TRAINED



**20%**  
REDUCTION IN ENERGY INTENSITY\*

\*Potential future impact of PI on U.S. process industries

### New in 2020

- ▶ Six new eLearning courses were launched. Topics included Intensified Reaction Processes, Fundamentals of Intensified Heat and Mass Transfer, Process Design for PI, Modeling and Simulation for PI, and an Introduction to MCPI.
- ▶ RAPID launched the pilot ChemE Cube competition — in which undergraduate students design, build and operate a mini-plant in a 1-ft. cube. The theme for the pilot competition is Modular On-Demand Water Purification in Developing Countries.
- ▶ Continued operating RAPID's 10-week virtual summer intern program to develop future leaders in PI and MCPI. Twenty-two RAPID interns completed the program in 2020.
- ▶ Piloted a face-to-face course, "Emerging Membrane Processes," at the University of Arizona.
- ▶ 5,000+ registered for RAPID educational content (eLearning courses, webinars).

## DIPPR

The DIPPR 801 Database is a widely used resource for the design and operation of safe, reliable, and sustainable processes. End-users have access to accurate and complete thermodynamic and transport properties for the chemical compounds used across a broad segment of the chemical processing industries, as well as validated environmental and process safety and risk assessment properties.

DIPPR offers 801 Database end-users the ability to embed the 801 Database in third-party software and in-house applications, and they have the ability to add their own proprietary data.

DIPPR provides instructional and training tools (including postings on YouTube) for best practices in evaluating and using the data contained in the 801 Database to practitioners in industry and academia worldwide; the latter institutions have found the DIPPR 801 Database to be a valuable addition to library and individual department resources.

[AIChE.org/DIPPR](http://AIChE.org/DIPPR)



An AIChE Technology Alliance



**50**  
CORPORATE MEMBERS



**85**  
GLOBAL LICENSEES

# CCPS

The Center for Chemical Process Safety (CCPS®) is a not-for-profit, corporate membership organization within AIChE that identifies and addresses process safety needs for facilities that handle, store, use, process, or transport hazardous materials. CCPS member companies, working in project subcommittees, define and develop useful, time-tested guidelines that have practical applications within industry. CCPS educates employees of member companies through its events, courses, books, tools, online resources, and publications. CCPS ended 2020 with 227 members from more than 40 countries.



[AIChE.org/CCPS](https://www.aiche.org/ccps)

## Conference highlights in 2020:

CCPS held 30 virtual events in seven countries, including:

- ▶ 2 Virtual Student Boot Camps (in addition to five on-campus boot camps)
- ▶ 3 Virtual Faculty Workshops
- ▶ 1st Latin America Region Student Boot Camp
- ▶ 4 Virtual Conferences
  - 16th Global Congress on Process Safety
  - 2020 Virtual European Conference on Process Safety and Big Data
  - Latin American Virtual Conference on Process Safety
  - 3rd Middle East Process Safety Virtual Mini-Conference
- ▶ Many other regional meetings, conferences, round tables, and webinars



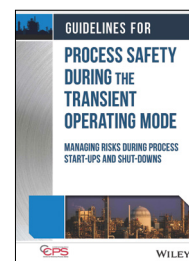
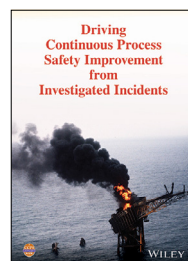
- ▶ In its 20th year, the **CCPS Process Safety Beacon** continued to publish valuable process safety information for plant operators. The Beacon is available in 41 languages, with an estimated distribution of 1,000,000 readers. In 2020, CCPS started working on the “Book of Beacons” to expand the details of the published issues of the Beacon.

