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# DIVERSITY DATA REPORT 2021

American Chemical Society

# Introduction

Chemistry is known as the central science not only because of its role in bridging the physical sciences and the life and applied sciences, but also because it impacts broad areas of human endeavor. Yet while chemistry may touch all our lives, we are not all equally represented in chemistry as a professional field.

At the American Chemical Society (ACS), we believe in advancing the broader chemistry enterprise and supporting its practitioners for the benefit of the Earth and all its people. We cannot accomplish this without empowering great minds, no matter who they are or where they come from. Yet scholarly publishing too often fails to assess the work of scientists fairly and equitably, as evidenced by the disparities in representation covered by this report and reports by other scientific publishers. As one of the world's largest scientific organizations, and publisher of chemistry journals, it is critical that we address the disparities and biases that have persisted in our field for far too long.

Diversity, equity, inclusion, and respect (DEIR) are among the core values of the ACS. Research demonstrates that diversity is strongly associated with improved [organizational performance](#), [better group decision-making](#), and [more citations](#). However, analyses by [the Royal Society of Chemistry](#), and the [American Geophysical Union](#), among others, continue to show large gender, racial, ethnic, geographic, and age disparities in scientific publishing and STEM fields. Today's systemic injustices are robbing us of tomorrow's breakthroughs.

In June 2020, the Editors of ACS Publications journals wrote a joint editorial on [addressing systemic racism in the chemistry community](#). That editorial made several commitments, including a pledge to gather and make public our “baseline statistics on diversity within our journals, encompassing our editors, advisors, reviewers, and authors.” This report honors that promise with baseline data on the gender, racial, ethnic, and regional representation

*“We embrace and promote diversity in all its forms, not only to create a more inclusive environment for the practice of chemistry, but also to provide fair and just outcomes for all to achieve their full potential. Inclusion of and respect for people of all backgrounds, perspectives, experiences, and ideas will lead to superior solutions to world challenges and advance chemistry as a global, multidisciplinary science.”*

**— ACS Strategic Plan**

across chemical sciences publishing roles at ACS. ACS Publications will use the information herein to inform decisions to address systemic inequities. We are making this full report public so that our process can be transparent and promote accountability as we evaluate our ongoing progress.

In addition, this report describes some of ACS’ long-standing and more recent diversity initiatives. It also explores some ideas for future action. We will share information about follow-up analyses and initiatives as we continue our work on this front.

Understanding the mechanisms of bias in our journals, designing solutions, and testing those solutions will be a challenging and iterative process. There will be errors and adjustments along the way, but we will persist in this endeavor, as the goal of equal access and broad contribution to the field of chemistry is unquestionably worth it.

*To share feedback about any aspect of this report, visit [ACS Axial](#) and fill out the form to leave a comment for the ACS Publications team.*

# Executive Summary

## Purpose

This report benchmarks the demographics of the ACS Publications community of authors, reviewers, Editors, and Editorial Advisory Board (EAB) members. It supports our efforts to identify areas where representation improvements can be made by formulating targeted strategies to address bias in our journals.

## Data Collection

The data for this report come from a recent survey of authors, reviewers, editors, and EAB members, as well as existing geographical data from these same groups.

## Gender Representation

Men comprise the majority of every community reported on here, often by a ratio of 2:1 or more compared with women, with nonbinary individuals comprising less than 1.5% of all communities.

## Geographic Representation

Three regions are home to most people in the roles covered by this report. The majority of authors and reviewers reside in East Asia and the Pacific, followed by either the United States and Canada, or Europe and Central Asia. Most editors and EAB members are based in the United States or Canada.

## Racial and Ethnic Representation

Persons who self-identify as East Asian or White account for a majority of authors, reviewers, and editors. Respondents identifying as White comprise the greatest proportion of published authors, reviewers, and editorial positions, while those respondents who identify as East Asian represent the majority of submitting authors. No other group comprises more than 10% of any category.

## Current Diversity Initiatives

ACS Publications has spent the past 18 months focusing on the specific diversity commitments made in June 2020, along with implementing several additional DEIR initiatives during this time. These programs stand atop continued efforts to diversify our Editorial Boards and a long history of diversity programs across the ACS.

## In the Future

ACS Publications will use the data in this report to design and evaluate procedural and programmatic changes to address the systemic issues in peer review, editor selection, accessibility, and other factors affecting diversity in scientific publishing.

# Approach to Data Collection

This report is primarily based on data from a demographic survey of our various user groups. The survey was developed by ACS Publications in collaboration with the [ACS Committee on Minority Affairs](#) and [Gay and Transgender Chemists and Allies](#), a subdivision of the ACS Division of Professional Relations. Respondents were asked about their gender and racial/ethnic identities, birth year, highest academic degree, and the year that degree was obtained. In all cases, respondents were given the option to self-describe if their identity was not among the options offered or indicate that they preferred not to disclose that information. The survey can be viewed in [Appendix 1](#).

The survey was completed by corresponding authors and co-authors who submitted to ACS Publications journals between February and September 2021 and reviewers who completed reviews in that same period. The survey was also provided to Editors and EAB members of ACS Publications journals active in 2021.

Survey response rates varied by geographic region, but these variations had minimal impact on the observed demographic proportions. For the sake of simplicity and consistency with other published literature, the data reported here are not weighted by geographic response rate.

In addition, geographical data are collected from all ACS Publications authors during manuscript submission and are provided by over 90% of reviewers. All Editors and EAB members also provide geographical data as part of the onboarding process for those roles.

