

ACS Omega: 2022 Spring Forward, 2021 Look Back

Cite This: *ACS Omega* 2022, 7, 12448–12452

Read Online

ACCESS |



Metrics & More



Article Recommendations



Supporting Information

ABSTRACT: *ACS Omega* has entered its seventh year of publishing since the journal was launched in 2016. We are pleased to present an update and summarize *ACS Omega's* new plans and offerings in 2022 and look back and share the key journal statistics from 2021 while featuring some of its excellent published content. We take this opportunity to thank our global pool of reviewers for their continued voluntary and invaluable support in serving the journal and their assistance in maintaining the quality of our published content.

INTRODUCING OUR NEW TOPIC EDITORS

We are pleased to welcome our two new Topic Editors, Professor Ekaterina Skorb (ITMO University) and Professor Martina Costa Reis (University of São Paulo) (Figure 1), who



Figure 1. Topic Editors Prof. Ekaterina Skorb (left) and Prof. Martina Costa Reis (right)

have joined the *ACS Omega* team in 2022. The Topic Editors support the journal's Editorial Board in handling a subset of manuscripts in their respective topical areas of expertise. Professor Skorb will manage the peer-review process for manuscripts received in infochemistry, a new research area at the interface of chemistry, biology, and computer science that considers unconventional methods of information processing. In addition, she will assist the Editorial Board in several topics within physical chemistry, encompassing areas of sonochemistry, stimuli-responsive materials, and encapsulation. Professor Martina Costa Reis will lend support to the Editorial Board with her expertise in theoretical physical chemistry, with a focus on nonequilibrium thermodynamics, the mathematical foundations of thermodynamics, thermodynamic modeling, and computational fluid dynamics, with a focus on industrial applications.

EXPANDING OUR MANUSCRIPT TYPE OFFERINGS

In October 2021, we introduced a new manuscript type, called Viewpoint, to allow our authors an avenue to publish general

commentaries and tutorials or topics that provide educational insights into research problems of interest to the journal's broad readership. We solicit Viewpoint submissions that express critical scientific analysis or personal views on exciting current topics of interest that include the history of science, chemistry/STEM education, safety, science ethics, policy, funding, etc., to encourage dialogue within the community. More information can be found on our Author Guidelines page [here](#).

In response to feedback from many authors, we have now implemented an option for the publication of full Reviews in 2022. In adding this option, we offer greater flexibility on formatting requirements than our Mini-Review offering, extending submissions of more comprehensive and critical accounts. Reviews that are concise, yet complete literature surveys written by experts for nonexperts will be considered. The purpose is to acquaint readers of *ACS Omega* with recent progress in emerging fields, including cross-disciplinary areas. They should be written for a more general audience to provide a balanced view of the topic in question. The publication of Mini-Reviews and Perspectives will be continued alongside this new "Review" option. More information can be found [here](#).

If you have a topic that you wish to be considered for publication as a Viewpoint or Review, please get in touch with the Editorial office (managing.editor@omega.acs.org) with a presubmission inquiry.

SHOWCASING OUR STRONG LINKS WITH OUR SISTER ACS JOURNALS VIA COPUBLICATION OF VIRTUAL ISSUES

Starting in 2021, we ventured to partner with our sister ACS journals on the publication of Virtual Issues. Creating these special collections on selected themes is an excellent way to enhance the focus on key global research trends, challenges,

Published: April 6, 2022





Figure 2. Artwork of the joint Virtual Issues copublished by ACS Omega. Top panel 2021: Open Access Energy (Left). Green Chemistry: A Framework for a Sustainable Future (Middle). Raising Antimicrobial Awareness (Right). Lower Panel 2022: Neglected Tropical Diseases (Left). From Biosensors to Drug Delivery and Tissue Engineering: Open Biomaterials Research (Middle). Tuberculosis Drug Discovery and Diagnosis (Right).

and topics and highlight the strong links among our ACS portfolio of journals. Below, we elaborate on the Virtual Issues ACS Omega participated in and copublished with our sister journals in 2021 and so far in 2022.