[AIChE.org/Beacon](https://www.aiche.org/beacon)

## New in 2020



**3** BOOKS PUBLISHED  
IN 2020



- ▶ Two new Monographs addressing “Process Safety Best Practices During the Global Pandemic.”
- ▶ Newly upgraded and reissued Risk Analysis Screening Tool (RAST) software.
- ▶ CCPS offered its first 10-week CHEF (Chemical Hazard Engineering Fundamentals)/RAST Training Workshop.
- ▶ The PSID improvement project reached a significant milestone toward modernizing the structure, user experience, and analytic functionality.
- ▶ CCPS and the Jordanian Engineers Association signed a Memorandum of Understanding (MoU) to provide a knowledge-sharing platform for Jordanian industries, process safety professionals, and academia in the country.
- ▶ Advanced process safety education for students and professors in collaboration with companies and the AIChE Foundation via the Undergraduate Process Safety Learning Initiative (UPSLI). These efforts included CCPS Virtual Faculty Process Safety Training Workshops, sponsored by BASF, Chemours, and Dow; five in-person student boot camps (conducted before March 2020), and two virtual student boot camps (conducted in October 2020). Visit [AIChE.org/UPSLI](https://www.aiche.org/upsl).

# Foundation

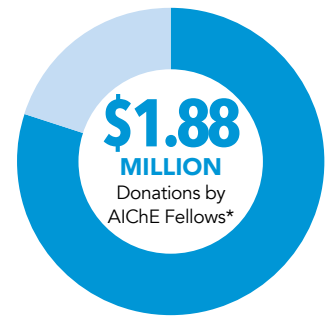
The AIChE Foundation launched its Doing a World of Good campaign in 2015 with a goal of \$15MM to expand the profession's positive impact by funding five transformative priorities. The campaign unites the chemical engineering community in addressing society's grand challenges to benefit humanity.

Thanks to the continued generosity of individual supporters and industry partners, the campaign surpassed its goal, raising more than \$27MM allowing our impact to continue to grow. We are dedicated to creating an equitable, diverse and inclusive profession and safer workforce for all chemical engineers. Today, tomorrow and for decades to come.

[DoingaWorldofGood.org](http://DoingaWorldofGood.org)



## Overall Funds & Donor Data since the Campaign Launch



\*Refers to overall Foundation donations, including the campaign

## PARTICIPATION

**125**  
TOTAL COMPANIES PARTICIPATING IN CAMPAIGN

**6,544**  
INDIVIDUAL AND CORPORATE SUPPORTERS

## PROGRAM IMPACT

### SAFETY & ETHICAL PRACTICE

**182,615**

SAFETY CERTIFICATES AWARDED TO STUDENTS WORLDWIDE

**51,174**

STUDENTS COMPLETED SACHE MODULES WORLDWIDE

**657**

NEW FACULTY MEMBERS EDUCATED IN PROCESS SAFETY AT INDUSTRY WORKSHOPS

**673**

UNIVERSITIES PARTICIPATED IN PROCESS SAFETY CURRICULUM

**866**

UNDERGRADUATES PARTICIPATED IN PROCESS SAFETY BOOT CAMPS AT UNIVERSITIES

### ATTRACTING & RETAINING THE BEST & THE BRIGHTEST

**247**

SCHOLARSHIPS AWARDED TO UNDERREPRESENTED STUDENTS

**60**

INTERNATIONAL STUDENT MEMBERS AWARDED GRANTS TO ATTEND THE ANNUAL STUDENT CONFERENCE

### RESEARCH & INNOVATION

**2,801**

INDIVIDUALS TRAINED IN PROCESS INTENSIFICATION

**62**

UNDERGRADUATES TO DATE PARTICIPATED IN RAPID'S INTERNSHIP PROGRAM

### EDUCATION & CAREER DEVELOPMENT

**4,840**

K-12 STUDENTS TO DATE PARTICIPATED IN AIChE STEM OUTREACH PROGRAMS

**423**

MEMBERS JOINED THE AIChE ONLINE COMMUNITY FOR PROCESS ENGINEERS

### CHANGING PERCEPTIONS

**188,767**

VIEWS OF *WHAT CHEMICAL ENGINEERS DO* VIDEO

**9,983**

LISTENERS TUNED INTO THE RAJ AND KAMLA GUPTA DOING A WORLD OF GOOD PODCASTS

## FOUNDERS' CIRCLE

### BENEFACTORS



### UNDERWRITER



### PATRONS



## 2020 AIChE Virtual Gala



S. Shariq Yosufzai

AIChE honored DuPont and Thermo Fisher Scientific, along with those companies' leaders, for exemplifying the good works of chemical engineering at its 2020 Virtual Gala. The gala also honored S. Shariq Yosufzai, who received the Foundation's Doing a World of Good Medal for his leadership in creating a more equitable, diverse, and inclusive profession.