# Definitions

Before exploring how different groups are represented across different roles, it may be helpful to define those roles and explore how people are selected for these positions.

## Editor-in-Chief (EIC)

As per [ACS Bylaws](#), an Editor-in-Chief (EIC) is an active researcher who is responsible for all editorial decisions related to the journal as well as developing and implementing its strategic vision. They are initially appointed for a 5-year term with the option to be renewed for up to two additional terms. New EICs are identified by a search committee comprised of a current EIC of another ACS Publications journal, a representative of the Society Committee on Publications, and active researchers from the community. This committee advances the EIC recommendation to the ACS Board of Directors for approval.

## Editorial Board

A journal's Editorial Board comprises some or all the following: Associate Editors, Senior Editors, Topic Editors, and other editorial personnel. The EIC appoints them to assist in managing scientific peer review and editorial decision-making for submissions the journal receives, with additional responsibilities varying by journal. EICs assemble their Editorial Boards to represent the communities their journals serve, aiming to achieve appropriate topical expertise across the journal's scope and diversity of gender, ethnicity, and global representation, as per ACS Bylaws. In this report, the EICs and the Editorial Boards are grouped together as "Editors." The survey response rate for Editors is 61%. EICs and Editorial Board members were considered together in all the analyses covered by this report.

## Editorial Advisory Board (EAB)

This is an advisory body, also appointed by the EIC, whose members aim to provide feedback, suggestions, and support for the journal in their area of expertise. Specific EAB roles and responsibilities vary by journal. The survey response rate for EAB members is 39%.

## Reviewers

A reviewer is a subject matter expert invited by an editor to undertake peer review of a manuscript. They provide suggestions to authors on how to improve their manuscripts and provide editors with their recommendations on a manuscript's suitability for publication in the journal. The reviewers whose demographics are reflected in this report have all been invited to complete at least one review since February 2021. The survey response rate for reviewers completing reviews is 7%.

## Corresponding Author

In this context, a corresponding author is the author of a manuscript with whom the journal editorial office communicates during the editorial and peer-review process. This author is also the author (or one of several authors) to whom readers of the published article can address questions, comments, and requests for materials and/or data as appropriate after publication. The corresponding authors whose demographics are reflected in this report have all submitted at least one article since February 2021. The survey response rate for corresponding authors, both those submitting and those publishing, is 9%.

## Co-authors

These are the authors outside of the corresponding author who contributed to a manuscript. The co-authors whose demographics are reflected in this report have all been listed on at least one submitted article since February 2021. The survey response rate for all authors combined is 5%.

# Current Representation Data

## Gender Representation

The imbalance between the number of men and women in each stakeholder group is present at every stage of the publishing process for ACS Publications journals. However, the degree of that imbalance varies by activity. The collective proportion of nonbinary persons is below 1.5% across all roles.

### **AUTHORS**

Among all the authors, men have far greater representation than women or nonbinary persons, in line with global trends on gender disparity in chemistry.

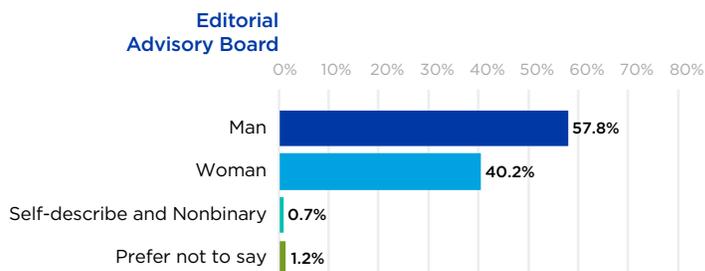
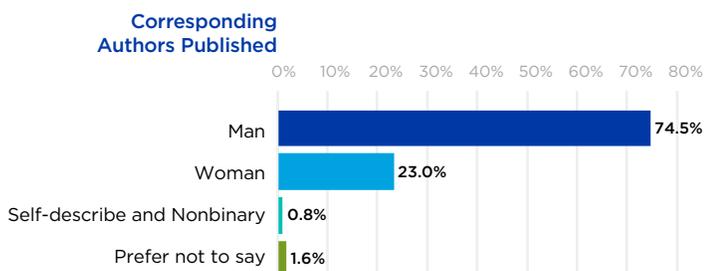
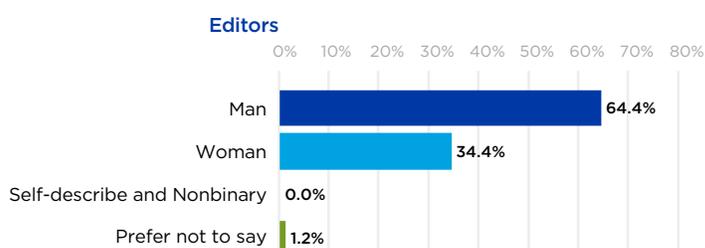
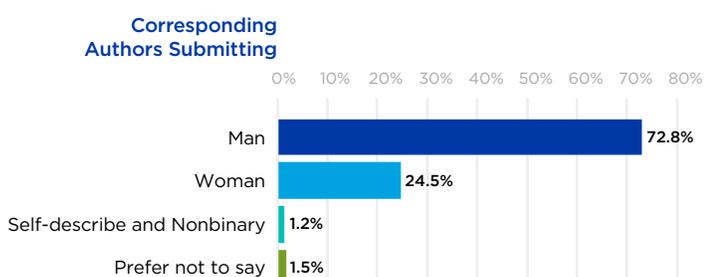
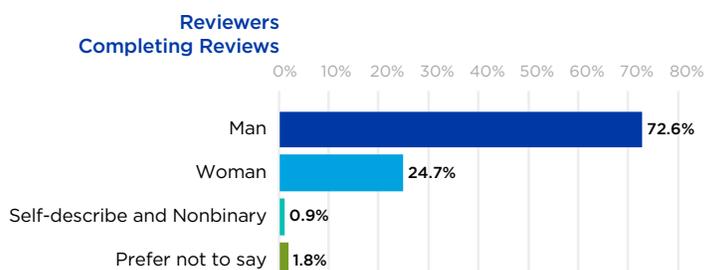
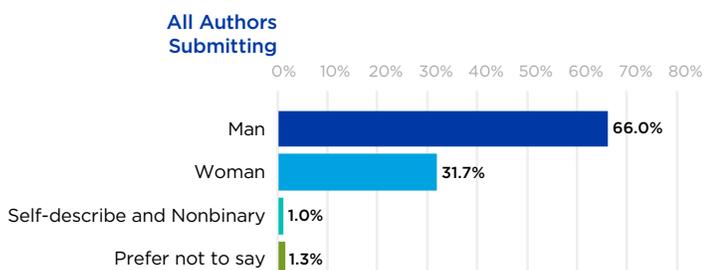
The acceptance rate for women authors (36%) is very similar to that of men (37%) and nonbinary individuals (37%). However, women submit about 10% fewer manuscripts per person each year. They are also less likely to be the corresponding author on a paper. Women make up 32% of all authors on submitted papers, but just 24% of corresponding authors. Nonbinary authors make up less than 1.5% of all author groups.

