

WILEY



Your Publisher's Report 2021

Botanical Society of America

Applications in Plant Sciences

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Your Publisher's Report 2021

In a rapidly changing world, research answers an urgent mission to solve some of society's biggest challenges. In 2021 research kept pace with evolving COVID-19 variants, and provided crucial evidence to mitigate the most serious impacts of the pandemic.

Across the research ecosystem we've been challenged by the uncertainty of the past two years – library budgets have come under greater pressure, the demand for open access continues to grow, and more funders develop open access publishing mandates. Fast-changing COVID mandates set by different national governments have made it hard to continue operating as we'd all hoped and expected, challenging our ability to get together in person - in labs and at conferences - to collaborate and share new thinking.

And yet the resilience, collaboration and spirit of determination we see amongst researchers, customers and partners means that together we've charted a path through that uncertainty to keep making progress.

Thank you for all that you do.

During 2021 we've worked together to make the publishing process better for everyone, so that authors can focus on conducting and publishing their best research, and editors can focus on developing quality.

The new transformational agreements we signed in 2021 build further on a sustainable transition to open access, and open up more opportunities for authors to get their work in front of the widest possible audience. New research released in 2021 demonstrates the value to authors of publishing open access to increase readership and citation.

We're investing heavily in simplifying the submission process for authors by developing Research Exchange (ReX). Close to 300 journals are already using the platform and we'll be expanding this throughout 2022. Initiatives like 'free format submission' simplify the process further.

Many of our partners are now taking advantage of 'Refer and Transfer' initiatives. The Transfer Desk Assistant offers an automated approach, while editors can refer manuscripts to help authors find the right journal for their research, and increase impact for the whole community.

Alongside this work, we've taken important steps together in our journey to tackle systemic bias in publishing. We've committed to developing standards and processes to improve inclusion in publishing, and we've expanded our dedicated team in Wiley to drive equity across everything we do. We'll share what we learn along the way, because together, we can have an even bigger impact.

In this report you'll see key performance data for your journal that will help you to track progress, as well as a summary of important steps we're putting in place to tackle current and emerging challenges and secure a sustainable future.

I hope you enjoy reading it. A lot of work has gone into the activity represented in these pages, and we're very proud of that work. Please get in touch with any feedback as we evolve our publishing service, tackle the changes and complexities facing the society publishing community, and make a difference in the world together.

With all best wishes,



Vicky Johnson
vjohnson@wiley.com
Senior Editorial Director

A partnership for long-term success

Our commitment to provide a best-in-class publishing service, together with strategic planning for the long term is key to our mutual success. We believe it's one of the reasons so many societies choose to partner with us over many years.

In 2021, 6 new societies and 52 journals joined the Wiley publishing family. We also launched 11 titles in collaboration with 10 partners.

Positioning your journal and society for a successful future

We continue to focus together on these strategic goals, which we see as essential for long-term success in a rapidly changing market. We'll cover these goals in more detail throughout this report.

- Sustainably transition to open research
- Be more efficient
- Grow your quality output
- Diversify

Tracking progress against your goals

[Wiley Journal Insights](#) gives you access to your journal data whenever you need it. Log-in to explore the detail behind the metrics in this report, including top-cited authors, most-read articles by region and submissions by country.

New for 2021, you can see more detail in your revenue data, and learn which papers have been funded by a transformational agreement. Later in 2022, you will have access to more detailed metrics on referred and transferred articles. If you aren't yet able to log-in, please speak to your Journal Manager.

Learning, networking, and connecting at events

We welcomed over 400 society leaders at our virtual [Wiley Society Executive Seminars](#) in 2021. We discussed key topics for societies, including open access, diversifying, and innovation. You can catch up on all the talks [here](#). We're still looking to create opportunities to meet in person again - look out for more information on our 2022 program coming soon.

Listening to members

Our **Wiley Member Survey** is the most comprehensive in the industry. We've surveyed over 50,000 current, former, and potential members over 7 years. In 2021 we had responses from 113 countries across 40 subjects. Here are three key themes this year.

Embracing open research

Members are better informed about open research, but they're still underestimating the availability of open access from their societies. They told us that 64% of their societies now offer some form of open access publishing, (up from 56% last year) and that 42% of their societies support open data.

A growing focus on diversity, equity, & inclusion (DE&I)



61% of respondents indicated they would be more likely to join a society that took a strong stance on diversity, and members would like to see closer collaboration between societies and publishers on DE&I issues.

In our white paper [The Future is Now: Accelerating Change in Diversity, Equity, and Inclusion](#), we delve into the detail of what members told us they want from their society.

Career support is vital to membership retention

Career support is the main driver for membership, yet satisfaction with the service societies provide continues to fall:

- 71% said they would be more likely to join a society that provided helpful career development resources
- 70% indicated they would join for help in advancing their career

For ideas on supporting your members' careers, read our blog, [How Societies Can Improve Their Career Support Service to Members](#). You'll find **trends and insights** from all our member surveys at [Wiley Society Member Resources](#), along with practical advice on how to engage and build your membership, including a marketing toolkit.

Supporting editors for success in a rapidly changing landscape

Our virtual event series for editors —**Wiley Editor Seminars** — continued to grow in 2021, with well-attended events on a variety of topics, including DE&I in research publishing, building a reviewer database, and developing editorial boards.

Both [The Wiley Network: For Editors](#) and the monthly newsletter, **Editor Connection**, publish essential content to keep editors informed and engaged. The most read pieces from the year covered [article referrals and transfers](#), [the transition to open access](#), [tips for growing journals with special issues](#), and [DE&I in research publishing](#). Editors can look forward to even more opportunities to learn and connect in 2022.

Keeping up with changes in the industry

You can rely on us to keep you current in whatever ways work best for you:



[Wiley Society Newsletter](#) – Look in your inbox for our monthly partner publication featuring news, case studies, and exclusive insights on engaging members. If you haven't received the newsletter, [subscribe here](#).



[Wiley Society Executive & Research Seminars](#) – Join us and your peers to learn, network, and get inspired with new perspectives and ideas.



[Special Issue podcast](#) – Listen in to expert insights on key issues in research publishing. Recent episodes explore creating an inclusive research community and transitioning a journal portfolio to open access.



