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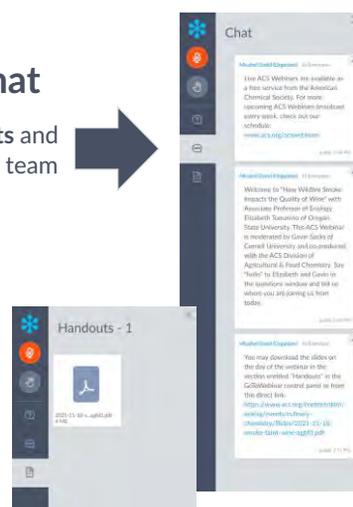
Chat

Announcements and hyperlinks from our team



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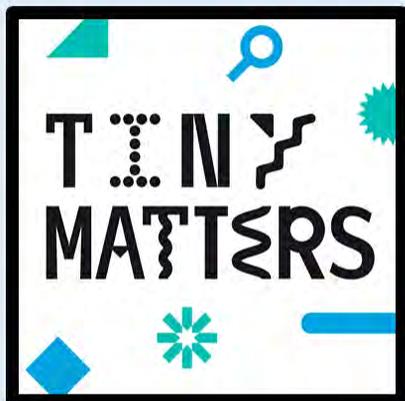
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4



A science podcast by the American Chemical Society about things small in size but BIG in impact.



Sam Jones, PhD
Science Writer & Exec Producer



Deboki Chakravarti, PhD
Science Writer & Co-Host

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7

A Career Planning Tool For Chemical Scientists



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Career Consultant Directory



- ACS Member-exclusive program that allows you to arrange a one-on-one appointment with a certified ACS Career Consultant.
- Consultants provide personalized career advice to ACS Members.
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Get in touch with the Office of Diversity, Equity, Inclusion & Respect

The Office of Diversity, Equity, Inclusion & Respect (DEIR) is the central hub at the American Chemical Society that coordinates, supports, and guides all efforts by staff, members, and governance toward Strategic Goal 5, "Embrace and Advance Inclusion in Chemistry." The Office of DEIR at ACS is committed to empowering everyone, irrespective of lived experience and intersectionality of identities, to fully participate in the chemistry enterprise. The Office of DEIR welcomes comments, suggestions, and questions around issues of diversity, equity, inclusion, and respect from members at any time. Please do not hesitate to reach out to the Office through this form.



Please do not hesitate to reach out to the Office of DEIR at diversity@acs.org

<https://fs7.formsite.com/acsdiversity/ACSMemberFeedback/index.html>

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Atlantic Basin Conference on Chemistry

Linking the World Through Chemistry

13-16 DECEMBER 2022 | MARRAKECH, MOROCCO

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Thurs., February 24, 2022 | 2pm – 3:30pm ET

New Game Changing Treatments for COVID-19

Co-produced with the ACS Division of Medicinal Chemistry,
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Wed., March 2, 2022 | 2pm – 3pm ET

Essentials of Pharmacokinetics for Drug Development

Co-produced with Office of Career and Professional Education



Thurs., March 3, 2022 | 2pm – 3:15pm ET

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questions window!

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Why You Need to Care about Ethics



KELLY ELKINS

Associate Professor of
Chemistry, Towson University



SUSAN SCHELBLE

Professor, Department of Chemistry
and Biochemistry, Metropolitan
State University of Denver



JUDITH CURRANO

Head, Chemistry Library,
University of Pennsylvania

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Why You Need to Care About Ethics

Kelly M. Elkins

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Susan M. Schelble

Department of Chemistry
& Biochemistry
Metropolitan State University of Denver
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What You Will Learn



Rules and norms that promote ethical decision making



How to report and commercialize new materials *and* chemical discoveries that require a knowledge of publication ethics and IP



Why a responsible workplace promotes ethics education and brings enhanced knowledge to those teaching ethics