The data show that the imbalance between men and women is more pronounced among authors who have had their doctorates for more than 20 years. Women make up just 17% of authors who have had a Ph.D. for more than 30 years. However, 26% of authors who have had their Ph.D. less than 20 years are women. The proportion of nonbinary authors is greatest among authors who obtained their Ph.D. in the past 10 years.

### **REVIEWERS**

Reviewer gender demographics closely mirror corresponding author demographics, with men representing 73% of reviewers, women 25%, and nonbinary persons 1%.

# Gender Across Roles

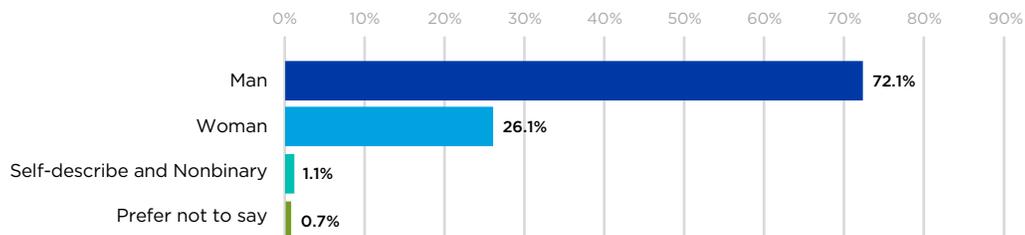


## EDITORIAL BOARDS AND EABS

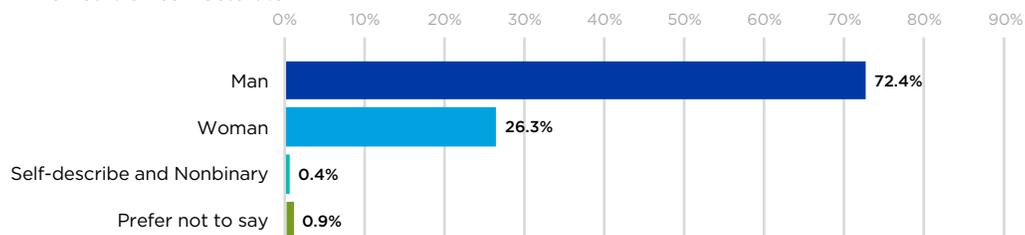
Women have greater representation on ACS Publications journal Editorial Boards and EABs than among the author and reviewer groups. More than one-third of Editors (34%) and EAB members (40%) are women, compared to roughly one-fourth of corresponding authors (24%) and reviewers (25%). Nonbinary persons make up less than 1% of both groups.

# Gender and Time Since Doctorate

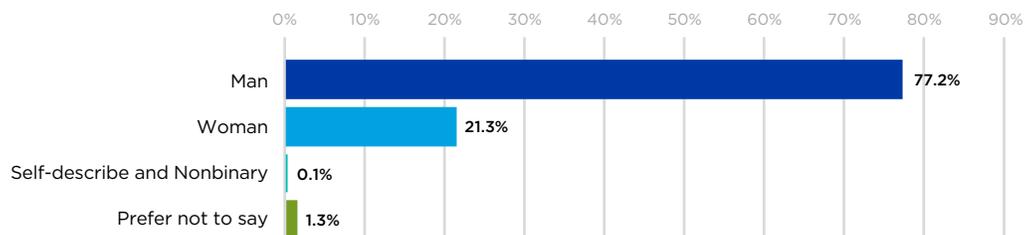
## 0-10 Years Since Doctorate



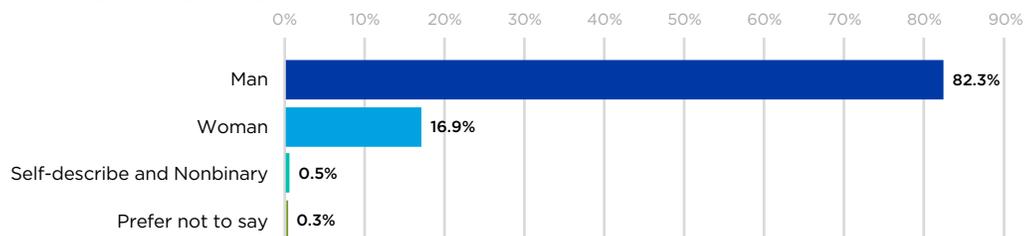
## 11-20 Years Since Doctorate



## 21-30 Years Since Doctorate



## 31+ Years Since Doctorate



## Geographical Representation

While ACS Publications journals include articles from all over the world, our submission data show that some areas are represented more than others. The data in this section were collected during the submission/publishing process, rather than during the survey. Thus, they provide data for all authors who submitted a paper during the time period and 90% of reviewers. Geographical data are also collected from all Editors and EAB members as part of the onboarding process.

