

PUBLISHING: ENSURING AND EXPANDING ACCESS TO HIGH QUALITY SCIENCE

The American Chemical Society (ACS) supports universal access to the results of scientific research via publishing models that are sustainable and ensure the integrity and permanence of the scholarly record upon which scientific progress is based.¹ The ACS does not support unfunded mandates that place constraints on authors or interfere with our ability to fulfill the Society's mission as a provider of indispensable information to the world's community of chemistry professionals.

The Society reaffirms the following principles which are essential to ensuring and expanding access to high quality science. These principles are aligned with those of the [Brussels Declaration on STM Publishing](#) as set forth by the International Association of STM Publishers, to which the American Chemical Society was an early cosignatory in 2007.

- **Central to its mission, the ACS seeks to maximize the dissemination of knowledge through economically self-sustaining publishing models.**
Sustainable access to the authoritative scientific record as embodied in peer-reviewed journal articles is essential to basic research innovation and to ensure that the United States remains a competitive global economic leader. The broad visibility of content in ACS journals not only helps scholars to achieve new scientific breakthroughs but also leads to practical applications that directly benefit human health and welfare.
- **The ACS organizes, manages, and financially supports the process of independent peer review that is essential to maintaining the integrity of the scientific research record.**
The Society's peer-reviewed journals contribute to an informal, yet widely recognized, ranking process used by funding bodies and the academic community to assess research quality, impact, and priority—key factors used to allocate funding resources, evaluate personal research achievement, and enable professional advancement. Toward that end, the ACS invests heavily in a worldwide network of expert scientific journal editors, highly trained staff, and specialized technology resources.
- **The ACS launches, sustains, promotes, and develops journals for the benefit of the scholarly community.**
Successfully coordinating these activities requires a significant financial and human resource investment. It is by deriving economic value from the published article that ACS is able to sustain its efforts to transform the author's original creative work into a final published work that has value to science professionals. Taxpayers and funding agencies support the underlying research, but not the cost to create articles that describe and interpret the research or expenses associated with independent peer review and publication of the results. Sustained investments in ACS journals have resulted in many recognitions of excellence for selecting, refining, and showcasing the world's most impactful research in chemistry and related sciences.
- **The Society's current licensing models and open access options deliver broad and significantly increased scholarly access to scientific research.**
ACS has developed, and continues to develop, innovative and accessible publishing models, policies, and practices to support the scholarly communication process and to broaden the public's access to, and understanding of, scientific information. While ACS journals are globally

The American Chemical Society (ACS) Board of Directors Committee on Public Affairs and Public Relations adopted this statement on behalf of the Society. ACS is a non-profit scientific and educational organization, chartered by Congress, with more than 158,000 chemical scientists and engineers as members. The world's largest scientific society, ACS advances the chemical enterprise, increases public awareness of chemistry, and brings its expertise to state and national matters.

accessible in electronic and print media, the Society recognizes special situations faced by institutions in developing countries and those located in areas with economic hardship. Where subscription access is unavailable, ACS offers “pay-per-view” individual article purchase options, as well as interlibrary loan privileges that enable free access to the public.

For those authors or their funding agencies wishing to sponsor immediate or 12-month delayed public access to research, ACS offers a suite of [fee-based open access licensing options](#) whereby the final article of record is made available immediately upon publication, or after a 12-month delay, free to any reader.

- **Copyright protects the intellectual property and investment of both authors and the Society.**

ACS strives to strike an appropriate balance between enabling public access and ensuring that it can sustain its publishing activities. All bibliographic information that describes our published journal content, including the complete abstracts of all published ACS research articles, is freely available on our website for the benefit of professional scientists and the public alike. In its [Journal Publishing Agreement](#) with authors, the Society grants back to ACS authors broad rights for the re-use of various versions of their published work for non-commercial purposes. ACS also provides all authors the option of enabling unlimited access to the final published article after an appropriate interval post-publication, via special web links that may be openly shared by authors through our [ACS Articles on Request](#) program.

- **The ACS supports the creation of rights-protected archives that preserve scholarship in perpetuity.**

Consistent with its own mission as a scholarly scientific society, the ACS has created and maintains a digital legacy archive of the historical published content contained in the Society's journals. In keeping with publishing industry best practices for digital archiving, the Society has also deposited and keeps current its legacy published journal content with a trusted third-party archive, [Portico](#), which is committed to long-term preservation of the scholarly record.

- **The ACS endorses the view that researcher-validated primary data should be made freely available.**

ACS Publications makes openly available any and all supporting information and data that authors provide to accompany articles they publish in ACS journals. Through a cooperative arrangement with [FigShare](#), such supporting information is made freely accessible and citable by the global research community.

The Society also supports an enabling role for governmental and other funding agencies to identify standards and best practices for the management of primary scientific data that are generated via taxpayer or other research grant funding that supports independent investigators. This role could include, for example, establishment of standards for the interoperability of data repositories with the published research literature, and support for public-private cooperative arrangements that promote scientific information access.

The cross-publisher initiative [CHORUS](#) (Clearinghouse for Open Research of the United States), which operates in cooperation with a number of U.S. federal funding agencies, is one example whereby ACS has played a leadership role in enabling seamlessly linked and networked access to scientific information.

Using such collaborative approaches, various primary and other data resources could be linked (under license) to the published article at the websites of publishers, which would enable access to the comprehensive, authoritative record of science and eliminate the need for building, maintaining, and modifying redundant and costly repositories/infrastructures.

- **Publishing in a variety of media has associated costs.**
Each key stakeholder in today’s scholarly communication system fills a unique role in which it is most experienced and best suited. Scientific publishers, such as the American Chemical Society, fund the infrastructure that enables the certification, dissemination, and preservation of research articles through an independent process of peer review and publication in scientific journals. This includes investment in web-publishing technologies and platforms, innovation with dissemination methods, and publishing models that ensure reader access to research is wider and faster than ever before.
- **Initiatives that mandate the open deposit of accepted manuscripts must ensure an appropriate interval for publishers to recover the significant investments they make in high quality scientific communication.**
The ACS, along with numerous other scientific societies, opposes policies that mandate the free dissemination of journal articles without regard to an appropriate interval for publishers to recoup their investments. Successfully accommodating free access to accepted manuscripts after an embargo period, often characterized as Green open access, ultimately depends on sustained subscriptions or other revenues to fund the costs of publication. If the embargo period prior to open availability is set too short, publishers like ACS will be challenged to fund the ongoing publication of high quality scientific articles, which would be to the detriment of the research community, the progress of science, and the public good. The unintended consequences of short Green open access embargoes include costs of peer review and other key publishing activities shifting back to authors and federal agencies, effectively forcing taxpayers to fund directly the verification and publication of research, and causing granting agencies to shift monies away from actual research to directly underwriting costs of publication by grantees.
- **“One-Size-Fits-All” open access policies do not provide the flexibility required to sustain the scholarly publishing environment.**
Because the practices of scientific disciplines can, and do, differ and because each scientific publisher follows different publication models, ACS cautions that one-size-fits-all open access mandates risk undermining the sustainability of scientific communication. ACS supports ongoing and independent analyses of the cost/benefit impact of public access mandates on scientific journal publishers and the disciplines they serve. Such analyses should include a careful assessment of the public need that open access proponents seek to address, the impact on scientific information quality, the long-term costs to the respective funder, national, or state government, and plausible non-funder or governmental alternatives. At a time of constrained R&D budgets, policymakers must also consider the long-term costs entailed by various research agencies themselves developing, procuring, and managing major new electronic database systems that may be redundant and competitive with efforts in the private sector.