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

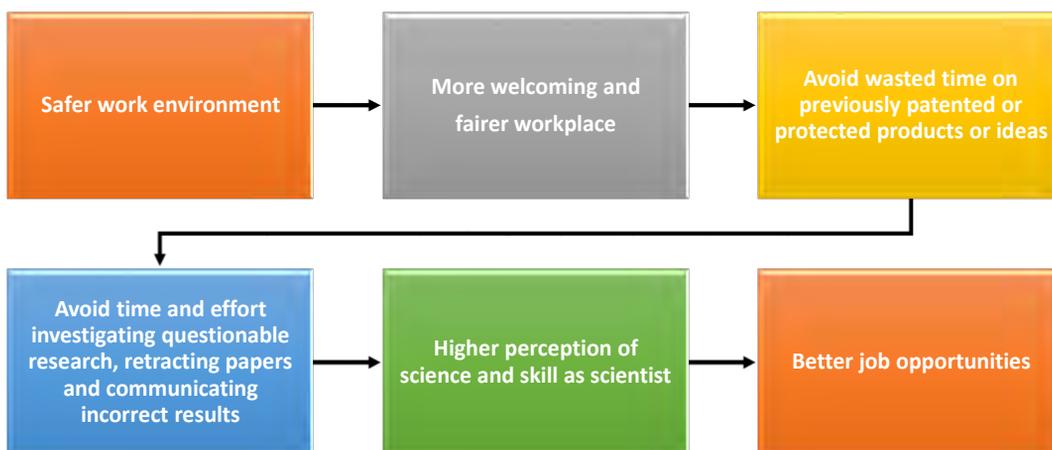
What percent of ACS Members feel confident in their knowledge of ethics-related resources?

- Less than one-third
- About Half
- About two-thirds
- Almost All (90%)

* If your answer differs greatly from the choices above **tell us in the chat!**

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Being Ethical is Better



Ethical Reporting and Commercialization of Molecules and Materials



**Accurate
Database
Searches**



**Appropriate
Credit**



**Protection of
Intellectual
Property**

Journal article or
paper
Patent
Copyright



**Proper Labeling
of Food and
Products**



**Encourage
Innovation**



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

According to the Office of Research Integrity, which of these is NOT included in the definition of Research Misconduct?

- Fabrication
- Falsification
- Theft of Intellectual Property
- Plagiarism

* If your answer differs greatly from the choices above **tell us in the chat!**

Tools and resources for ethical decision making



ACS Committee on Ethics (ETHX)



HHS Office of Research Integrity



NIH Responsible Conduct of research



Committee on Publication Ethics (COPE)



World Association of Medical Editors (WAME)



International Medical Journal Educators (ICMJE)

Courses and Training Promote Ethical Decision-Making



LAW



PROFESSIONAL
RULES AND NORMS



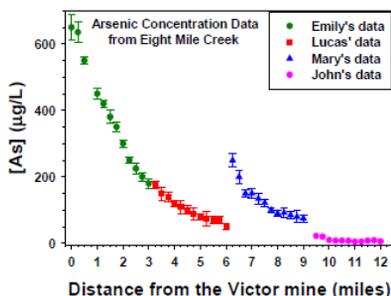
CODES OF
CONDUCT



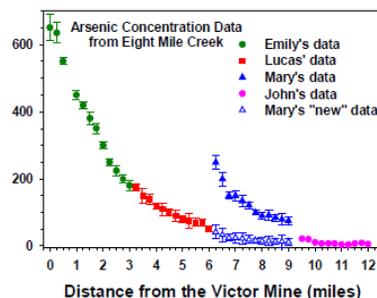
POLICIES AND
PROCEDURES

Teaching Data Sharing & Ethical Decision Making: **Data Collection and Manipulation**

Original Data



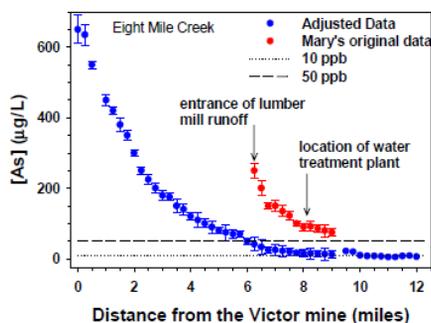
"Fixed" Data



E. R. Fisher & N. E. Levinger, A Directed Framework for Integrating Ethics into Chemistry Curricula and Programs Using Real and Fictional Case Studies. *J. Chem. Ed.* 2008, 85(6): 796-801.

