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Editorial

From Biosensors to Drug Delivery and Tissue Engineering: Open Biomaterials Research

Cite This: *ACS Omega* 2022, 7, 6437−6438

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In this editorial, we summarize the biomaterials portfolio at ACS in the context of the global open access publishing landscape for biomaterials research. Via the accompanying joint Virtual Issue, we focus on this incredibly diverse and interdisciplinary topic to highlight the strengths of this portfolio, the importance of this topic, and the advantages of publishing with ACS.

The Virtual Issue showcases an outstanding collection of high-quality, impactful, free-to-read articles published in journals across the ACS "biomaterials", "applied materials", and "macromolecular science" portfolios alongside *ACS Omega*, whose broad scope welcomes research in these areas and more. A range of articles published in *ACS Applied Bio Materials*, *ACS Applied Polymer Materials*, *ACS Biomaterials Science & Engineering*, *ACS Macro Letters*, *Biomacromolecules*, and *Macromolecules* are represented in this collection (Figure 1). Like the majority of the ACS portfolio, these six journals offer a mixed model of publishing that not only consists of research articles that require access via purchase or subscription but also provides "open access" options that allow for free accessibility to anyone with an Internet connection. These journals are termed "hybrid". In contrast, *ACS Omega* is a fully open access journal. These seven journals are featured in this joint Virtual Issue. In addition, complementing these journals in the ACS portfolio are other recently launched ACS journals, *ACS Bio & Med Chem Au*, *ACS Materials Au*, *ACS Measurement Science Au*, *ACS Nanoscience Au*, and *ACS Polymers Au*, all of which are fully open access journals and also welcome submissions in the broad field of biomaterials. Together these journals encompass the breadth of the biomaterials field and provide authors with a range of options to satisfy personal preferences, research focus, and mandates from institutions or funders. An analysis of Clarivate's Journal Citation Reports database shows that there are currently 47 journals indexed under the "MATERIALS SCIENCE, BIOMATERIALS" category (Journal Citation Reports dataset updated Oct 25, 2021). Of these, the vast majority follows the hybrid publishing model, with six being fully open access journals. However, the growth in open access publishing for biomaterials research is evident when assessing the Directory of Open Access Journals (DOAJ; https://doaj.org/), which lists 48 fully open access biomaterials journals. Remarkably, 24 biomaterials journals have been added to the DOAJ in the last three years (Figure 2).

Authors can publish open access in any ACS journal by choosing and purchasing one of two ACS Open Access Licensing Options (CC-BY or CC-BY-NC-ND), or they may