[The Wiley Network: For Societies](#) – Explore our resource hub to find ideas and answers to your questions on [engaging members](#), improving research impact, and publishing strategy.



Join us on Twitter by following [@wileyinresearch](#) or connect on [Facebook](#) or [LinkedIn](#).

Increasing your impact with open research

The funding environment is changing rapidly, with increasing requirements for data and research findings to be openly available to all. We work closely with researchers, funders, societies and institutions to ensure research is easily discoverable by the people who need it.

Open access: Making research available to everyone

By removing the barriers to published research, open access makes research findings available to everyone — driving forward the pace and strength of global innovation and invention.

In 2021, we celebrated 10 years since the **launch of our gold open access** program.



We started with 2 gold OA titles in 2011, growing rapidly to **233 in 2021**. Acquiring Hindawi added a further 220 gold OA journals.

90% of Wiley journals now offer an open access publishing option. That's 1,400 journals across 120 subjects.

In 2021, gold and hybrid open access articles accounted for almost a third of all the articles we published - in all a total of **70k articles**, 15k more than in 2020.

Open Access Week in October focused on the theme of “**It Matters How We Open Knowledge: Building Structural Equity**”. Read our thoughts on [The Wiley Network](#), including [looking back at the past 10 years, predicting forwards to the next 10](#), and the [researcher view on open access](#).

Advantages of publishing open access

We undertook an extensive review of the impact of Wiley-published journal articles from 2015-2021. See our [infographic](#) and [white paper](#) on the advantages of open access publication.

Click [here](#) to see the full infographic.



Easier research recognition for open access funding

Open access continues to drive changes in how we publish. Over decades of growth, our journals had defined an incredible 29,000 different article types.

With so many transformational arrangements in place, article categorization has a new importance in recognizing eligibility for open access funding. [The development, implementation, and benefits of concise publishing taxonomy: Article Type Harmonization](#) describes our new taxonomy of 30 article types and the benefits we expect everyone to see.

Open data: Maximizing the value of research

We're committed to facilitating research discovery by encouraging the sharing of research data, methodology and reporting standards, enabling researchers to analyze and reuse data to further discovery.

Our **open data strategy** recommends adopting ‘**expects data sharing**’ as journal policy, where a data availability statement is included with the article, explaining where and how people can access the data or why it isn't sharable. Wiley publishes 756 journals that expect data sharing and 63 journals that now mandate data sharing.

[Open Science Badges](#) incentivize researchers to highlight shared data and materials, signaling to readers that more information is available. The badges were developed by the [Center for Open Science](#) and are available for use in articles on Wiley Online Library.

Open practices: Enabling collaboration and transparency

As research becomes more open, publishing processes must also become more transparent. Open processes enable greater trust in published research and increase accountability. Our commitment to this means exploring big changes to the publishing process.

In 2021, 75 journals took part in our **transparent peer review pilot** in collaboration with Publons and ScholarOne. 12,700 articles have now been published with transparent peer review content.

56 journals offer **Registered Reports**, where study methodologies are peer reviewed and accepted or rejected based on the research question and proposed methodology before the research takes place. Registered Reports improve studies before data are collected and reinforce the fact that positive or negative results add to our knowledge.

As more funders require early accessibility of research findings, researchers are sharing their work on preprint servers before submitting to a journal for peer review. **Under Review** from [Authorea](#) and Overleaf are ideal for researchers to share ideas, create papers, edit documents, and make changes. Authors can then share their research early – providing benefits including earlier views, citations and collaboration opportunities.

A commitment to research integrity

Our commitment to improving research integrity means working together to protect the integrity of research and the reproducibility of data. **Wiley's Integrity in Publishing Group** comprises over 40 experts from our editorial, content, and legal teams, who provide support and advice for Wiley colleagues, editors, and societies on best practice in research publishing, in line with Wiley's Best Practice Guidelines and COPE.

[CRediT](#) recognizes the role each person played to create the published research. In its second year, 172 Wiley journals are using CRediT, with the highest uptake in life sciences and medicine.

A better publishing process for everyone

Authors, editors, and reviewers alike are eager for change that creates a more streamlined publishing process while upholding the highest standards of quality. We've listened to researcher experiences and developed tech-based solutions to reimagine the publishing process.

Making publishing work better, for everyone

Our continuous improvement approach means that a typical article can now publish in **20 days** — with an increasing percentage of articles publishing under **18 days**.

The introduction of **AI tools** for article book-in enables us to greatly reduce the number of author queries at the proofing stage, streamlining the process and delivering an improved author experience.

Version 2.0 of our **HTML proofing system** went live in early 2022, bringing improved functionality and crisper rendering of math and equations. It rolls out to all eligible titles this year.

To better showcase authors' research, we are providing support for large images and deep zoom through the article figure viewer on Wiley Online Library, as well as video and audio capabilities for 3D images, and enhanced article-level metrics.

Simplifying the submission process

Research suggests that, on average, it [takes an author 14 hours to format their manuscript](#) ready for submission. We are reducing this time and effort with two key initiatives designed to improve the author experience — **ReX** and **free-format submission**.

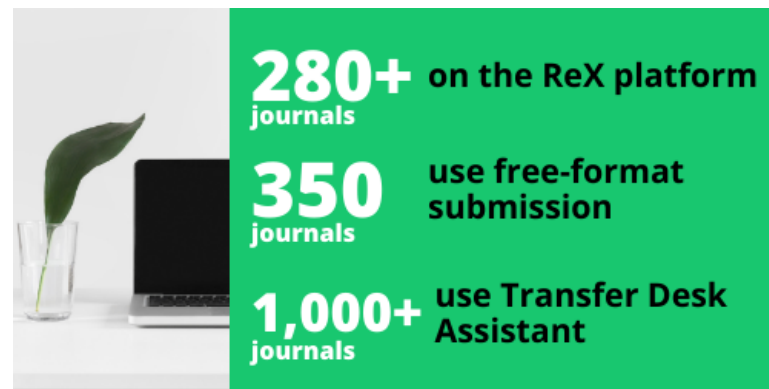
More than 280 journals now use our [smart submission platform ReX](#), and over 100k new submissions have come via this route since its launch. Watch this [video](#) to see how ReX is making submission easier for everyone.

350 journals now offer **free-format submission**, which simplifies the submission process by saving the journal-specific formatting to the revision stage. This improves both the author experience and your journal's reputation in the community. Learn more [here](#).