For ease of reporting, countries have been grouped into eight regions for this report. Please see [Appendix 2](#) at the end of this report for a list of countries included in each region.

### AUTHORS

Submissions and publications are dominated by three regions: East Asia and the Pacific, the United States and Canada, and Europe and Central Asia.

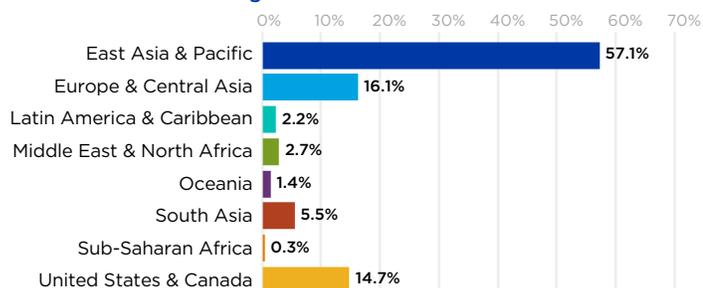
East Asia and the Pacific are home to a majority of all authors (57%) and corresponding authors (51%) submitting to ACS Publications journals, while 44% of corresponding authors on published papers are from this region. Europe and Central Asia are home to 16% of all submitting authors and 20% of submitting corresponding authors, compared with 23% of published corresponding authors. Meanwhile, the United States and Canada account for 15% of all authors and 15% of corresponding authors across all submissions, as well as 22% of published corresponding authors.

When we consider the number of years since a person finished their Ph.D., the regional distribution shows a trend toward greater East Asian and Pacific representation among those who have had their doctorate for 20 years or less. The United States and Canada, as well as Europe and Central Asia, are more highly represented among chemists who completed their Ph.D. more than two decades ago.

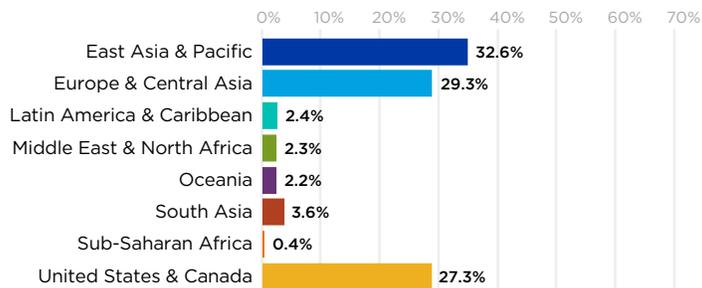
*When we consider the number of years since a person finished their Ph.D., the regional distribution shows a trend toward greater East Asian and Pacific representation among those who have had their doctorate for 20 years or less.*