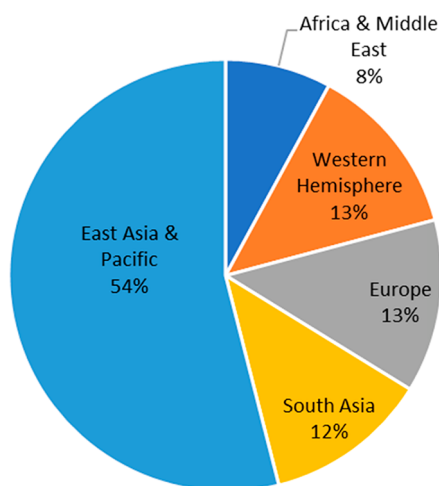


Figure 3. ACS Omega's global authorship by region in 2021.

ACS Omega was part of three joint Virtual Issues in 2021 (Figure 2; top panel). Our first collaborative Virtual Issue, “Open Access Energy”, was published in March with ACS Applied Energy Materials, ACS Energy Letters, and Energy & Fuels and featured a collection of excellent open access articles published in these four journals. An accompanying Editorial, “Energy Research at ACS in the Age of Open Access”, summarized the ACS energy portfolio in the context of the global open access publishing landscape for energy research. In June, ACS Omega partnered with eight other journals,

Environmental Science & Technology, Environmental Science & Technology Letters, The Journal of Organic Chemistry, Organic Letters, Organometallics, Industrial & Engineering Chemistry Research, Organic Process Research & Development, and ACS Sustainable Chemistry & Engineering, to release the “Green Chemistry: A Framework for a Sustainable Future” Virtual Issue. Published to coincide with the start of the 25th Annual Green Chemistry & Engineering Conference held June 14–18, 2021, with the theme “Sustainable Production to Advance the Circular Economy”, this Virtual Issue featured a collection of articles drawn from the nine journals that highlight the progress, remaining challenges, and future research directions across the disciplines covered that will help advance us toward a more sustainable world. The Virtual Issue was introduced by an Editorial in which the journal Editors discussed the impact of the selected articles and commented on areas requiring specific emphasis to facilitate such changes. Finally, in November, ACS Omega joined 32 other journals in the ACS portfolio to publish a Virtual Issue titled “Raising Antimicrobial Awareness” to coincide with World Antimicrobial Awareness Week (November 18–24) and to highlight how antimicrobial resistance remains a persistent and long-term threat to public health and a challenge to modern medicine. The Virtual Issue highlighted important research and advances made in the field over the past few years.

ACS Omega has already been part of three collaborative efforts in the first quarter of 2022 (Figure 2; lower panel). In January, it was one of 21 ACS journals to come together and publish a Virtual Issue on “Neglected Tropical Diseases” (NTDs) in support of World Neglected Tropical Diseases Day (January 30) to raise awareness of this group of diseases and showcase recent advances to diagnose, treat, and combat NTDs. In February, ACS Omega copublished a Virtual Issue on a biomaterials theme titled “From Biosensors to Drug Delivery

Table 1. Selection of Highly Accessed Articles Published in 2021 (Accessed March 29, 2022)

Accesses	Title	Author List (*Corresponding Author)
31,869	Identification of a New Family of Prenylated Volatile Sulfur Compounds in Cannabis Revealed by Comprehensive Two-Dimensional Gas Chromatography	Iain W. H. Oswald*, Marcos A. Ojeda, Ryan J. Pobanz, Kevin A. Koby, Anthony J. Buchanan, Josh Del Rosso, Mario A. Guzman, and Thomas J. Martin
18,504	Progress Toward a Large-Scale Synthesis of Molnupiravir (MK-4482, EIDD-2801) from Cytidine	Grace P. Ahlqvist, Catherine P. McGeough, Chris Senanayake, Joseph D. Armstrong, Ajay Yadaw, Sarabindu Roy, Saeed Ahmad, David R. Snead, and Timothy F. Jamison*
16,164	How Many CO ₂ Bubbles in a Glass of Beer?	G�rard Liger-Belair* and Clara Cilindre
10,990	Tuning the Oxygen Content of Reduced Graphene Oxide and Effects on Its Properties	Wei Liu and Giorgio Speranza*
8,074	Repurposing the Ebola and Marburg Virus Inhibitors Tilorone, Quinacrine, and Pyronaridine: <i>In Vitro</i> Activity against SARS-CoV-2 and Potential Mechanisms	Ana C. Puhl*, Ethan J. Fritch, Thomas R. Lane, Longping V. Tse, Boyd L. Yount, Carolina Q. Sacramento, Natalia Fintelman-Rodrigues, Tatyana Almeida Tavella, Fabio Trindade Maranh�o Costa, Stuart Weston, James Logue, Matthew Frieman, Lakshmanane Premkumar, Kenneth H. Pearce, Brett L. Hurst, Carolina Horta Andrade, James A. Levi, Nicole J. Johnson, Samantha C. Kisthardt, Frank Scholle, Thiago Moreno L. Souza, Nathaniel John Moorman, Ralph S. Baric, Peter B. Madrid, and Sean Ekins*