The real data demonstrates the complete picture

- In this hypothetical study, the horizontal lines represent current (50 ppb) and new (10 ppb) EPA guidelines for safe drinking water. The water treatment plant is located at mile 8.5.



E. R. Fisher & N. E. Levinger, A Directed Framework for Integrating Ethics into Chemistry Curricula and Programs Using Real and Fictional Case Studies/ *J. Chem. Ed.* 2008, 85(6): 796-801.



Training is Essential

- Safety
- Hazardous waste disposal
- Responsible conduct of research
- Working with human subjects
- Applying statistics
- Publishing
- Copyright and patents

History of Ethics Education

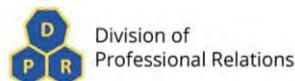
2006-2022 Through
ETHX and PROF

American Chemical Society

Organized around Committees (39) and Divisions (32) of Volunteers

ETHX Mission: To provide and promote resources and activities that educate, guide, and recognize chemists in ethical decision-making

ETHX Vision: Leading a culture of ethics in chemistry (2)



PROF Mission: Empowering chemical professionals for success in a diverse world

PROF Vision: Creating inclusive communities, resources and programming for the benefit of chemical professionals throughout their careers

Division of PROF (DPR) and Subdivision

PROF Subdivision	Name	PROF Subdivision	Name
	Ethics Chartered in 2006 96 members		Gay and Transgender Chemists and Allies Chartered in 2010 177 members
	Younger Chemists Chartered in 2006 166 members		Women Chemists Chartered in 2006 286 members
	Chemists with Unique Abilities Chartered in 2006 77 members		International Chemists Chartered in 2017 63 members
	Minority Affairs Chartered in 2006 131 members		DPR (PROF) Formed in 1973 803 Members

Our Journey in Ethics Education: Interactive Workshops Programming

Date	Event	Type	Date	Event	Type
2006	58 th SERMACS Augusta, GA	Symposium	2009	GLRM Lincolnshire, IL	Workshop
2007	233 rd National ACS Chicago, IL	Symposium	2009	ISU STEM Engines Normal, IL	Workshop
2007	59 th SERMACS Nashville, TN	Symposium	2009	Regional SACNAS Denver, CO	Workshop
2007	RMRM Denver, CO	Symposium	2009	National SACNAS El Paso, TX	Workshop
2007	234 th National ACS NOLA	Symposium	2010	IPG Grant Funding	Pacificchem Program
2008	IPG Grant	Purchase Clickers	2010	Developed Case Studies Materials	On ETHX Website
2008	NERM [®] Burlington, VT	Workshop	2010	Pacificchem 2010 International Congress Honolulu, HA	12 Talks: RCR, IP, Diversity

Our Journey in Ethics Education: Interactive Workshops Programming

Date	Event	Type	Date	Event	Type
2011	Established PROF Town Hall Social Events	Award Ceremony	2014	IPG Grant Funding	Developed Ethics Case Study Videos
2011	Established liaison relations with at 242 nd National Meeting ACS	GEAB CHAL CHED	2015	Began presenting at APPE	Ethics connection to other organizations
2012	Began regular Programming at 243 rd ACS National meeting	Poster SciMix	2015	GLRM/CRM Grand Rapids, MI.	Workshop
2013	Worked with ACS Leadership to write Volunteer Policy	ETHX in Indianapolis 236 th ACS Meeting	2015	IPG Grant Funding	Pacificchem Program
2013	Strategic Planning ETHX, Washington, DC	Workshop New Goals	2015	Pacificchem 2015 International Congress Honolulu, HA	12 Talks: Chemistry and Society
2014	Began NCPRE Sabbatical	Developed Ethics Case Study Videos	2016	Metro State University of Denver Mini-Grant	Ethics Education for Organic Laboratory Curriculum