Transfer networks – helping research find the right journal

More than half of the journals we publish now participate in an editor-driven transfer network or use our automated [Transfer Desk Assistant](#) (TDA). TDA provides a transfer service to authors of approximately 17,000 rejected manuscripts per month.

We heard from societies that you'd like more information on transfer networks and how they help the researcher community find a home for all valuable research. Our [blog](#) and [video](#) show four key benefits of transfers.



An expanded range of services for authors

[Wiley Editing Services](#) offers authors a range of services that help them to prepare their article for submission and promote it post-publication. Several societies have chosen to invest funds to cover a specific aspect of post-publication activity for their authors, including infographics and lay summaries, and are seeing authors benefit from this decision.

Building an engaged reviewer pool

To decrease the burden on editors to find reviewers, we piloted a **Reviewer Selection service** on a small number of journals, to expand the reviewer database and reduce the average time to decision. We hope to scale up the service in 2022.

We sent over 360,000 **certificates of appreciation** to reviewers at over 700 journals in 2021. Nearly 2.2 million reviews for over 1,100 Wiley journals have been recorded on [Publons](#), for more than 370,000 reviewers, where they can be used to support grant applications.

Enabling easier access to research

We're building on our successful [GetFTR](#) pilot, which makes it easy for researchers to access direct, authenticated content across different publishers.

Starting early in 2022, we are also trialling a 6-month project to make 70,000 organic chemistry articles across different publishers available in one central hub. Learn more [here](#).

Wiley Content Sharing facilitates research collaboration by providing subscribers with a simple tool for sharing free-to-read full-text articles with non-subscribers. In 2021, researchers accessed articles over 99k times through this functionality.

Wiley Author Sharing enables authors to generate a link of the full text of their published articles that they can share with an unlimited number of people for non-commercial personal use. There were nearly 200k downloads of shared articles in 2021.

Please speak to your Journal Manager if you'd like to hear more about or adopt any of these initiatives for your journal.

Driving a sustainable route to open access

Driving a sustainable route to open access

Working with future-focused partners we are driving change in the industry through new publishing models. Transformational agreements are transforming scholarly publishing so that researchers at affiliated institutions benefit from access to the millions of articles their subscriptions previously paid for, whilst also funding their open access publishing.

Demand for open access publishing agreements continues to increase. We're at the forefront of negotiating national agreements that deliver open access options at scale whilst managing the transition to open in a sustainable way. These agreements also secure access for your journal in the top institutions, which ensures the highest possible exposure.

From 2020 to 2021 – the difference of a year

Last year, we were negotiating new transformational arrangements across Europe, in countries including **Italy** and **Switzerland**. Those agreements are now signed and active. We were also in the early stages of discussions with governments and consortia elsewhere in the world beyond Europe. This year, as well as four new arrangements in Europe, we now have transformational arrangements in **Australia, New Zealand, Republic of Korea, Israel** and are rapidly expanding access in the **US**.

As of January 2022, these transformational agreements are anticipated to cover the publication of over **53,000 articles**, almost double last year's coverage, across **1,435 institutions** worldwide.

This information is correct as of January 2022. As we continue the transition to open access, we expect increasing frequency of agreements – please speak to your Journal Manager to hear the latest, and please also follow @wileyinresearch on Twitter and Facebook to see announcements.

Expanding coverage across Europe

Throughout 2021 we announced new transformational agreements. This meant we had agreements in **12** different countries (up from **eight** last year) across Europe — including some agreements that have now been renewed for a second term.



Transformational Agreements in Europe:

Austria, Finland, Germany, Hungary, Ireland, Italy, Sweden, Switzerland, The Netherlands and the UK.

In January 2022 we added **Slovenia** to this list, bringing the total eligible institutions across Europe to **1,230**.

Jisc – embedding the open access agreement

We continued to see unprecedented submission numbers from our authors in the UK. We have been working very closely with Jisc to ensure that in 2022 more UK authors than ever before will be able to publish their research open access, throughout the year.

Projekt DEAL – three years of success

We extended our current successful agreement to last throughout 2022. After 3 years of our ground-breaking new partnership with Projekt DEAL, we can see its influence in terms of article publication – with more than 10,000 open access articles published annually – and an increase of 50% usage in Germany. More detail on aims and achievements [here](#).

Increasing open access interest across the US

We have seen a marked increase in interest in negotiating open access agreements across North America. We now have **seven** transformational agreements in place, up from two (**Iowa State University** and **Johns Hopkins University**) last year.



Starting in 2022, transformational agreements with the following organizations are all live:

Texas State University, US Department of Energy, Carnegie Mellon University, Carolina Consortium, VIVA, and Statewide California Electronic Library Consortium (SCELC).

This means that transformational deals now include **104** US institutions, which we anticipate will cover over **2.5k** articles publishing gold open access.

First transformational agreements in Asia-Pacific and the Middle East



In October 2021, we signed our first two agreements in **Australia** and **New Zealand** — with **CAUL** and **CSIRO**. CAUL covers 52 institutions and is expected to have an output of 6k articles.

January 2022 brought further agreements — the **Republic of Korea** with **NST** on behalf of 25 institutions, and our first agreement in the Middle East, in **Israel** with **MALMAD**, covering 24 institutions.

Maximum global reach for high readership

The scale of our sales team means that for many years we've played a pioneering role in partnering with consortia and governments to design new licenses that meet their strategic ambitions.

Our sales strategy is to deliver wide reach, sustainable revenue streams, and the greatest possible audience for your journal to achieve the high impact and high profile it deserves.

An expert team of colleagues across sales, marketing, government affairs, technology, analytics, and publishing work together to ensure maximum discoverability for your journal.

Driving readership through global reach and discoverability

We continually develop Wiley Online Library, helping researchers the world over read and cite the best evidence available.

In 2021, readership of articles on Wiley Online Library increased by almost a third (**29.5%**), following an increase of 20% in 2020, and 35% in 2019. Articles were read **825 million times** in 2021, across **249 countries** and territories.

Open access usage increased by **71%** and now represents **26%** of total journal usage across Wiley Online Library.

We put in place several new improvements to maximize usage this year, including: 'remembered authentication' to keep users logged in between visits, removing the article limit from email content alerts, and a new email design that encourages more full-article views.