Table 2. ACS Omega Articles in 2021 Selected as ACS Editors' Choice

Accesses	Title	Author List (*Corresponding Author)
19,008	Preamalytical Issues and Cycle Threshold Values in SARS-CoV-2 Real-Time RT-PCR Testing: Should Test Results Include These?	Ilka Engelmann*, Enagnon Kazali Alidjinou, Judith Ogiez, Quentin Pagneux, Sana Miloudi, Ilyes Benhalima, Mahdi Ouafi, Famara Sane, Didier Hober, Alain Roussel, Christian Cambillau, David Devos, Rabah Boukherroub, and Sabine Szunerits*
9,726	Drawing Polycyclic Molecules	Dean J. Tantillo*
9,463	From Infection Clusters to Metal Clusters: Significance of the Lowest Occupied Molecular Orbital (LOMO)	Yuta Tsuji* and Kazunari Yoshizawa
6,014	Improved Self-Assembly of P3HT with Pyrene-Functionalized Methacrylates	Taniya M. S. K. Pathirana, Ziyuan Ma, Chinthaka M. Udamulle Gedara, Xiangcheng Pan, Youngmin Lee, Enrique D. Gomez, Michael C. Biewer, Krzysztof Matyjaszewski, and Mihaela C. Stefan*

Table 3. Selection of Highly Read and/or Cited Mini-Reviews and Perspectives Published in 2021

Title	Author List (*Corresponding Author)
Fomite Transmission, Physicochemical Origin of Virus–Surface Interactions, and Disinfection Strategies for Enveloped Viruses with Applications to SARS-CoV-2	Nicolas Castan�, Seth C. Cordts, Myra Kurosu Jalil, Kevin S. Zhang, Saisneha Koppaka, Alison D. Bick, Rajorshi Paul, and Sindy K. Y. Tang*
Advances in Waterborne Acrylic Resins: Synthesis Principle, Modification Strategies, and Their Applications	Cuiyan Jiao, Li Sun, Qian Shao*, Jiyong Song*, Qian Hu, Nithesh Naik, and Zhanhu Guo*
Experimental and Theoretical Advances in MXene-Based Gas Sensors	Sadegh Mehdi Aghaei*, Aref Aasi, and Balaji Panchapakesan*
Progress in Tuning Emission of the Excited-State Intramolecular Proton Transfer (ESIPT)-Based Fluorescent Probes	Yonghao Li, Dipendra Dahal, Chathura S. Abeywickrama, and Yi Pang*
Advances in Screen Printing of Conductive Nanomaterials for Stretchable Electronics	Nathan Zavanelli and Woon-Hong Yeo*
Hydrogen Bonding in Self-Healing Elastomers	Zhulu Xie, Ben-Lin Hu*, Run-Wei Li*, and Qichun Zhang*
Flavonoids in <i>Cannabis sativa</i> : Biosynthesis, Bioactivities, and Biotechnology	Johanna L. Bautista, Shu Yu, and Li Tian*
Fabrication and Materials Integration of Flexible Humidity Sensors for Emerging Applications	Tugce Delipinar, Atia Shafique, Maryam Sepehri Gohar, and Murat Kaya Yapici*
Emerging Technologies for Monitoring Plant Health in Vivo	Jenna M. Roper, Jose F. Garcia, and Hideaki Tsutsui*
Impact of Artificial Intelligence on Compound Discovery, Design, and Synthesis	Filip Milkovi�, Raquel Rodr�guez-P�rez, and J�rgen Bajorath*
Plastic Pollution: A Perspective on Matters Arising: Challenges and Opportunities	Austine Ofondu Chinomso Iroegbu, Suprakas Sinha Ray*, Vuyelwa Mbarane, Jo�o Carlos Bordado, and Jos� Paulo Sardinha
Evolution of the Synthesis of Remdesivir. Classical Approaches and Most Recent Advances	Didier F. Vargas, Enrique L. Larghi*, and Teodoro S. Kaufman*