Our Journey in Ethics Education: Interactive Workshops Programming

Date	Event	Type	Date	Event	Type
2016	Programming at 252 nd National Meeting ACS	Interactive Poster at SciMix DivCHED	2019	Attend Ethics Bowl Baltimore, MA, Judge experience.	Use to develop potential ACS Contests
2016	Programming at 252 nd National Meeting ACS	Interactive Poster at SciMix	2019	SWRM/RMRM	Ethics presentation
2017	Attend Ethics Bowl Dallas, TX	Design Ethics Competition	2019	IPG Grant Funding	Pacificchem 2021 Travel
2018	70 th SERMACS Augusta, GA	Ethics Competitions	2020	ChemLuminary Award	Award for Ethics Programming
2018	Publication about Interactive Poster	<i>J. Chem. Educ.</i> Paper	2021	ER2 NSF Grant Proposal	Pending for Ethics Anchoring Concepts
2018	Attend Ethics Bowl Chicago, IL	Design Ethics Competition	2021	Programming at 261 st National Meeting ACS	Seven symposia from PROF at Spring 2021 Meeting
2019	NCPRE Silos Urban, IL, May 2019	Ethics Conference	2021	Programming at 262 nd National Meeting ACS	Ethics Workshop for In-Person Exam Topic Development
2019	Strategic Planning Retreat ETHX	Development of Mission Vision Goals	2021	Pacificchem 2021 December, Honolulu, HI	Two multi-session symposia

Using Case Scenarios to Engage Workshop Participants

Examining Perceived Norms through Case Studies through ETHX and PROF

Postdoctoral researcher, Sissy, has been working hard for a year and a half in Professor Beaker's lab and generating interesting, if not quite earth-shattering results. A new graduate student, Glenda, is assigned a project that extends Sissy's work. Despite many attempts neither Glenda nor anyone else in the lab can duplicate Sissy's results. After looking at Sissy's lab notebooks, Professor Beaker concludes that her reported results are fraudulent.

The professor is dismayed and discusses the case with some of his colleagues. In general, their advice is to fire Sissy immediately without filing a formal fraud investigation. Beaker doesn't like this solution, but the thought of hours of time a formal investigation would take, and the potential embarrassment and cost to the university are also unpalatable.

Moving to Scripted Case Studies

CASE of The Prevaricating Postdoc
Script #2

Characters: *Chemistry Research Advisor, Professor Beaker
Chemistry Research Colleague, Professor Flask
Glenda, a new post-doctoral researcher in Professor Beaker's group.*

Scene 1. Office of Professor Beaker during initial assignment
Professor Beaker: Glenda, You will be extending the work done on this project. As one of the initial experiments you will do for this project, would you repeat the work done by Sissy, the post-doctoral researcher for this project?
Glenda: Thanks. I will get started on this and report back to you on a regular basis.

Scene 2. Office of Professor Beaker six months later
Glenda: I have tried to repeat Sissy's results and have been unable to get the same results. In addition, when I couldn't repeat the work, after many attempts, I thought there was something wrong with my techniques. So as a new researcher on this project, I asked others in the lab to repeat the work and they were unable to get the same results as Sissy.
Professor Beaker: Please give me the notebooks from your work and the work that Sissy completed and I will look into these results.

Scene 3. Office of Professor Flask
Professor Beaker: I am very concerned about one of my projects. The experiments done by Sissy, a post-doctoral researcher in my lab cannot be repeated. I have looked at Sissy's lab notebooks and believe that her reported results are fraudulent. What do you think I should do?
Professor Flask: Has any of Sissy's data been published?
Professor Beaker: I recently submitted a paper to JACS that included her data.
Professor Flask: Have you contacted our Office of Research Integrity?
Professor Beaker: Not yet. Considering that a formal fraud investigation will require many hours and may result in embarrassment and be costly for the university, it seems desirable to contain this incident as much as possible.



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

What action do you think WAS taken by Professor Beaker?

- A) Fired Sissy immediately & retracted a submitted paper.
- B) Asked Sissy to leave, in return for not filing formal Institutional Complaints against her. Sissy was thus able to find a position elsewhere. Beaker resubmitted the paper after removing Sissy's data.
- C) Followed Institutional guidelines, and spent many hours dealing with the paperwork involved.
- D) Fired Sissy immediately and told her not to list him as a reference. But he didn't tell anyone else the circumstance of her leaving.

