

ChemRxiv: Year One and Beyond

This time last year, ChemRxiv was launched with the goal to become the world's premier preprint server focused on the chemical sciences, and what a year it has been! This spring, the Royal Society of Chemistry (RSC), and the German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh) joined the American Chemical Society (ACS) as co-owners. This three-society group provides experience and expertise in meeting authors' needs and is well-positioned to provide strong governance for ChemRxiv in addition to promoting the chemical sciences around the globe. ChemRxiv has attracted more than 450 different submitting authors (who posted over 500 original preprints and more than 200 revisions) and readers from 40 different countries. These preprints are being developed into full research publications and are now appearing in top journals, including ACS Central Science, Angewandte Chemie, Chemical Science, Nature, and Science, underscoring the excellent quality of the submissions to ChemRxiv. Just as impressive are our readers' responses, with preprints read more than 500,000 times in this first year.



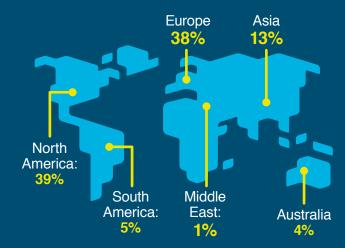




Top Five Subjects

- 1 Computational Chemistry
- **2** Materials Science
- 3 Biological and Medicinal Chemistry
- 4 Physical Chemistry
- **5** Organic Chemistry

Geographic Breakdown of ChemRxiv Authors



Milestones

- August 14, 2017
 ChemRxiv opened for submissions
- August 15, 2017 1st preprint posts
- March 20, 2018
 ACS, GDCh, and the Royal Society of Chemistry partner to support ChemRxiv

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Our strong vision to provide a premier preprint service tailored to chemists has resulted in this already robust support. We chose Figshare as its service provider to deliver a modern interface and ability to both host and interactively display data natively within the browser. Our authors and readers have made good use of these features by uploading crystal structures, computational files, videos, and more that can be processed and manipulated without the need for specialized software. ChemRxiv accepts all data types from authors—removing the limitations imposed by PDF and Word— providing a richer, more valuable reading experience for users. Since launch, we have added a number of new features, including a "Follow" feature, which allows readers to create notifications and RSS feeds based on precise search criteria, and an interactive citation-formatting tool. Our automated scans for plagiarism, viruses and malware, and improvements to the curation tools allow triage before posting to be quick, in fewer than two business days, and often in less than one day! Several new features will be available with the next release, including an interactive search widget to the "Funding" field. All of this, plus positive user feedback and the establishment of our global three-society governance, means that we are moving ChemRxiv from the beta stage to a full-service resource.

Migrating ChemRxiv from beta does not mean that improvements and new features are complete. There are plenty of exciting new projects underway—including a feature that helps authors eliminate duplicative steps at manuscript submission time, called ChemRxiv "Direct Journal Transfer". One of the most highly valued features of ChemRxiv is the simplicity of submission. Authors drag and drop files into the browser, complete one screen of information, then click "Submit". To extend this simplicity, ChemRxiv is developing a tool to allow authors to send their preprint to a journal submission system in two clicks. Authors can smoothly transition from preprint posting, to submitted—and ultimately published—article without having to re-enter their information into a second interface. ChemRxiv intends to make this feature available in the next few months and will launch with support for journals owned by the American Chemical Society, Royal Society of Chemistry, and the German Chemical Society, with journals from other publishers to join on a rolling basis thereafter. This feature will be free and available to authors worldwide.

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The ability to post comments to a preprint is frequently mentioned as a possible future enhancement. Governance is currently evaluating whether commenting directly on the preprint is appropriate for ChemRxiv. Would authors be comfortable submitting to a service with commenting enabled? Other preprint servers, such as arXiv, do not allow comments, and although bioRxiv has a comment section, it is infrequently used. At this time, we will focus on other features, such as Direct Journal Transfer, and continue to explore a commenting platform that fits the future needs of ChemRxiv users. In the meantime, readers can provide feedback to the authors directly via email or by using PubPeer.

During the past year, as preprints have proliferated throughout many scientific disciplines, we have fielded many questions of whether and how to cite preprints. Ultimately, these policies are determined on a journal-by-journal basis, but ChemRxiv governance has a responsibility to explore and articulate best practices for our communities. Preprints are a valuable part of scientific discourse and should be cited where appropriate, ideally using a format that indicates the work's preprint status. The default recommended citation format provided on ChemRxiv, obtained by clicking "Cite" on a preprint page, does so by appending the word "Preprint" to the end of the citation. In this way, it is clear that the referenced record is not peer-reviewed, but still allows credit to the researchers responsible for the work and provides a ready link for interested readers. Authors are encouraged to cite the most recent version of a given work available at the time of publication whenever possible to aid readers of their work. That said, there are times when the preprint version differs significantly from the published version, giving an author valid reason for citing the preprint alongside the peer-reviewed final version (such as when referring to figures, data files, or discussion that may have been removed during the editorial process at the journal, often due to length limitations or other journal specific requirements). Editors might handle this by engaging authors in a dialogue about motivations for choosing to cite a preprint when there is also a published article available. It can be noted that the citation records are merged in several metadata repositories once the preprint is published in a journal.

The ChemRxiv team extends our warmest gratitude to our authors and readers for an incredible first year. Watching the chemistry community demonstrate enthusiasm for preprints, and collecting feedback from satisfied authors and readers has made for an inspirational launch year at ChemRxiv. We look forward to the opportunity to serve the global community of authors and readers even more in the coming year. We welcome your feedback and comments via email at admin@chemrxiv.org.

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