

Open Access Publishing for Chemistry

10 November 2020 - Strategy

Keynote: Enabling Open Science

Dr Martin Hicks *Scientific Director, Beilstein Institut*

Many reports and analyses conclude that making science more open, increasing the transparency of research, removing bias, and being more inclusive and democratic, would be beneficial to society as a whole. If this is so, then why do not more researchers practice it? The answer can be found in lack of technical infrastructure, a hypercompetitive research environment, and a lack of discourse with scientists as to the usefulness of such an undertaking. In order for Open Science to become mainstream practice among scientists, technological and cultural issues are required to be solved and roadblocks to be removed. Technically, chemistry stands out among other scientific disciplines; on the one hand, it is not traditionally a data-intensive science, and on the other, its principle language of communication is “only” a context-dependent model. Just like a real spoken language, it is idiomatic, fuzzy, incomplete and sometimes redundant. Culturally, the character of universities, expectations for researchers, ways that funders distribute grants, and IP and copyright, all play a role in the way the academic environment has developed and how readily people are to share. The rise of meritocracy has reduced the collectivism that is necessary for open science. Without trying to turn the clock back, what can we do to enable open science?

Open access for UK Research and Innovation: emerging policy for 2021

Rachel Bruce *Head of Open Science, UK Research and Innovation*

Rachel will present an overview of the UKRI open access review, the policy direction and other considerations that are underway to inform the final policy and supporting actions. The new policy includes open access to research articles and longform outputs and book chapters, and it will be announced in 2021.

How open are chemists? An academic librarian's perspective

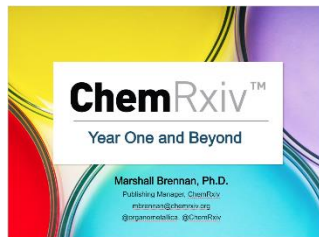
Clair Castle *Librarian, Department of Chemistry, University of Cambridge*

Open access publishing has been relatively slow to take hold in chemistry in comparison with other STEMM disciplines. Why is this? What are the benefits of open access publishing for chemists? What encourages them to publish as open access? What are the perceived barriers or disincentives to open access publishing? How has open access publishing affected the role of librarians in the way they support researchers, and how do they facilitate it at their institutions? How has the move towards doing open science influenced all of this? This presentation will explore, from an academic librarian's perspective, the impact that open access publishing has had on chemists and how this might change in the future.

11 November 2020 – Solutions

ChemRxiv: Year One and beyond

Dr Marshall Brennan *Publishing Manager of ChemRxiv, American Chemical Society*



ChemRxiv is a preprint server devoted to chemistry launched by the ACS in 2017 and is now co-owned by the Royal Society of Chemistry and the German Chemical Society (GDCh). ChemRxiv has experienced incredible growth since launch and changed how many go about publishing academic papers in chemistry. As a result, many chemists are wondering what preprints are and how they can use them. In this seminar, Dr Marshall Brennan, ChemRxiv's Publishing Manager, will describe what preprints are, what preprint servers do, and answer questions about how ChemRxiv can impact your scholarly publication workflow.

Pros and cons of open peer review

Dr Tony Ross-Hellauer *Leader, Open and Reproducible Research Group, Graz University of Technology*

Peer review is an inherently fallible process but is nonetheless usually considered the gold standard for assuring quality in the scholarly literature. Open peer review can be understood as an umbrella term for a variety of mechanisms that apply Open Science principles to peer review in order to bring greater transparency and/or participation to review processes. This talk will lay out this variety of mechanisms, discuss the ways in which they are often poorly understood, their benefits and drawbacks, and the development of researcher attitudes towards these new models. Through a discussion of the evidence to support the various claims for and against peer review, the talk will demonstrate the potential advantages to be gained in various contexts. It will also make clear the current lack of clear information to guide decision making, and hence need to formalise policies and intensify research on the subject.

A tale of two societies: are differences in open access policy driving a split in UK and US chemistry publishing?

Professor Cameron Neylon *Professor of Research Communications, Centre for Culture and Technology, Curtin University*

The Royal Society of Chemistry and American Chemical Society have very different histories but for much of the late 20th and early 21st century their publishing operations had strong parallels. But from 2010 onwards each scholarly publisher responded differently to the local research communication context as UK and US funders and policy makers took different approaches to open access. Early experimentation at the ACS was abandoned, leaving the RSC to respond to stronger UK policy mandates. From 2015-2018 the RSC gained a larger share of UK and of open access publishing that can be associated with initiatives such as Gold for Gold and other publish and read agreements. Has this led to an ongoing change in publishing patterns or was it a temporary shift? Does local policy over-ride global publishing patterns and is there a risk, or indeed an opportunity, of concentrating national publishing in national journals and publishers?

12 November 2020 - Perspectives

The growth in importance of open access sources in the pharma industry

Helen Malone *Senior Director, External Data Lead, Data & Computational Science, GlaxoSmithKline*

The pharma industry has always needed comprehensive sources of evidence in order to answer critical business questions in R&D. This has ranged from internal data, subscription-based resources and now open access publications and databases. This presentation will explore new trends in the use of open access sources in the pharma industry relating to quality, reliability, value, and impact.

Open science in an open access world

Dr Egon Willighagen *Team Leader, Department of Bioinformatics, Maastricht University & Editor-in-Chief, Journal of Cheminformatics (OA)*

Every year in autumn, Open Access receives a lot of attention, and invariably it is conflated with Open Science. While they both have an overlap in intentions, they are quite distinct. This talk will focus on how we can enable Open Science with Open Access, using scholarly journals as the vehicle. Currently, too many articles share tiny bits of knowledge that could have been more efficiently shared via a database. The journal article has, in many cases, effectively become an advertisement: to understand the full experiment, the article is not always enough. It is not open science. Worse, with the modern fetish around impact factors, we only recognize and reward the advertisement, which does great damage to open science. For more than 20 years, Open Science has been about efficient and open sharing of research output. It does so by allowing others to reuse, modify, and redistribute that research. Journals used to enable this behavior. How can a journal further enable Open Science? First and foremost, a scientific journal must recognize and reward all research output. Research output is not only articles, but also data, software and standards. Journals can recognize and reward these by adoption of standards for data, software, etc citation. Sustainable and FAIR supplementary information is essential. Adoption of Open Citations and the Citation Typing Ontology will give more insight in reuse of output and will support the second urgent need: general improvement of dissemination of knowledge, for example with semantic web technologies, global unique identifiers, machine readability, etc. The adoption of Open Science by Open Access journals is slow but steady: a key advantage of Open Science is that it doesn't go away; it just accumulates. Problems remain, but this talk will give you a good idea of how Open Access can embrace Open Science.

Open Access: a society publisher's perspective

Dr Neil Hammond *Publisher for Open Access Journals, Royal Society of Chemistry*

Amongst advocates of open access publishing, 'legacy' publishers are often characterised as an inertial force and barrier to change. Whilst this may be true in many cases, the situation for a mission-driven non-profit publisher, such as the Royal Society of Chemistry, is complex, with competing incentives and pressures from various directions. In this talk I will try to provide insight into the challenges encountered by the RSC in aligning its publishing activities with the interests of the research community, and the steps we are taking to drive the global open access transition in the chemical sciences.