In 2022, Wiley Online Library will provide enhanced article-level metrics, expanded video and audio capabilities, and ongoing user experience optimizations across article and journal pages.

Navigating a mixed economy for a sustainable transition

We are currently operating in a mixed economy, and we know how important it is that the transition to open is sustainable and at the right pace for your journal and society.

In 2020, we had to take action to reduce bronze open access content, articles that are free to access but not formally licensed for reuse, when journal subscriptions were threatened with cancellation based on bronze open access levels of more than 30%.

After much work in 2020 and 2021, bronze content is now 13% of articles, and 26% of all content across Wiley-published journals.

Offering different sales options for different markets

Maximizing your reach with the 'All Journals' license

In countries where open access agreements are under discussion, or not yet of interest, we continue to see strong uptake and use of our Wiley 'All Journals' license.

Including transformational agreements, **40 countries** representing over **1,800 institutes** and **3,300 sites** have purchased the 'All Journals' license.

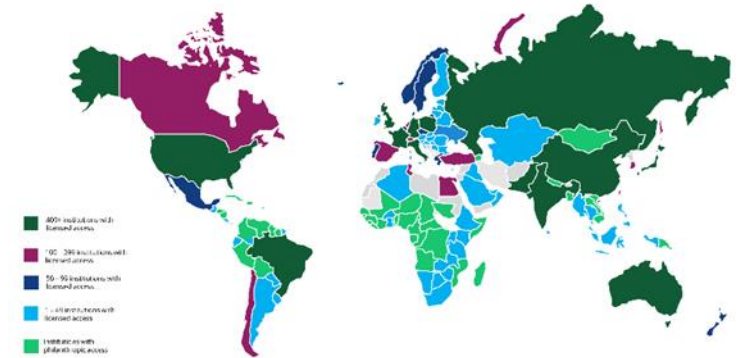
Customers in countries including the **US, Japan, Belgium, and France** converted licenses to the Wiley 'All Journals' license in 2021.

Opening up new audiences globally – journal license sales

We continue to offer different models to suit different markets. In 2021, we signed new multi-year licenses with Dr Abdul Kalam Technical University in **India**, which has 379 different sites, and the shared access Saudi Digital Library consortium in **Saudi Arabia**.

Wide access to journals worldwide via Wiley licenses

Click [here](#) to see the full-size version.



Consortia in **Turkey, Chile** and **Brazil** added more member institutions in 2021 to provide expanded access to content.

Countries that purchased licenses for the first time in 2021 included **Belarus, Iran, Iraq, Zambia, and Ukraine**.

Access for everyone via philanthropic initiatives

This year, 4,600 institutions from 75 countries had philanthropic access to 1,297 titles. We work closely with R4L and other organizations to provide philanthropic access to our content around the world.

Numbers of institutions with access increased in countries including **Nepal, Somalia** and **Mali**.

Policy briefing – updates from around the world

Many of our partners have commented that policies seem to be changing faster than ever, and we want to make sure you feel connected with the policy changes that affect you.

Our policy team is well connected in all key territories, engaging in frequent discussions with senior officials in governments and policymaking agencies around the world to help shape policy decisions.

Connecting societies with policy decisions

With rapidly changing policies around the world, we remain convinced that the best approach for societies is to engage constructively with policymakers, diversify sources of revenue, and look for opportunities to transition to open access.

We'll continue to notify you of opportunities for discussion and engagement directly with policymakers, and we'll create those opportunities for discussion whenever and wherever we can.

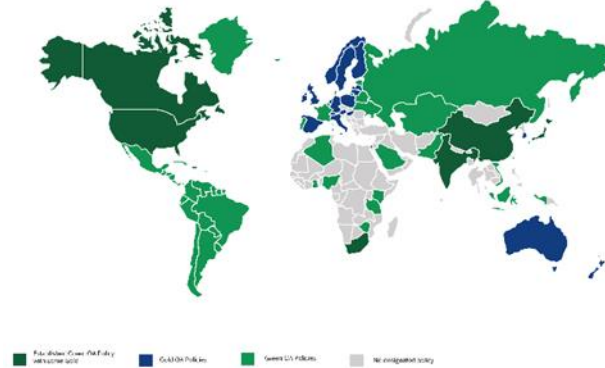
Open access policies around the world

The [ESAC Registry](#) shows that there are now 300 transformative agreements across publishers around the world. Whilst the majority of them are focused in Europe, this year we've seen open access mandates taking a stronger hold elsewhere around the world.

Four years after its initial release, **Plan S** started to come into effect in 2021. As each funder has a different implementation timeline, there will be variation at the article level. A reminder of Plan S routes to compliance can be found [here](#).

193 member states at **UNESCO's** General Conference adopted the first international recommendation on open science. By doing so, they agree to common standards for open science and to adopt a common roadmap. The [Recommendation](#) sets out to make science more equitable and inclusive by increasing transparency and accessibility.

You can see the full-size version of the OA Policies map [here](#).



United States – The new Biden administration brought in Dr. Eric Lander, from the Obama administration, to lead the Office of Science and Technology Policy (**OSTP**). Dr. Lander has spoken publicly about reviewing open access policy, and we're expecting to hear more on a likely strong open access policy this spring 2022. Other markets, including the UK and Australia, have set a new precedent for the creation of a government-funded agency.

AAP and **STM** are leading engagement with OSTP and intend to take an active approach collaborating with policymakers. We recommend societies work with them to send a common voice.

NASA has designated 2023 as the Year of Open Science, as part of their 2022-2027 Transform to Open Science Initiative. They plan to teach researchers how to make sharing a part of their workflow and advocate for international open science policies.

European Union – Horizon Europe, the new EU research program, took effect in 2021 and will last until 2027, with a €95.5bn budget. The program will prioritize high-quality research that tackles global challenges such as climate, health, food, and energy. Horizon Europe favors open access publishing and Wiley's growing list of transformational agreements provide a compliant publishing route.

The [EU reported](#) that over 80% of the papers funded by Horizon 2020, (the previous program) were published open access.

United Kingdom – The long-awaited UK Research and Innovation (**UKRI**) policy, which administers and oversees all public and university funding, was announced in August. The new policy was broadly aligned with Plan S in accepting publication in both gold open access journals and hybrid journals in transformational agreements.