* If your answer differs greatly from the choices above tell us in the chat!

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Impact of Modifications on Participation

Category 2: Responsible Conduct of Research

CASE of *The Prevaricating Postdoc*

Workshop Leader Guide

Consult ACS Publications Guidelines:

<https://pubs.acs.org/page/policy/ethics/index.html>

Specific directives cover many aspects of authorship, removing authors, retracting papers etc.

Consult Chemical Professional's Code of Conduct:

<https://www.acs.org/content/acs/en/careers/career-services/ethics/the-chemical-professionals-code-of-conduct.html>

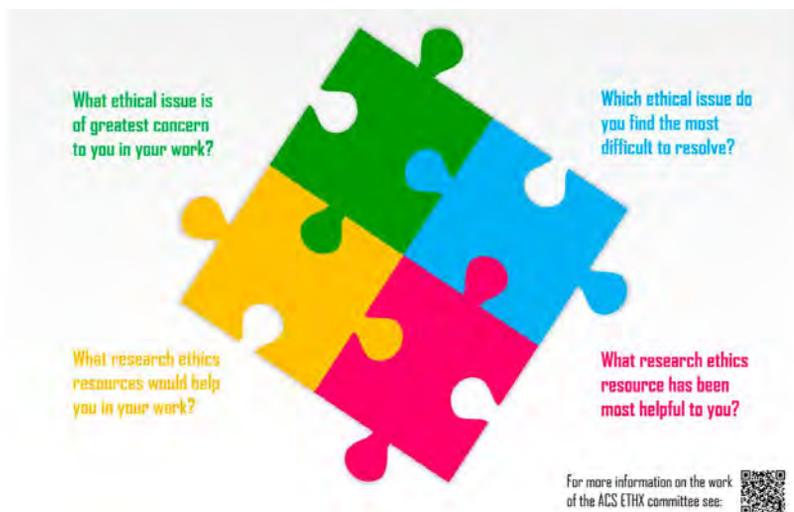
CODE has no in-depth details but does state:

Chemical professionals should strive to remain current with developments in their field, share ideas and information, keep accurate and complete laboratory records, maintain integrity in all conduct and publications, and give due credit to the contributions of others. Conflicts of interest and scientific misconduct, such as fabrication, falsification, and plagiarism, are incompatible with this Code.

This statement could have broad interpretations, but certainly guides a group that is analyzing this case to come to sound consensus of values.

History of Ethics Education

Leading to Publications <https://pubs.acs.org/doi/10.1021/acs.jchemed.7b00867>



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

When dealing with a situation needing ethical decision-making, **which of these resources was cited most often during the interactive poster at a national ACS Meeting?**

- Professional codes of conduct
- On-line websites
- People in a work unit
- Other (Let us know more in the chat)

* If your answer differs greatly from the choices above **tell us in the chat!**

History of Ethics Education

International Expansions

Pacificchem	Symposia	Abstracts
	AREA 11: Chemistry Outreach to the Community Cultural Influences on Professional Ethics (#273)	12 Oral presentations, from four different countries helped to use brainstorming about how to find common core values for chemical ethics.
	AREA 11: Connecting Chemistry with Society Women in Chemistry: Changing the Face of Science (#382) Active and Inquiry Learning in the Chemistry Classroom and Laboratory (#443)	26 Presentations dealing with challenges women face across all cultures in careers in academia and industry 15 Presentations dealing with ethics education, the ethics of laboratory safety
	AREA: Chemical Education and Communication Empowering Women in the Chemical Sciences and Engineering (#95) Ethics in the Chemical Profession: Cultural Impacts (#96)	20+ Accepted abstracts dealing with common challenges of women chemists in the Pacific Rim 23 Accepted abstracts addressing the ethics challenges that face all countries, including research and publication issues, patents, resource equity and workplace fairness.