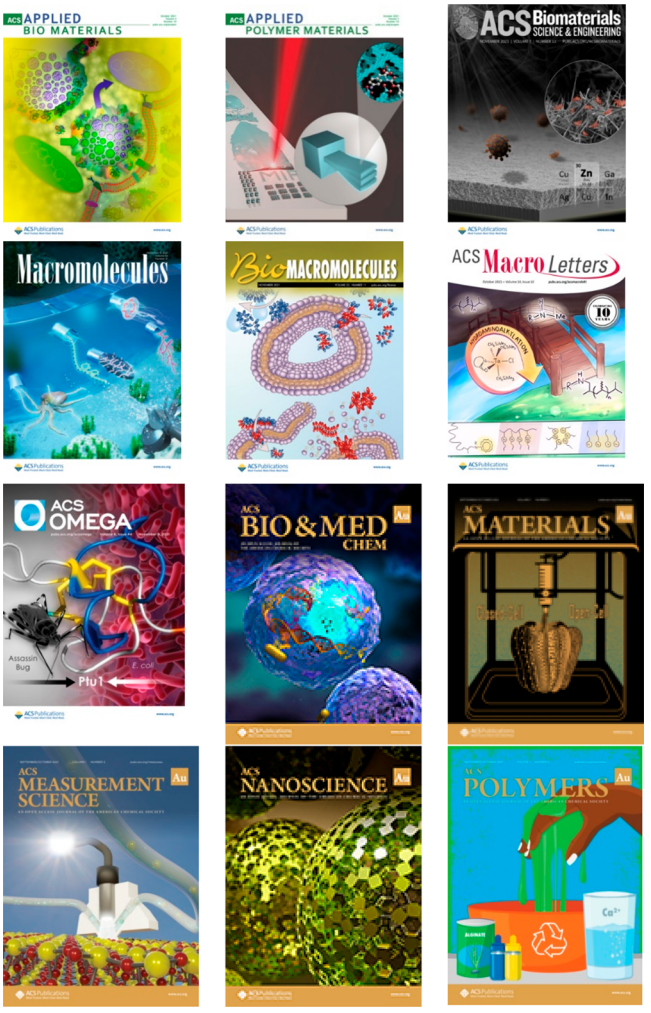

Figure 1. The ACS portfolio of hybrid journals (top two rows) and fully open access options (bottom two rows) that publish biomaterials research.

Published: February 16, 2022

https://doi.org/10.1021/acsomega.2c00787
ACS Omega 2022, 7, 6437−6438

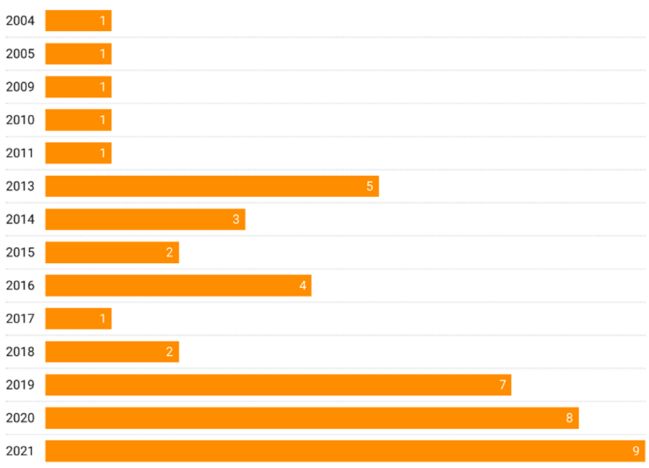

Figure 2. Directory of Open Access Journals (DOAJ) indexed journals in the field of biomaterials.

qualify to publish open access via one of the many ACS Read + Publish Agreements in place with institute libraries or consortia. The benefits of publishing open access include the potential for greater usage and more visibility of your work with a broader geographic research readership and, therefore, potentially higher citations.[1−3] From the 2020 ACS Open Access Survey (https://acsopenscience.org/acs-2020-open-access-survey/), many authors were motivated to publish Open Access by personal support of the principles of open science and from a desire to increase the visibility of their research.

The biomaterials theme is intrinsically cross-disciplinary. For this reason, perhaps more than other traditional themes, it benefits from a continuous exchange of information among researchers with different backgrounds, whether it is the medical, engineering, materials, physical, or chemical sciences. Freely accessible research cuts across the boundaries of disciplines and allows a much greater circulation of ideas and results. Unsurprisingly, nearly all articles showcased in this Virtual Issue have been heavily read: note the "Article Views" and the "Altmetric" indexes within each article's landing page.

We trust that the selection of journals participating in this Open Virtual Issue provide great options for authors in the field of biomaterials research based upon their topics and funding circumstances. While the articles presented in this Virtual Issue do not necessarily reflect the extent of biomaterials topics covered in these seven journals, they are fine examples of the high-quality research articles, letters, reviews, and perspectives that we aim to publish.

As research-active editors, we are part of the biomaterials community and would be thrilled to have your contributions published open access in our journals. We understand that, as authors, you have many options beyond the ACS portfolio to publish your work; however, the choice of trusted, reputable, and well-recognized options at ACS will undoubtedly make your scientific advances stand out.

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Notes

Views expressed in this editorial are those of the authors and not necessarily the views of the ACS.

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https://doi.org/10.1021/acsomega.2c00787
ACS Omega 2022, 7, 6437−6438