China – Despite the challenge of COVID, 2021 saw another 9.7% increase in R&D spending. China's double-digit growth in OA publication output and the push for OA transition elsewhere is driving policymaker **CAST** to consider a national OA policy or APC sponsorship. Funders and leading research institutions are playing a leading role in advocating for open access, and **CAS**, **NSFC**, and **CAAS** have moved to create their own green open access policies.

Australia – The evolution of open access policy is now taking on the force and voice of government. The **Australia Chief Scientist, Dr Cathy Foley**, joined us for our [Wiley Research Seminar: Australia](#). She introduced the idea of an Australian model for open access: for all Australians to freely access research from anywhere, and to have all Australian research published open access. The transformational agreements we made in October with both **CAUL** and **CSIRO** are aligned with this mission, and we look forward to providing more information on this next year.

Japan – In November, the Japanese Prime Minister Fumio Kishida announced a \$88 bn university fund to promote Japan as a science and technology nation. This planned stimulus package focuses on a growth strategy of digital transformation and green innovation, and he called it a 'new capitalism', in part due to its goal for wealth distribution to households.

India – Progress has been made to establish a National Research Foundation (**NRF**) in India, with budget allocation for the next five years announced in 2021. The NRF will strengthen governance of research institutions and improve links between R&D, academia, and industry.

Building a more equitable future

The development and rollout of a COVID vaccine in such a short space of time is a triumph that demonstrates the central contributions of science to the welfare of mankind. It showcases the power of bringing different skills and communities together to address a common goal.

Sharing COVID research quickly and widely

COVID research published by Wiley continued to be shared via the [World Health Organization](#), with over 1,600 articles now included. Likewise, we continued to deposit all existing and forthcoming COVID research into PubMedCentral, as well as making the articles freely available via Wiley Online Library on our [COVID-19 research hub](#).

Communicating research outcomes

We're committed to supporting science and bridging the communications gap between research, the media, and the public.

In 2021, we held five [Wiley Science Talks](#) in partnership with the [World Federation of Science Journalists](#) to connect societies and researchers directly with the journalists that share their research. These sessions encourage evidence-based journalism, enhance accuracy of science news coverage, and enable discovery and understanding of the latest research.



In June, our podcast [This Study Shows](#) returned for a third series, sharing the fascinating stories of people who are changing the world with their science communication. It also launched a new spotlight series meeting the scientists behind research that made headlines, and their journey to publish their work.

[This Study Shows](#) has now shared contributions from 50 leading experts to over 13,000 listeners. Find it wherever you normally get your podcasts — direct links [here](#).



Environmental sustainability: reducing our climate impact

We've been looking closely at our climate impact. Print journal makes up a big part of Wiley's carbon impact, so we launched our **Go Green Fund** to plant a tree for every journal copy that we stop printing.

We've set a target of planting 1m trees over the next 3 years and are on track to meet this ambitious target, having planted [200,000 trees](#) in the first six months since launch.

A further 90 titles moved online-only from the start of 2022, meaning that over 50% of journals published by Wiley are now online-only.

We also focused on plastic pollution and targeted the removal of plastic packaging. All titles printed in the UK moved to paper packaging, eliminating 1.3m plastic bags. Over 60% of our titles now ship with either no packaging at all or in paper envelopes. We are exploring options for the rest.

Learn about your journal's sustainability with our **Carbon Footprint calculator**, which helps to identify the carbon footprint of a print journal. For more information speak to your Journal Manager.

In fiscal year 2021 we again achieved **Carbon Neutral Certification** for our operations and consumed **100% renewable energy** for all locations. In 2022, we will focus on shrinking our environmental footprint further, including optimizing materials used in production and working with vendors to minimize environmental impact.

Tackling equity issues in our community

We know that members want publishers and societies to work together on DE&I initiatives.

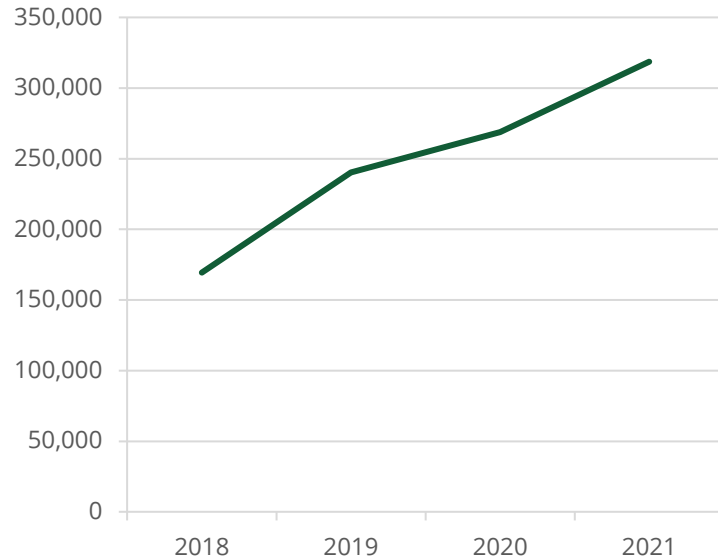
We're still listening and learning in order to take the right and important steps for our communities and future community members. Some of the initial steps we've taken so far include:

- Continuing our collaboration with 48 publishers and societies in the [Joint Commitment for Action on Inclusion and Diversity in Publishing](#), committed to understanding and reflecting our research communities and developing standards and processes for collection of self-reported data.
- Launching [RISE \(Research in Support of Equity\)](#), providing free-to-access curated collections around the topic of social equity. For example, see the curated collection '[Diversifying Museums](#)'.
- We promoted awareness of underrepresented research communities by supporting initiatives such as [@BlackinChem](#) and [@BlackinNeuro](#).
- We supported our author community by updating our [author name change](#) policy to support anonymity of authors who wish to change their name on already-published research, introducing author pronoun capability to Wiley Online Library, and enabling authors to select the 'Mx' honorific in their account details on many of our submission systems.
- We provided thought leadership via articles on the [Wiley Network](#) exploring ways to improve inclusion in our journal practices.
- DE&I experts collaborated with us for colleague training and [Virtual Seminars](#).

We are your partner in this as in everything else, and we look forward to taking our next steps on this important journey.