[#96 ETHICS IN THE CHEMICAL PROFESSION: CULTURAL IMPACTS]

Susan Schelble
Metropolitan State University of Denver
 4:25-4:50 HST, December 19, Honolulu, HI



PACIFICHEM 2021
INTERNATIONAL CHEMICAL CONGRESS OF PACIFIC BASIN SOCIETIES



Choon Ho Do
Korean Chemical Society
Founded in 1946

Choon H. Do graduated Department of Chemistry, Seoul National University in 1969 and studied polymer chemistry at Polytechnic University of New York (current, NYU He got his Ph.D. degree in 1984 under supervision of Prof. Eli Pearce. He co-authored with Dr. Attila Pavlath a book, "Chemistry: Our Past, Present and Future". He also co-authored an ACS Symposium Series Book, "Chemistry of Korean Foods and Beverages" with Agnes Rimando and Y. Kim. He served as the president of the Korean Chemical Society in 2010 and has been a member of ACS over 40 years.



Kieran Fergus Lim
Royal Australian
Chemical Institute
Founded in 1917

Kieran Lim is an Honorary Associate Professor in the School of Life and Environmental Kieran Lim Sciences at Deakin University. He was formerly chair of the Royal Australian Chemical Institute's Division of Chemical Education, and a recipient of an Australian Award for Teaching Excellence (Physical Sciences and Related Studies). His research interests include chemistry, forensic science, science education, and STEM education in Scouting.



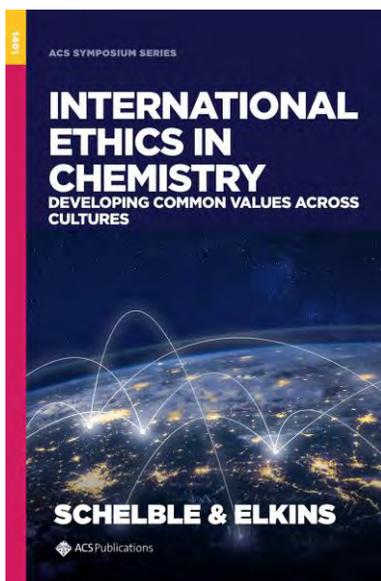
Lynne Greenblatt
Canadian Society
for Chemistry
Founded in 1921

Lynne Greenblatt retired in 2010 from a 37-year career at Wyeth Laboratories (now Pfizer), spanning QA/QC, bulk manufacturing and, most recently, as Principal Research Scientist in discovery research. Upon retirement, she and her husband moved from the Princeton, NJ area to New Brunswick, Canada. She has been an active member of the ACS since 1992 and the CIC since 2013, at both local and national levels. She has served ACS as a Councilor and many other offices.



Susan Schelble
American Chemical Society
Founded in 1876

Susan M. Schelble is a Professor in the Department of Chemistry and Biochemistry Metropolitan State University-Denver, Denver, Colorado. She is a member of the Colorado Local Section of the American Chemical Society (ACS), and has served on several national ACS units, including the Committee on Committees She has contributed ethics oral papers during the 2010 and 2015 PacifiChem Conferences, and at dozens of Regional and National Meetings of ACS.



Developing International Ethical Standards and Values

In our global scientific enterprise, we must reconcile cultural differences to share scientific information. This work explores ethical issues across chemistry, focusing on chemical organizations and researchers and how they establish policies and educational strategies for professional ethics.

Chapters focus on intellectual property, codes of conduct, relationships with employers and government, and safety in the laboratory and workplace. By viewing both the past and future, readers will find shared ethical best practices to address international challenges with enormous effects on human and planetary health.

<https://pubs.acs.org/isbn/9780841297982>



Where will we go in 2022 and Beyond?

Association for Practical and Professional Ethics



9:40 am–10:40 am

7G

Current Ethics Activities in the American Chemical Society

Topics: Education Ethics, Science, Technology and/or Artificial Intelligence Ethics

Session Venue: Mayflower 1 & 2

Presenter: Susan Schelble

Where will we go in 2022 and Beyond?

How can YOU join us? **2022 Biennial Conference on Chemical Education**

Dear Susan,

Your workshop entitled "Creating activities to promote development of ethical standards for the chemical profession." has been accepted as part of the BCCE 2022 technical program.