The Gala moved to a virtual format, opening the doors to future leaders and innovators to attend, network, and celebrate changemakers of the profession. More than \$634,000 was raised to support underrepresented communities pursuing an education and a career in STEM. Together, our community continues to advance, transform and evolve the chemical engineering profession.



[AIChE.org/Gala](https://www.aiche.org/gala)

### New in 2020

#### The Future of STEM Scholars Initiative (FOSSI)



The Future of STEM Scholars Initiative

FOSSI is an industry-wide program that provides scholarships to students pursuing STEM degrees at Historically Black Colleges and Universities (HBCUs) and connects these students to internships, leadership training, and mentoring opportunities at participating companies. Launched by four founding partners — the American Chemistry Council (ACC), AIChE, Chemours and HBCU Week Foundation — FOSSI is providing opportunity to underserved communities, while equipping the world with a diverse future workforce, ready to bring the perspective and talent needed to tackle the big challenges that lie ahead. With inaugural year donations exceeding \$10 million, FOSSI will provide scholarships of \$10K per year to 150 scholars.

[AIChE.org/FOSSI](https://www.aiche.org/foSSI)

### New in 2020

Released at the 2020 Gala, this short video posed the question, "Why Chemical Engineering?," and was aimed at inspiring young people to pursue careers in the field by illustrating the limitless ways that chemical engineers can contribute to the world's quality of life.

Why  
Chemical  
Engineering

AIChE  
The Global Voice of Chemical Engineering

[AIChE.org/WhyChemE](https://www.aiche.org/WhyChemE)

# AIChE's Reach

AIChE made an impact on media throughout the world via its numerous news releases and communication channels



**3.1K**

TOTAL EDITORIAL MENTIONS IN 2020



**14.2K**

TOTAL SOCIAL MENTIONS IN 2020



## WEB STATS

**2020** 2,723,564 USERS

**2019** 2,350,786 USERS

- ▶ **15.8% growth in website visitors from previous year**
- ▶ **AIChE.org** attracts site visitors from Australia, Canada, China, Germany, India, Malaysia, Philippines, Singapore, the UK, and other international locations.

# AIChE Engage

The **Engage forum** connects AIChE members with each other and their chemical engineering communities. It serves as the Institute's directory, discussion/communication platform, and volunteer hub.

**Discussion Central** is a focal point of AIChE's online activity, with ongoing technical and professional development discussions. Student Central provides a discussion space for undergraduate students, and Engage is also the home for private or subject-specific communities.

[AIChE.org/Engage](https://www.aiche.org/engage)



## 2020 DISCUSSION CENTRAL STATS



**34.5K**  
SUBSCRIBED



**192**  
TOTAL THREADS

The screenshot shows the AIChE Engage website with a navigation bar (Home, Volunteer, Directories, Discussions, Browse, Participate, Help) and a main content area. A 'Welcome to AIChE Engage' message is displayed, followed by a 'LOGIN' button. Below, there are sections for 'Latest Discussions' and 'Volunteer Opportunities'. A discussion thread titled 'RE: Basic process controls for Chemical Engineers' by ANDREA CAVALIER is visible, along with a volunteer opportunity for 'Engage Student Central Community Seed Question Participa'.

Find AIChE daily on  
Twitter, Facebook, Instagram  
LinkedIn, and YouTube.