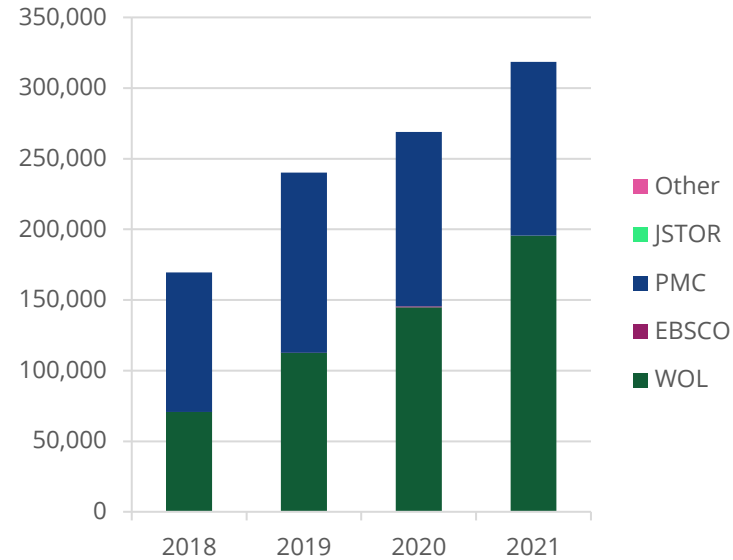
Readership

Article downloads trend



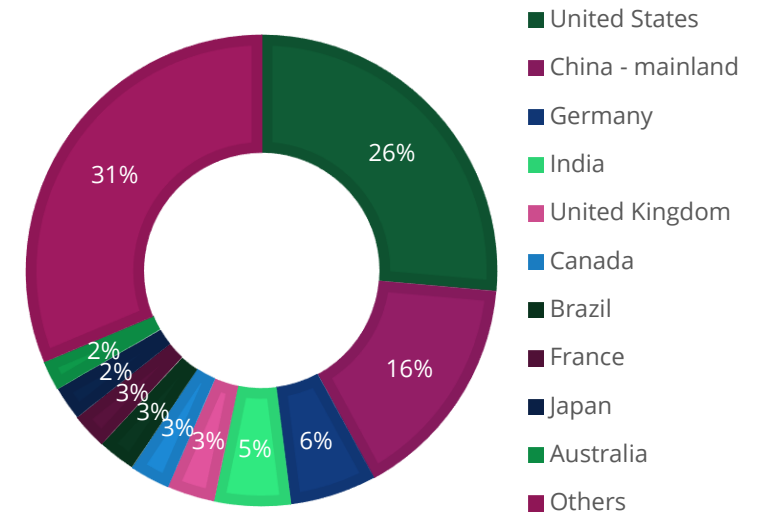
This chart shows the increase in the number of full-text article downloads for your journal in the period 2012 to 2021. The total includes usage on Wiley Online Library, PubMed, and other third-party databases. Downloads via Wiley Online Library increased (35.0%) in 2021. This compares with an increase (31.9%) across all Wiley journals in the Plant Science / your subject area.

Article downloads by source



This chart shows the origin of full-text downloads of your journal across Wiley Online Library and other major third party providers.

Top 10 downloading countries/regions



This chart shows the top 10 countries/regions from which articles in your journal were downloaded via Wiley Online Library in 2021, and the percentage each country/region contributed to total usage. All other countries/regions are combined under "Others."

Readership

Most downloaded articles on Wiley Online Library

Rank	Author(s)	Article Title	Volume	Issue	No. of Accesses
1	Thapa, R. et al.	The Plant Pathology Challenge 2020 data set to classify foliar disease of apples	8	9	3,987
2	Easlon, H. & Bloom, A.	Easy Leaf Area: Automated digital image analysis for rapid and accurate measurement of leaf area	2	7	3,175
3	Folk, R. et al.	High-throughput methods for efficiently building massive phylogenies from natural history collections	9	2	2,843
4	Li, F. & Harkess, A.	A guide to sequence your favorite plant genomes	6	3	2,756
5	Mahood, E. et al.	Machine learning: A powerful tool for gene function prediction in plants	8	7	2,608
6	Cassidy, S. et al.	Using clear plastic CD cases as low-cost mini-rhizotrons to phenotype root traits	8	4	2,507
7	Mavrodiev, E. et al.	A new, simple, highly scalable, and efficient protocol for genomic DNA extraction from diverse plant taxa	9	3	2,504
8	Labiak, P. et al.	A target enrichment probe set for resolving the flagellate land plant tree of life	9	1	2,295
9	Culley, T. et al.	Research inequity in the plant sciences	9	4	2,104
10	Pegg, T. et al.	Algae to angiosperms: Autofluorescence for rapid visualization of plant anatomy among diverse taxa	9	6	2,099

This table includes details of the 10 most-downloaded articles of 2021. The average number of downloads per article published in your journal in 2021 was 717. Across all journals that Wiley publishes in the same subject area, the average number of downloads per article was 700.

Top referrers

Rank	Referrer Service	% of Downloads
1	Google Scholar	23.6%
2	Google Search	19.1%
3	Twitter	3.7%
4	Bing	1.9%
5	Facebook	1.4%

Open search continues to play a key role in driving readership. This table shows the top 5 known referrers, and the % of total downloads resulting from each.

Article downloads via Wiley Content Sharing

In 2021, 37 sharing links were generated via the Wiley Content Sharing service, resulting in 0 full-text downloads. In addition, links shared by authors resulted in 0 downloads. Links shared by media sites generated a further 0 downloads.

Marketing

Your marketing objectives for 2021

At the start of the year, we agreed on these marketing objectives and priorities for *Applications in Plant Sciences*:

- **Authorship:** Increase article output
- **Authorship:** Accelerate transition to Open Access
- **Readership:** Promote novel, cutting edge research
- **Readership:** Increase reach through growing readership
- **Brand Awareness:** Maximize discoverability and access of content
- **Collaboration:** Foster global collaboration
- **Collaboration:** Support strategic, new, or high priority disciplines

From encouraging authors to submit their next articles to *Applications in Plant Sciences*, to recognizing and promoting published research, marketing plays a crucial role in reaching your goals. The research ecosystem is shifting, and researchers now expect personalized communications targeted to their current publication stage.