# Geography Across Roles

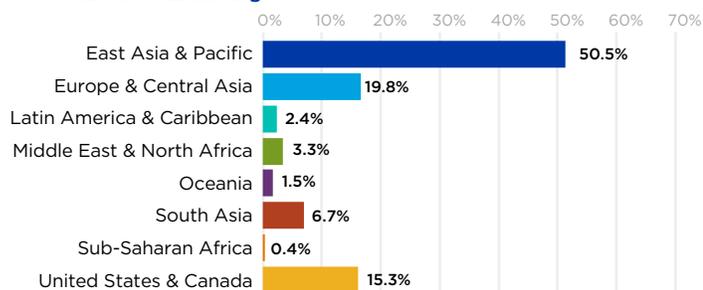
All Authors Submitting



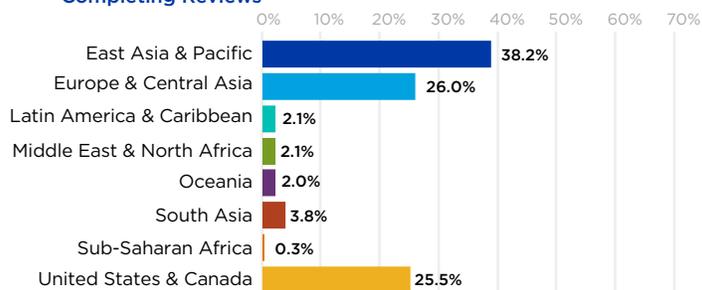
Reviewers Invited



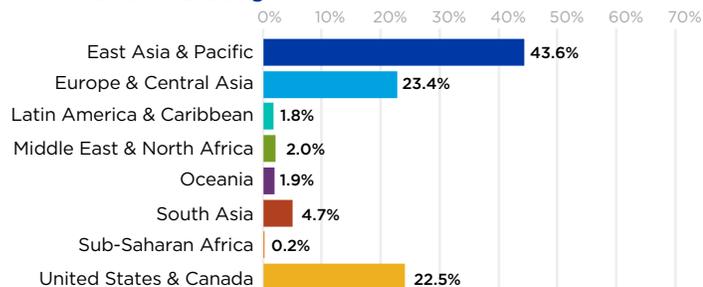
Corresponding Authors Submitting



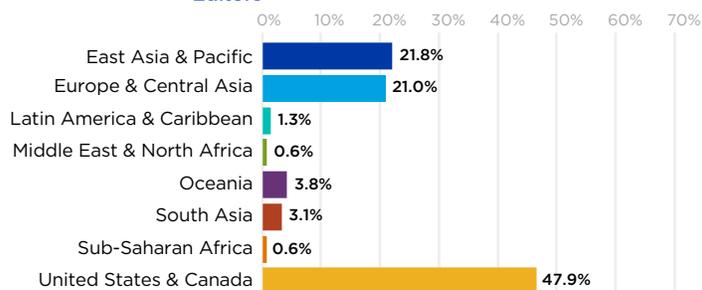
Reviewers Completing Reviews



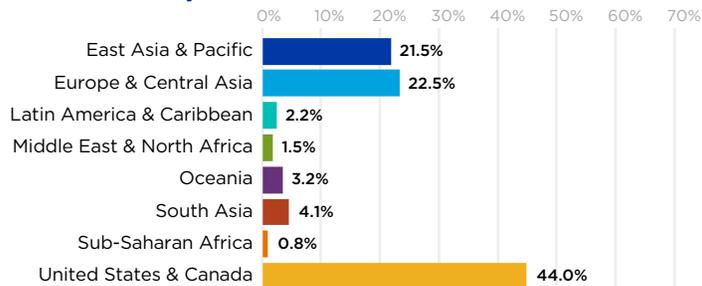
Corresponding Authors Publishing



Editors

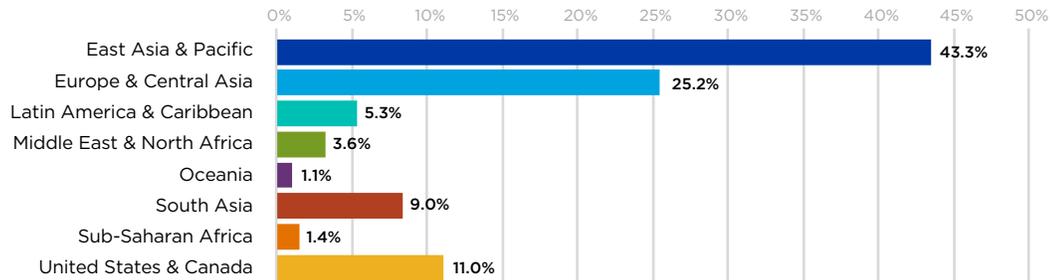


Editorial Advisory Board

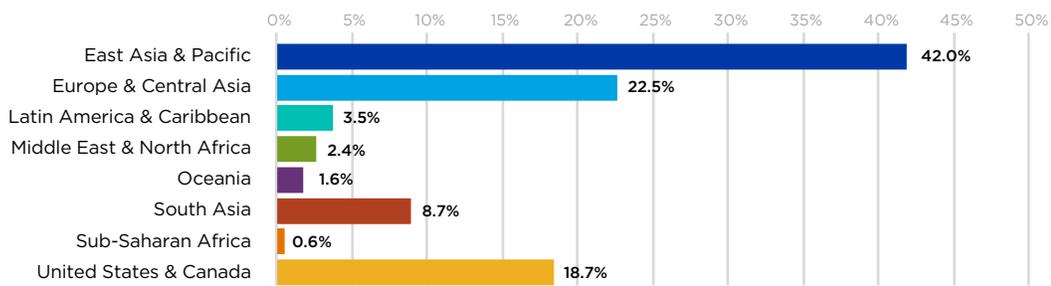


# Geography and Time Since Doctorate

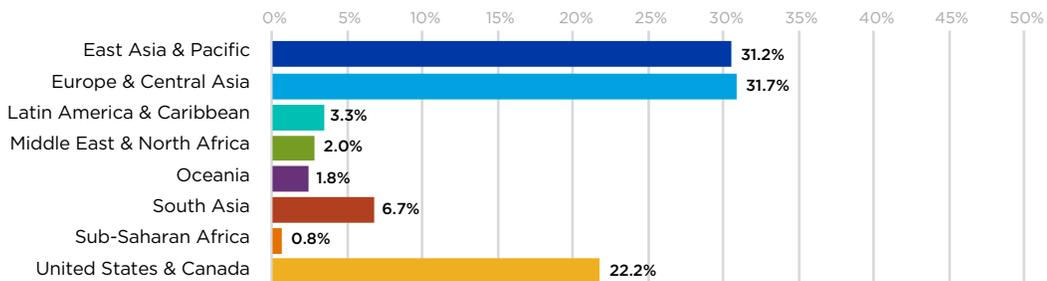
## 0-10 Years Since Doctorate



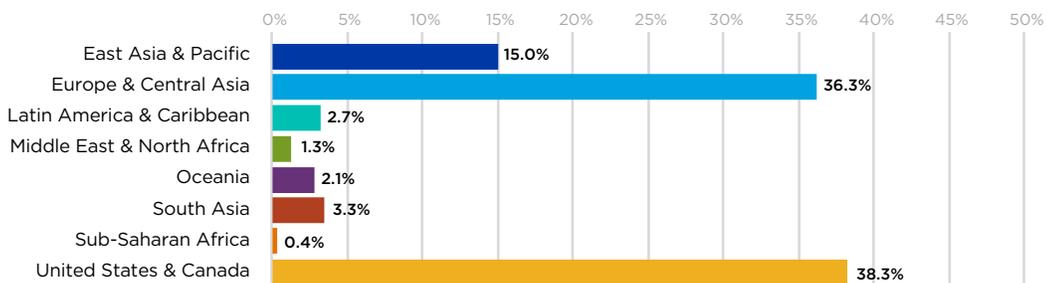
## 11-20 Years Since Doctorate



## 21-30 Years Since Doctorate



## 31+ Years Since Doctorate



## REVIEWERS

East Asia and the Pacific, the United States and Canada, and Europe and Central Asia are also dominant in the proportions of invited reviewers and the proportion of reviewers who complete reviews.

