



Global Chemists' Code of Ethics

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- About ACS International Activities
 - Global Chemists' Code of Ethics
 - Next Steps
-

About ACS



ACS Vision:

“Improving people’s lives through the transforming power of chemistry”

ACS Mission:

“Advance the broader chemistry enterprise and its practitioners for the benefit of Earth and its people.”

- 150,000+ members
 - 185 Local Sections
 - 33 Technical Divisions
 - 23 International Chapters
- 87% of members have degrees in chemistry, 13% in other fields
- >55% of members in business & industry
- Nearly 24,000 members living outside the U.S.
- 2 locations – Ohio and Washington, D.C.



ACS International Activities

ADVANCE GLOBALLY.

ACS International Activities is committed to helping chemists take their global scientific interests and networks to the next level.

ACS INTERNATIONAL CENTER™

Identify opportunities and resources for the globally curious STEM practitioner.
Visit global.acs.org

SCIENCE & HUMAN RIGHTS ALERT NETWORK

Stay up-to-date on pressing global and social issues affecting chemistry professionals.

ACS NATIONAL MEETING EVENTS

Expand your community at the International Welcome Reception and our globally focused networking events.

INTERNATIONAL TRAVEL & PROJECT GRANTS

Catalyze new collaborations with grants sponsored by the ACS Committee on International Activities.



ACS EFFORTS:

- Build science and human rights awareness among its members and the global chemistry community
- Informed by protections afforded by the Universal Declaration of Human Rights
- Implemented at the level of its Board of Directors; addressing issues where ACS is uniquely positioned and qualified to make a meaningful impact
- Directed toward human rights abridgement cases where the rights and welfare of professionally engaged chemists and related practitioners are threatened.

ACS Science & Human Rights Alert Network



ACS Science and Human Rights

Alert Network

Sign up at www.acs.org/scienceandhumanrights

ACS and Chemistry Ethics

- ACS has a long history of leadership in Chemistry Ethics
 - Multiple Sectors:
 - Academia
 - Publishing
 - Industry
 - Multiple Committees
 - Committee on Ethics
 - Committee on Patents and Related Matters
 - Division of Professional Relations
 - Division of Chemical Health and Safety
 - ACS Science and Human Rights
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The Global Chemists' Code of Ethics

The Global Chemists Code of Ethics (GCCE) Background



- In 2014, ACS and PNNL proposed a project to create a Global Chemists Code of Ethics
 - Focused on workshop in Kuala Lumpur to bring together a diverse group of chemists from around the globe, including from countries and regions at risk of chemical threats, to create the GCCE, and then disperse it to be taught in local communities to practicing chemists around the world.
 - Similar projects have been undertaken by various governments, military and other organizations of authority, but the GCCE specifically targeted **practicing chemists**, who are on the frontlines and must make decisions related to their work and expertise everyday.
 - Meant to be adopted by chemical societies, universities, or and companies.
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Drafting The Global Chemists Code of Ethics (GCCE)



Global Chemists' Code of Ethics Workshop, Kuala Lumpur, Malaysia –
April 2016
35 participants from 18 countries

Who is the GCCE For?

- **Chemical practitioners:**
 - Scientists
 - Engineers
 - Technicians
 - Trades/business people
 - Anyone else with contact with chemicals at work or home
 - **Chemistry professionals:** a subset of practitioners
 - “scientists and engineers, who, by virtue of their specialized education, certifications or licensures, are authorized to offer chemistry services to the public”
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Global Chemists' Code of Ethics - Intro



- Chemical practitioners should promote a positive perception and public understanding and appreciation of chemistry.
 - How?
 - Research
 - Innovation
 - Teamwork
 - Collaboration
 - Community Outreach
 - High Ethical Standards
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Global Chemists' Code of Ethics - Intro



Chemistry professionals should:

- Act as role models, mentors, and advocates of the safe and secure application of chemistry to benefit humankind and preserve the environment for future generations.
- Provide professional inputs and opinions to government and other decision makers regarding industrial, environmental, and other issues.



Linda Wang/C&EN

Global Chemists' Code of Ethics - Sections



- Environment
 - Research
 - Scientific Writing and Publishing
 - Safety
 - Security
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Global Chemists' Code of Ethics – Sections: Environment



- Protect environment for future generations
 - Ensure safety and health of workers and community
 - Develop environmental plans and policies
 - Responsible disposal of chemicals
 - Encourage sustainability in education
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Global Chemists' Code of Ethics – Sections: Research



elearningindustry.com

- Chemical science research should benefit humanity
- Emphasis on transparency and integrity
- Promote exchange of scientific and technological information

Global Chemists' Code of Ethics – Sections: Scientific Writing and Publishing



- Strive for honesty throughout publication process, avoid plagiarism
- Promote peaceful applications of science and sustainable development whenever possible
- Avoid errors as much as possible, and thoroughly check work before publishing



Global Chemists' Code of Ethics – Sections: Safety vs. Security



How are chemical safety and chemical security related?

Safety doesn't equal Security

Safety and security
are different:

Safety

- protecting people from the dangers of the material

Security

- protecting the materials from **people** who may want to use it for malicious purposes

Global Chemists' Code of Ethics – Sections: Safety



- Be aware of safety regulations
- Have proper protective equipment and clothing
- Create a culture of safety in your workplace



thinglink.com

Global Chemists' Code of Ethics – Sections: Security



- Especially key when working with dual use chemicals and facilities
- Labs and storage facilities should have dedicated and specific space for all materials; stay organized!
- Practice security drills regularly
- Follow the law! – local and international



The Chemical Company

Preambles for the GCCE

- Academia
 - Policy Makers
 - Industry and Export Control
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Preambles for the GCCE: Common Points



1. Share the language and spirit of the GCCE with your colleagues
 2. Work with colleagues to determine whether the GCCE should be modified or augmented to address specific issues in your country or institution
 3. Promote open discussion of chemical ethics issues with colleagues in your home institution and at the national level and work across fields to solve them
 4. Enhance chemical safety and security in your organization or within your country
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Preambles for the GCCE

- Academia
 - Integrate ethics into educational curricula and training programs
 - Policy Makers
 - Adoption and compliance with international norms like the Chemical Weapons Convention
 - Incentivize ethical conduct
 - Work with chemistry practitioners when developing policy
 - Industry and Export Control
 - Encouraged to incorporate ethics into company's policies and procedures
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GCCE Next Steps

- Series of ACS hosted workshops in 2017 to spread the word about the GCCE
 - The code has been translated into 7 languages: Arabic, Turkish, Urdu, Pashto, Hindi, Tagalog and Indonesian Bahasa
 - The word about this document will continue to spread, with more institutions, scientific societies, and other groups adopting it
 - Drafters and workshop participants are:
 - Conducting workshops
 - Organizing symposia
 - Encouraging their home institutions and societies to adopt or modify
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GCCE Science and Technology Leadership Institute (STLI) Workshops



- 3 Workshops in 2017:
 - February: Rabat, Morocco
 - May: Nairobi, Kenya
 - July: Melbourne, Australia
- Participants required to reach 100 people in home institution/country
- 8,000+ attendees to date for follow-up events



Pilot Program: Capacity Building Chemical Societies in Conflict Zones



- October 2018 in Kuala Lumpur, Malaysia
- Representatives from Somalia, Libya, Iraq, and Malaysia
- Outcomes: establishment of Libyan Chemical Society chem security division, OPCW joint workshop in Malaysia, and follow-up events in Somalia and Iraq



Funders and Co-Organizers



QUESTIONS?

ACS Global Outreach

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