To meet these needs, we deployed a mix of communications that were creative, experimental and social-driven, targeting authors and readers throughout the publishing process.

New pilot programs and initiatives increased brand awareness. We experimented with new channels such as the Researcher App, which enabled direct engagement with highly targeted researchers. To keep researchers at the heart of everything we do, we also completed a segmentation project that provided fresh insights into how to best engage researchers with our marketing. More on this in 2022.

The continuation of global travel and meeting restrictions due to COVID meant that conferences were cancelled or moved online-only. We continued to see that exhibits associated with virtual conferences weren't well attended and provided few opportunities to engage with delegates. Instead, we developed ways to use the presentation program to engage with delegates, such as using journal-branded videos, slides, and hosting virtual sessions.

Although 2021 continued to be a challenging time, the marketing strategy for *Applications in Plant Sciences* remained focused on providing support to your key audiences at all points along their journey. On the following pages you'll find the key strategies used to achieve your journal objectives and their 2021 results.

Marketing

Key 2021 strategies and results

Strategy	Objectives				Results and Highlights
	Authorship	Readership	Brand	Collaboration	
Top Cited Author recognition: An email campaign to congratulate authors of top cited articles. By generating interest around highly cited content and nurturing author relationships, authors are encouraged to publish in your journal again.	●	●	●		The email campaign had an overall open rate of 254.34%. We sent this to 46 of your journal's authors.*
Impact Factor announcement: A journal-branded email to promote the new ranking to recently published authors.	●		●		We sent this to 192 of your journal's authors and had a 61% open rate.
Home for Your Next Paper campaign: A personalized email that helps prospective authors choose to submit their research to your journal, reaching them when they are ready to submit a new article. This campaign has a dedicated stream focused on authors in China.	●		●		The email campaign had an overall open rate of 52.3%. Your journal received 1 submission from this campaign.*
Driving usage in China: Using email and paid social media to drive usage among Chinese researchers and librarians, including promotion of the bulk downloader tool created for the Chinese market. This campaign demonstrates the power of paid social in China.		●		●	Paid and organic social was very successful here, generating over 51,000 page views in the first four months, and supporting the researcher in their reading journey.

Open rate Industry Benchmark: 20.8% (Source: 2021, Campaign Monitor)

*These campaigns will continue to run through 2022, and due to the time taken from email to submission we anticipate this number will continue to grow.

Marketing

Key 2021 strategies and results

Strategy	Objectives				Results and Highlights
	Authorship	Readership	Brand	Collaboration	
<p>Open Access Week: An industry-wide week-long event in October where we promote the benefits of publishing open access in journals. This year's content strategy focused on the 10th anniversary of Wiley's fully gold OA program, and the changing landscape of OA scholarly publishing.</p>	●	●		●	Over 2,000 people viewed Open Access Week content on The Wiley Network.
<p>Peer Review Week: An industry-wide week-long event in September where we promote the benefits of peer review. This year's content strategy included the theme of trust in peer review. Engagement tactics on social media included posts and polls to ask researcher opinion on peer review.</p>	●	●		●	Peer Review Week content on The Wiley Network was viewed over 1,500 times.
<p>Wiley Open Access Accounts program Targeting researchers who belong to an institution that has a Wiley Open Access Account or that is in a transformational agreement, this campaign informs researchers of funding opportunities available to them.</p>	●		●		The email campaign delivered 308,000 emails with an overall open rate of 46%.

Open rate Industry Benchmark: 20.8% (Source: 2021, Campaign Monitor)

Marketing

Expanding brand awareness using social media

As an essential part of the marketing mix, social media continues to be a valuable channel for engaging with readers and authors. It is a powerful tool that we are constantly refining to help build connections with relevant audiences and communities.

Through social media channels such as Twitter and Facebook, we were able to drive visibility and brand awareness for *Applications in Plant Sciences*.

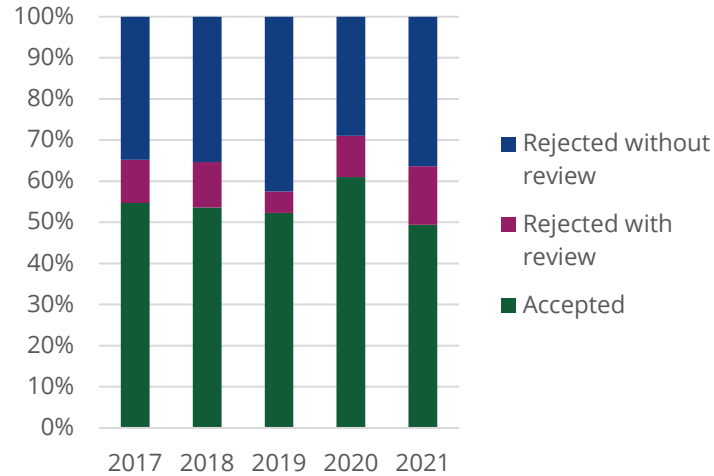
In China, the use of local social networks such as Sina Weibo, WeChat, and Bilibili enable us to connect with a large number of researchers, authors and society members. In 2021, WeChat averaged 44k views per month, and Weibo 167k monthly views. Articles are carefully selected, and posts translated into Chinese.

These articles were among the most liked or shared posts in 2021, as measured by Altmetric, which tracks the online attention that research outputs receive by pulling in data from three main sources: social media, traditional media, and online reference managers.