*East Asia and the Pacific, the United States and Canada, and Europe and Central Asia are also dominant in the proportions of invited reviewers and the proportion of reviewers who complete reviews.*

Though East Asia and the Pacific also contribute the greatest proportion of reviewers (33% of invited reviewers), this proportion is considerably smaller than the proportion of authors from that region (57% of all authors and 51% of corresponding authors), though their representation among reviewers completing reviews (38%) is slightly higher than among invited reviewers (33%). Reviewers from the United States and Canada make up 27% of invited reviewers, compared with 26% of reviewers completing reviews. In Europe and Central Asia, the proportion of invited reviewers is 29%, and the proportion of completing reviewers is 26%.

## EDITORIAL BOARDS AND EABS

The data are different when we consider the Editorial Boards of ACS Publications journals. The United States and Canada are home to nearly half (48%) of Editors and a plurality (44%) of EAB members. East Asia and the Pacific contribute 22% of each. Europe and Central Asia make up 21% of Editors and 23% of EAB members.

## Racial and Ethnic Representation

A majority of the authors, reviewers, and Editorial Board members of ACS Publications journals identify, at least in part, as East Asian or White. The next largest group across most roles is those who identify as South Asian, making up less than 10% of every category.

Note that about 5% of all respondents chose not to disclose their racial or ethnic identity in each role listed below or chose a self-described identity that was not part of the list provided. Fewer than 6% of respondents selected race/ethnicity options beyond the three highlighted above, so it is difficult to make meaningful comparisons of representation across roles for these identity groups.

### AUTHORS

Among the pool of corresponding authors who submitted papers, 38% identify as East Asian, and 34% identify as White, compared with 7% South Asian. Just 21% of corresponding authors did not identify as White, East or South Asian.

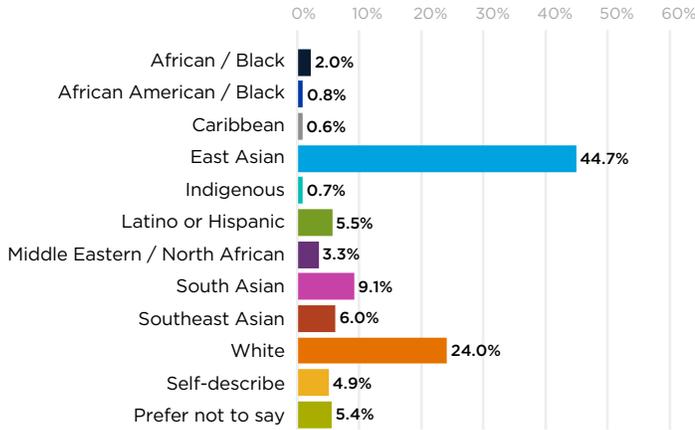
The data for all authors show a slightly different pattern, with 45% identifying as East Asian, 24% identifying as White, and 9% as South Asian, while other racial and ethnic groups make up the remaining 24% who chose to report their identity.

White and East Asian authors also experience higher acceptance rates than other groups. When looking just at accepted papers, 41% of corresponding authors are White, while 39% identify as East Asian. No other groups had a higher proportion of accepted corresponding authors than submitting corresponding authors.

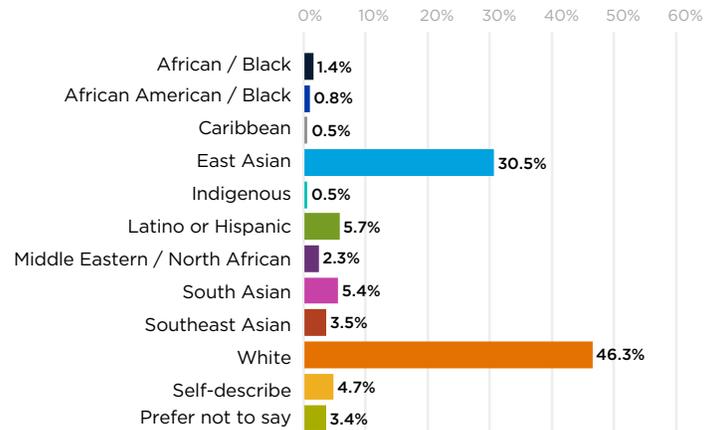
The data demonstrate that the community of chemistry authors has changed over the past 30 years. The share of authors who identify as White is larger among authors who earned their Ph.D. more than 30 years ago (65% versus 27% for those with fewer than 10 years since their Ph.D.). Representation among authors who identify as East Asian or South Asian is greater among authors who have had a Ph.D. for less than two decades. When looking just at corresponding authors who are 0 to 10 years past their Ph.D., almost three-quarters of authors identify as people of color.