Thank you for your patience while we have worked with the program committee to build the technical program. Talks and poster submissions will open in MAPS on January 10th and will close on February 28th. Please consider reaching out to colleagues that may be interested in your symposium or workshop. Talks and poster abstracts can be submitted to MAPS at <https://bcce2022.abstractcentral.com/>. Participants will be able to register for workshops when conference registration opens.

In the meantime, please contact Program Chairs Thomas Bussey (tbussey@ucsd.edu) or Carly Schnoebelen (carly.schnoebelen@cgc.edu) if you have any questions, comments, or concerns.

<https://www.bcce2022.org/abstracts>



SUBMISSION ROLE: Workshop Proposal

CONTROL ID: 3631258

ABSTRACT SYMPOSIUM NAME:

AUTHORS (FIRST NAME, LAST NAME): Susan M. Schelble¹, Kelly M. Elkins²

INSTITUTIONS (ALL): 1. Campus Box 52, Metropolitan State University of Denver, Denver, CO, United States.

2. Chemistry and Biochemistry, Towson University, Towson, MD, United States.

TITLE: Creating activities to promote development of ethical standards for the chemical profession.

ABSTRACT BODY:

Workshop Description: A question that challenges ACS and all chemical organizations is how to engage all members from students to retired chemists toward the construction of ethical policies for the profession. This workshop will have leaders that have been active in developing common norms that cross all cultures where standards for publications, transparency, intellectual property and workplace best practices. Participants will have an opportunity to work with these leaders on two major projects that address all ethical and legal issues facing students and chemical professionals. The first project involves the development of an ethics exam that models after the ACS Anchoring Concepts Content Map (ACCM) model used for standardized examination development by the ACS Exam Institute. The second project involves the construction of competitions for student teams where timely ethical issues and challenges will be used to engage members for educational purposes. Participants will be asked to help construct both of these items, which can be the basis of ethical education for chemists across the globe.

<https://www.bcce2022.org>



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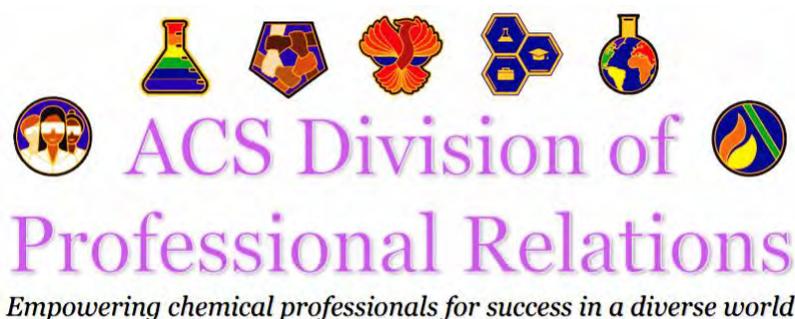
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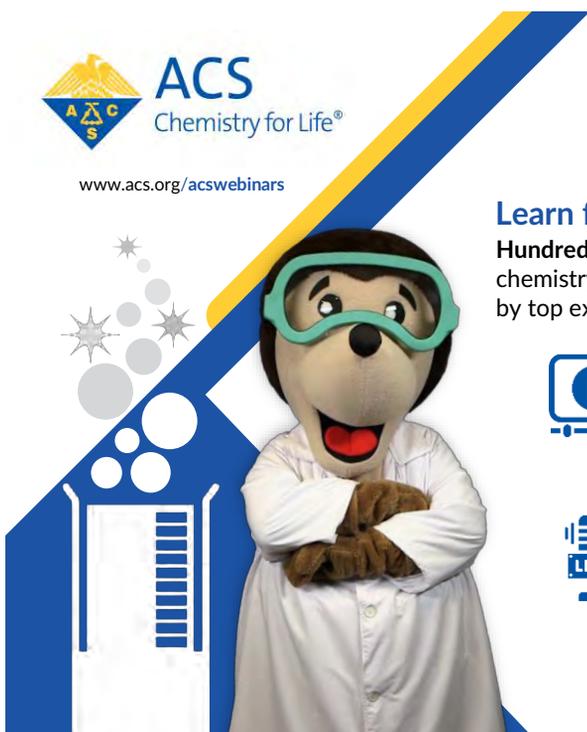


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