and Tissue Engineering: Open Biomaterials Research” in collaboration with *ACS Applied Bio Materials*, *ACS Applied Polymer Materials*, *ACS Biomaterials Science & Engineering*, *ACS Macro Letters*, *Biomacromolecules*, and *Macromolecules*, which included an introductory Editorial that placed the biomaterials portfolio at ACS in the context of the global open access publishing landscape for biomaterials research. Finally, our most recent partnership included 20 other ACS journals that combined to copublish “*Tuberculosis Drug Discovery and Diagnosis*” to highlight recent advances in tuberculosis drug discovery and in developing diagnostics as part of World Tuberculosis Day (March 24). We have more exciting Virtual Issues planned for the remainder of 2022!

■ OUR AUTHORSHIP, REVIEWER, AND READERSHIP HIGHLIGHTS AND STATISTICS IN 2021

In 2021, *ACS Omega* published 3,477 articles from researchers in 82 countries across all regions (Figure 3). We congratulate and thank our authors for choosing *ACS Omega*! A selection of some of our best content is presented in Tables 1–4.

Rigorous peer review is the cornerstone of *ACS Omega*. It enables us as Editors to make carefully considered, well-reasoned decisions. Thanks to our reviewers' voluntary efforts, *ACS Omega* maintains its standards for the high quality of its published articles. A total of 10,774 unique reviewers from 95 countries returned reviews in 2021. Due to the cooperation of

Table 4. Selection of High Altmetric Score Articles Published in ACS Omega in 2021 (Accessed March 29, 2022)

Altmetric Score	Title	Author List (*Corresponding Author)
144	Nd–Nb Co-doped SnO ₂ /α-WO ₃ Electrochromic Materials: Enhanced Stability and Switching Properties	Ronn Goei*, Amanda Jiamin Ong, Jun Hao Tan, Jie Yi Loke, Shun Kuang Lua, Daniel Mandler, Shlomo Magdassi, and Alfred Iing Yoong Tok*
143	Evolution of Medieval Gunpowder: Thermodynamic and Combustion Analysis	Tessy S. Ritchie, Kathleen E. Riegner, Robert J. Seals, Clifford J. Rogers, and Dawn E. Riegner*
139	Knitting Thread Devices: Detecting <i>Candida albicans</i> Using Napkins and Tampons	Anusha Prabhu, Hardik Singhal, M. S. Giri Nandagopal, Reshma Kulal, Prakash Peralam Yegneswaran, and Naresh Kumar Mani*
94	Tamper-Proof Time–Temperature Indicator for Inspecting Ultracold Supply Chain	Lam Tan Hao, Minkyung Lee, Hyeonyeol Jeon, Jun Mo Koo, Sung Yeon Hwang*, Dongyeop X. Oh*, and Jeyoung Park*
91	Physiochemical Properties of Biochar and Activated Carbon from Biomass Residue: Influence of Process Conditions to Adsorbent Properties	Mark Gale, Tu Nguyen, Marissa Moreno, and Kandis Leslie Gilliard-Abdul Aziz*
70	Photoinduced Photosensitizer–Antibody Conjugates Kill HIV Env-Expressing Cells, Also Inactivating HIV	Mohammad Sadraeiian, Edgar Ferreira da Cruz, Ross W. Boyle, Calise Bahou, Vijay Chudasama, Luiz Mário Ramos Janini, Ricardo Sobhie Diaz*, and Francisco E. G. Guimarães
68	Novel Development of Predictive Feature Fingerprints to Identify Chemistry-Based Features for the Effective Drug Design of SARS-CoV-2 Target Antagonists and Inhibitors Using Machine Learning	Kelvin Cooper*, Christopher Baddeley, Bernie French, Katherine Gibson, James Golden, Thiam Lee, Sadrach Pierre, Brent Weiss, and Jason Yang
62	Exploring Chemical Reaction Space with Reaction Difference Fingerprints and Parametric t-SNE	Mikhail Andronov, Maxim V. Fedorov, and Sergey Sosnin*
60	Pearlescent Mica-Doped Alginate as a Stable, Vibrant Medium for Two-Dimensional and Three-Dimensional Art	Anne M. Arnold*, Zachary C. Kennedy, Joshua A. Silverstein, Jacob F. Ellis, and Janine R. Hutchison
58	Revisiting the Mechanism of Electric Field Sensing in Graphene Devices	Afsal Kareekunnan, Tatsufumi Agari, Ahmed M. M. Hammam, Takeshi Kudo, Takeshi Maruyama, Hiroshi Mizuta, and Manoharan Muruganathan*