# Race/Ethnicity Across Roles

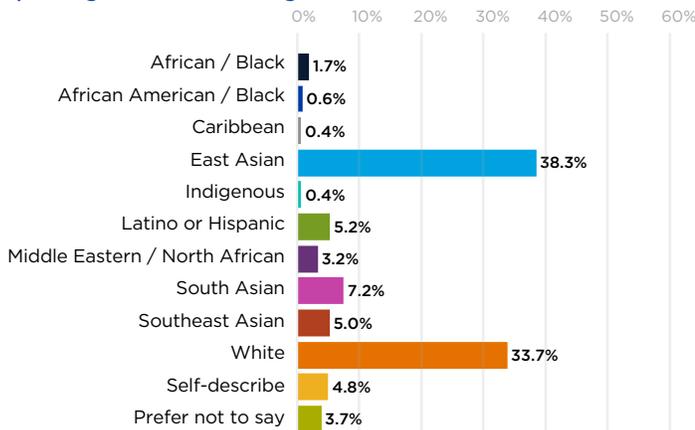
All Authors Submitting



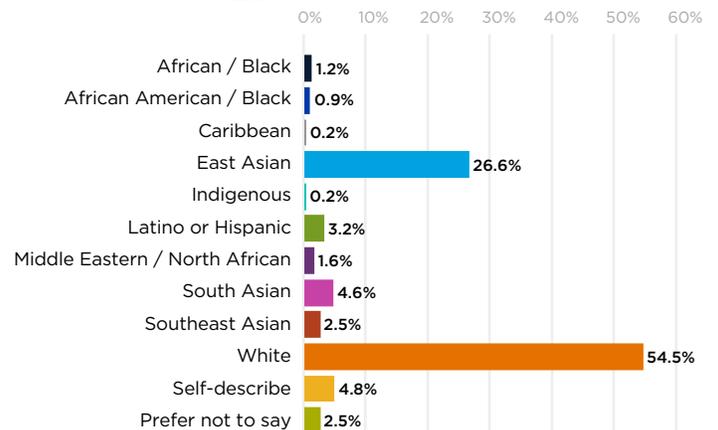
Reviewers Completing Reviews



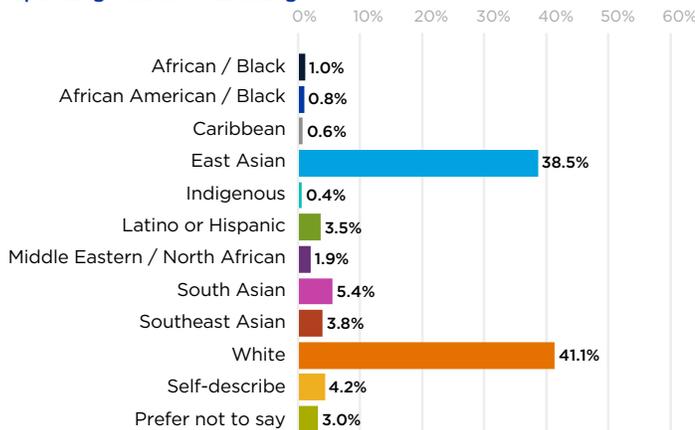
Corresponding Authors Submitting



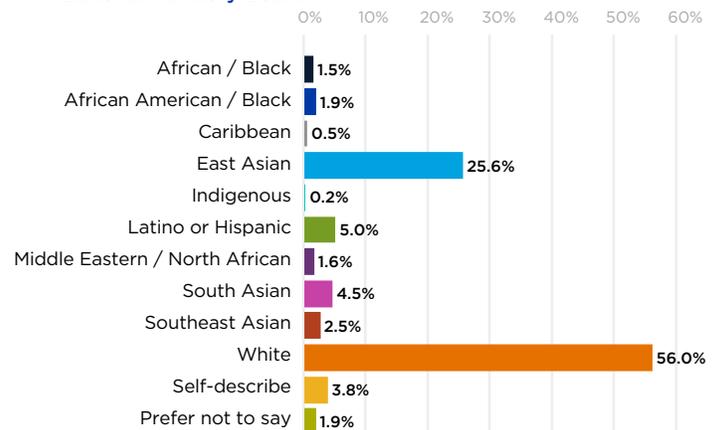
Editors



Corresponding Authors Publishing



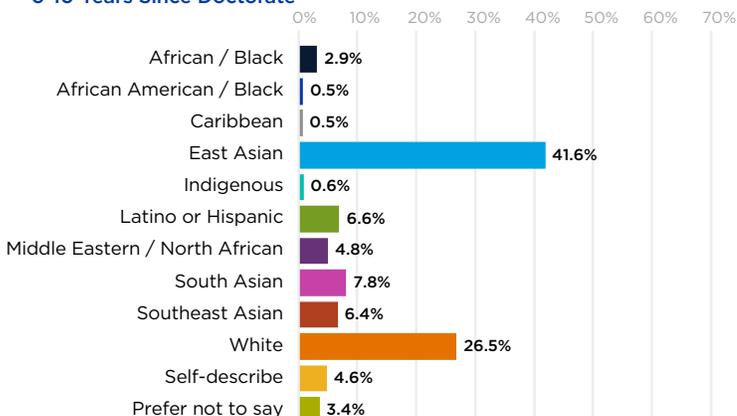
Editorial Advisory Board



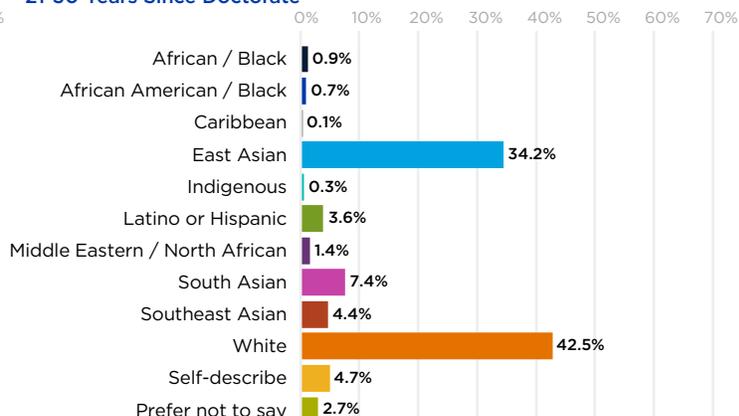
Because respondents can select more than one option, percentages will add up to more than 100%