Article Title	Highest Altmetric Attention Score 2021	All Mentions	Mentions from Social Media	Mentions from News & Blogs	Mentions from Policy Documents & Patents
Using clear plastic CD cases as low-cost mini-rhizotrons to phenotype ...	134	193	191	2	0
High-throughput methods for efficiently building massive phylogenies ...	118	149	138	11	0
A target enrichment probe set for resolving the flagellate land plant ...	107	109	100	9	0
SSRgenotyper: A simple sequence repeat genotyping application for ...	83	19	8	11	0
Composite modeling of leaf shape along shoots discriminates <i>Vitis</i> ...	81	145	144	1	0

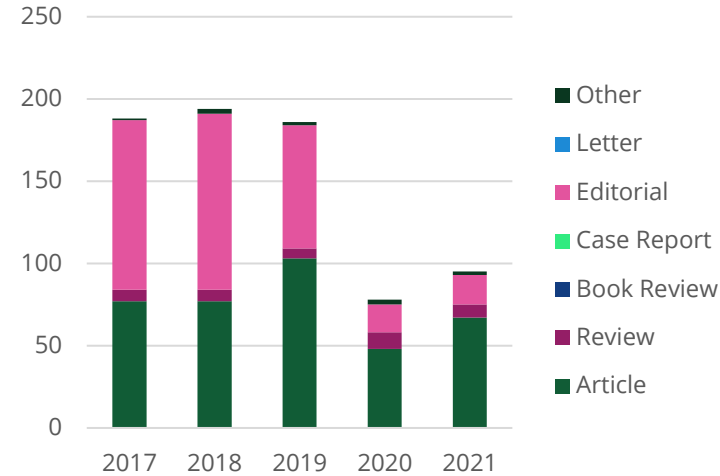
Author Experience: Submissions

Accepted and rejected articles



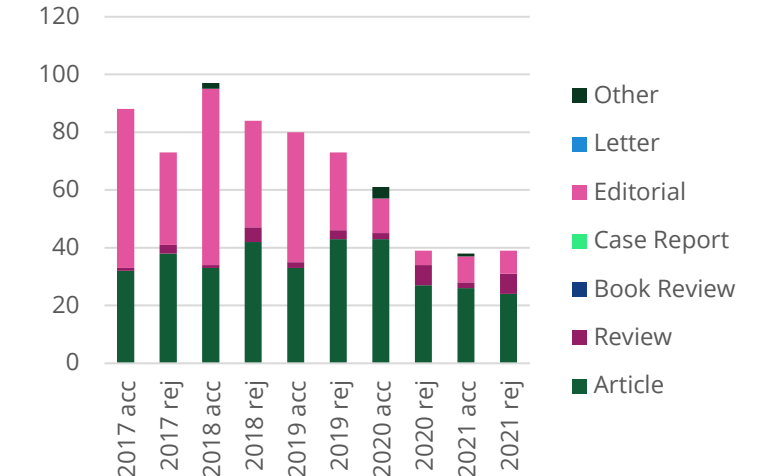
This chart shows the proportion of accepted and rejected articles listed in the year the final decision was taken. The accept rate was 49.4% in 2021, a decrease from 61.0% in 2020. This compares with an accept rate of 28.0% across all Wiley journals in the Plant Science subject area.

New submissions by type



The total number of submissions in 2021 increased (21.8%) compared with 2020. This compares with a decrease (-2.1%) across all Wiley journals in the Plant Science subject area.

Accepted and rejected articles by type



This chart shows the number of accepted and rejected articles by article type.

Quantity and speed of reviews

	2017	2018	2019	2020	2021
Number of review invitations sent	309	425	449	334	346
Number of reviews invitations accepted	150	206	196	144	130
Number of reviews completed	148	200	190	168	122
Median days to review completion	14	14	14	15	13

This chart shows review data for original submissions only for the past five years. Additionally, 44 reviews were claimed on Publons in 2021 by 39 reviewers, a 37.1% uptake.

Author Experience: Submissions

Speed of review process

Includes all articles, including those that were rejected without peer review

Median number of days (min-max)	2017	2018	2019	2020	2021
Submission to first decision	21 (1-133)	25 (1-101)	23 (1-144)	45 (1-178)	39 (1-151)
Submission to final decision	42 (1-194)	47 (1-259)	41 (1-362)	82 (1-306)	71 (1-281)
Submission to acceptance	72 (8-194)	69 (2-259)	73 (1-362)	125 (1-306)	105 (2-281)

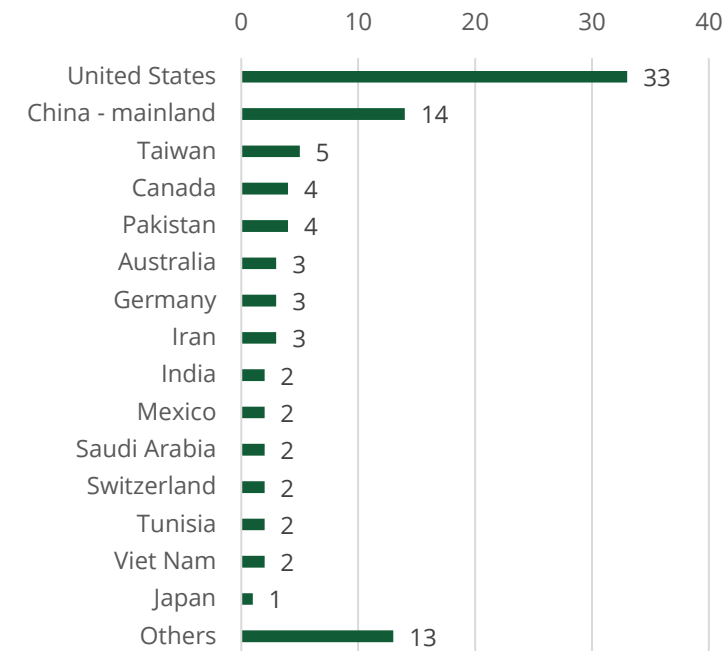
Articles are included in the year the decision was made, and data includes all articles, whether or not they were sent out to peer review. The number of days from submission to acceptance in 2021 was a median of 105 days, down from 125 days in 2020. This compares with a median of 123 in 2021 across all Wiley journals in the Plant Science subject area.

Excluding articles that were rejected without peer review

Median number of days (min-max)	2017	2018	2019	2020	2021
Submission to first decision	55 (19-133)	51 (21-101)	56 (21-144)	60 (21-178)	69 (27-151)
Submission to final decision	88 (19-194)	88 (21-259)	97 (38-362)	124 (29-306)	104 (34-281)
Submission to acceptance	99 (53-194)	100 (37-259)	101 (52-362)	129 (54-306)	107 (61-281)

Articles are included in the year the decision was made, and data excludes articles that were rejected without review. The number of days from submission to acceptance in 2021 was a median of 107 days, down from 129 days in 2020. This compares with a median of 128 in 2021 across all Wiley journals in the Plant Science subject area.

Country/region of submission



This chart shows the top 15 countries/regions ranked by the number of submissions to the journal. All submissions counted were submitted in 2021. The remaining countries / regions are grouped into "Others."

Thank you