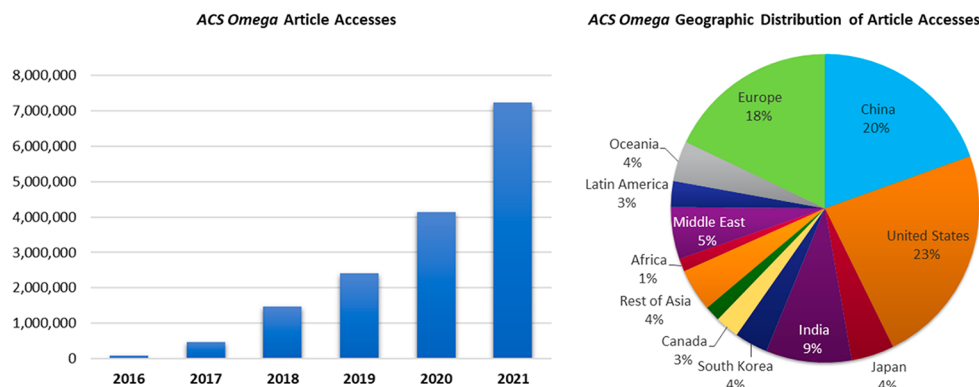


Figure 4. Year-wise annual growth of published content in ACS Omega on the left. The image on the right highlights the geographic distribution of readership in 2021.

our reviewers, in 2021, the median time to first decision was healthy at 20 days. The Editors would like to extend their gratitude and recognition to all of our reviewers (Supporting Information Table S1) for their precious time and dedication.

We are delighted to see that ACS Omega continues to attract a growing and diverse readership globally (Figure 4). Downloads of published articles at ACS Omega snowballed to >7.2 M, a >74% increase over 2020.¹ In 2021, 68% of our readership profile comprised nonsubscribers versus 32% ACS institutional subscribers. A selection of highly read articles (>8,000 views excluding ACS Editors' Choice articles) is presented in Table 1. The four articles selected for ACS Editors' Choice in 2021 are shown in Table 2.

ACS Omega published 110 Mini-Reviews and Perspectives in 2021 on a range of topics. A small selection of some noteworthy Mini-Reviews and Perspectives is presented in Table 3.

Finally, we showcase a selection of articles that received wider public attention online on social and news media, as reflected by their high Altmetric scores (Table 4).

We hope you enjoy looking through the content featured in this Editorial, and we apologize to the many researchers whose works were worthy of selection but have not been highlighted.

We conclude by congratulating our authors who have published their work in ACS Omega and reiterating our sincere thanks to the referees for their input in reviewing manuscripts. Also, we thank our readers for their support and interest in our journal.

Krishna N. Ganesh, Co-editor orcid.org/0000-0003-2292-643X

Deqing Zhang, Co-editor orcid.org/0000-0002-5709-6088

■ ASSOCIATED CONTENT

SI Supporting Information

The Supporting Information is available free of charge at <https://pubs.acs.org/doi/10.1021/acsomega.2c01984>.

Table S1: Full reviewers list. Alphabetical list of ACS Omega peer reviewers who returned a referee report between January 1, 2021 and December 31, 2021 (PDF)

■ AUTHOR INFORMATION

Complete contact information is available at: <https://pubs.acs.org/10.1021/acsomega.2c01984>

Notes

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

■ ACKNOWLEDGMENTS

We thank Drs. Paul Goring, Silvia Imberti, Aditi Jain, Jhoan Toro-Mendoza, and Dinesh Soares for providing data and assistance in preparing this Editorial.

■ REFERENCES

(1) Zhang, D.; Ganesh, K. N. Deepening Our Roots and Growing Wings. *ACS Omega* **2021**, *6* (7), 4506–4510.