INSTAGRAM @CHENECTED

**2.5K**  
FOLLOWERS



TWITTER @CHENECTED

**16.5K**  
FOLLOWERS



LINKEDIN

**49.8K**  
FOLLOWERS



FACEBOOK

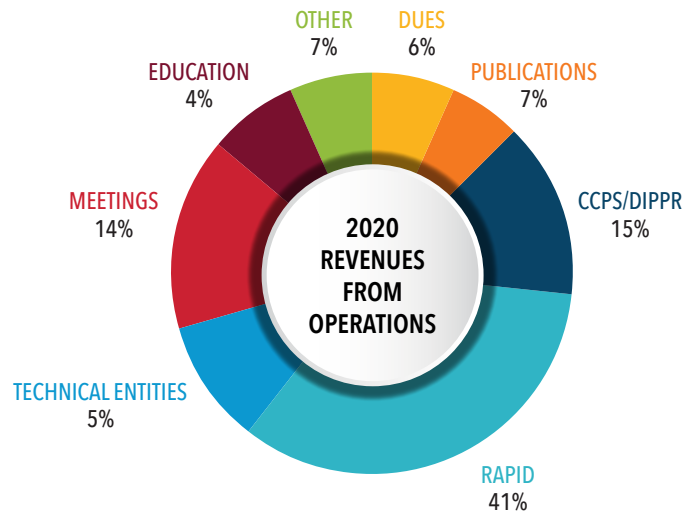
**21.9K**  
PAGE LIKES



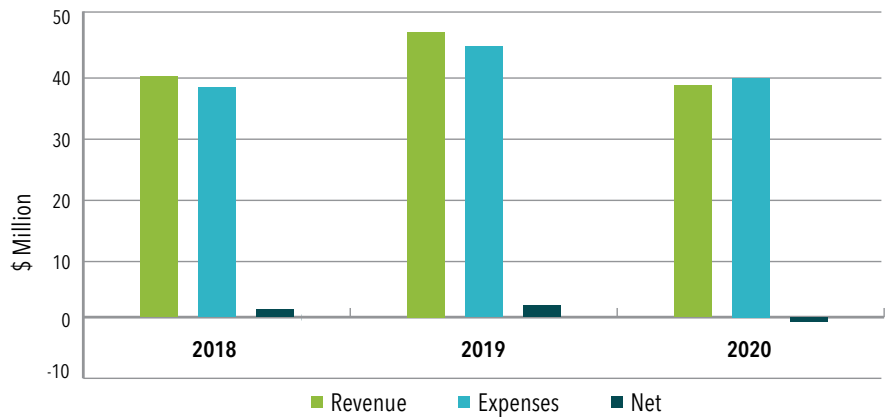
YOUTUBE

**13.9K**  
SUBSCRIBERS

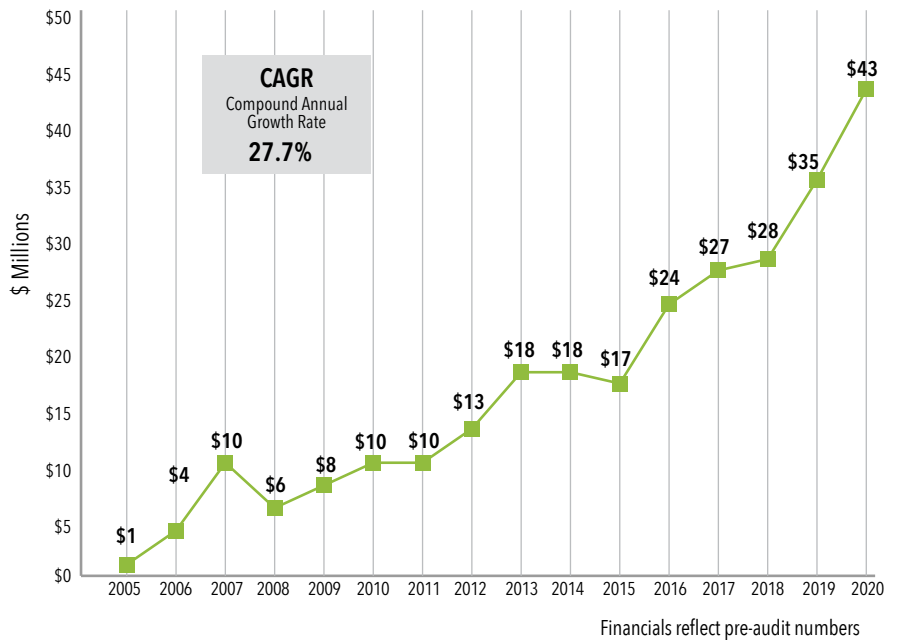
# Financial



## AIChE OPERATIONS



## NET ASSETS



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**AIChE**   
The Global Home of Chemical Engineers