# Race/Ethnicity and Time Since Doctorate

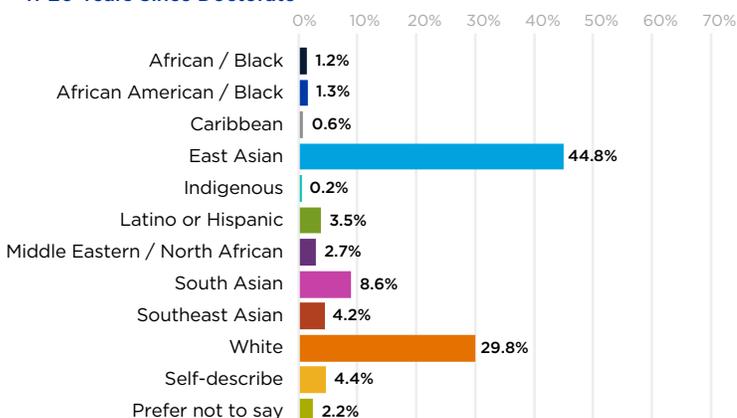
0-10 Years Since Doctorate



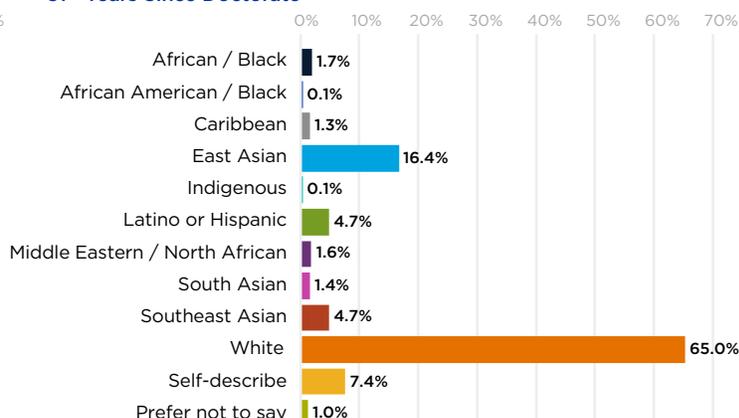
21-30 Years Since Doctorate



11-20 Years Since Doctorate



31+ Years Since Doctorate



Because respondents can select more than one option, percentages will add up to more than 100%

## REVIEWERS

Among reviewers who completed reviews, 46% identify as White and 30% as East Asian. South Asian and Latino or Hispanic are the only other groups that make up more than 5% of reviewers who completed reviews.

## EDITORIAL BOARDS AND EABS

The Editors of ACS Publications journals are 55% White, while their EABs are 56% White. People who identify as East Asian made up 27% of Editors and 26% of EABs. No other racial or ethnic group comprises greater than 5% of either the Editors or the EABs.

# Current Diversity Initiatives

The bulk of the data in this report are the result of the demographic survey developed in 2020 and implemented in 2021. While several ACS diversity initiatives have been underway for years, this new data will help inform their evolution as we look to improve representation across our journals.

This section of the report will detail historical diversity initiatives from ACS, considering what they have and have not been able to accomplish. It will discuss processes that have been instituted in the past 18 months and a few that are ongoing. Each of these programs has a role in holistically addressing these issues.

## Editor Diversification

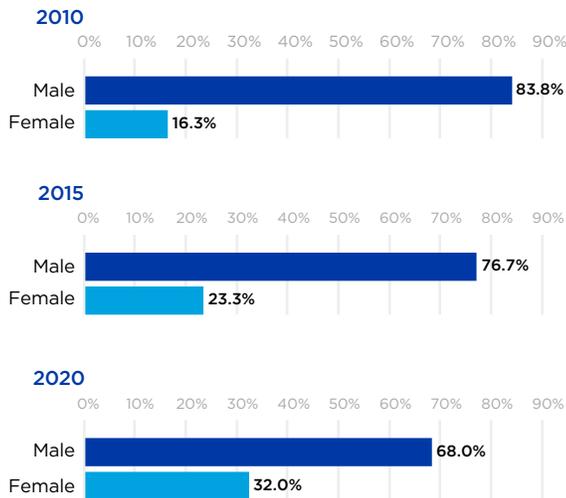
Over 10 years ago, ACS Publications recognized that the makeup of the Editorial teams did not reflect the diversity of our community in at least two key areas: gender and geographical distribution. At that time, we began tracking these elements while increasing the diversity of our Editorial Boards in these areas. These data were collected using now-outdated biological sex descriptors, and only binary options were provided prior to 2021. Nonetheless, the data are presented below in their original format.

Since 2010, editorial diversification efforts have led to the percent of editors choosing the “female” option doubling from 16% to 32% in 2020, which is in line with the 34% of editors who identified as a woman in the 2021 survey.

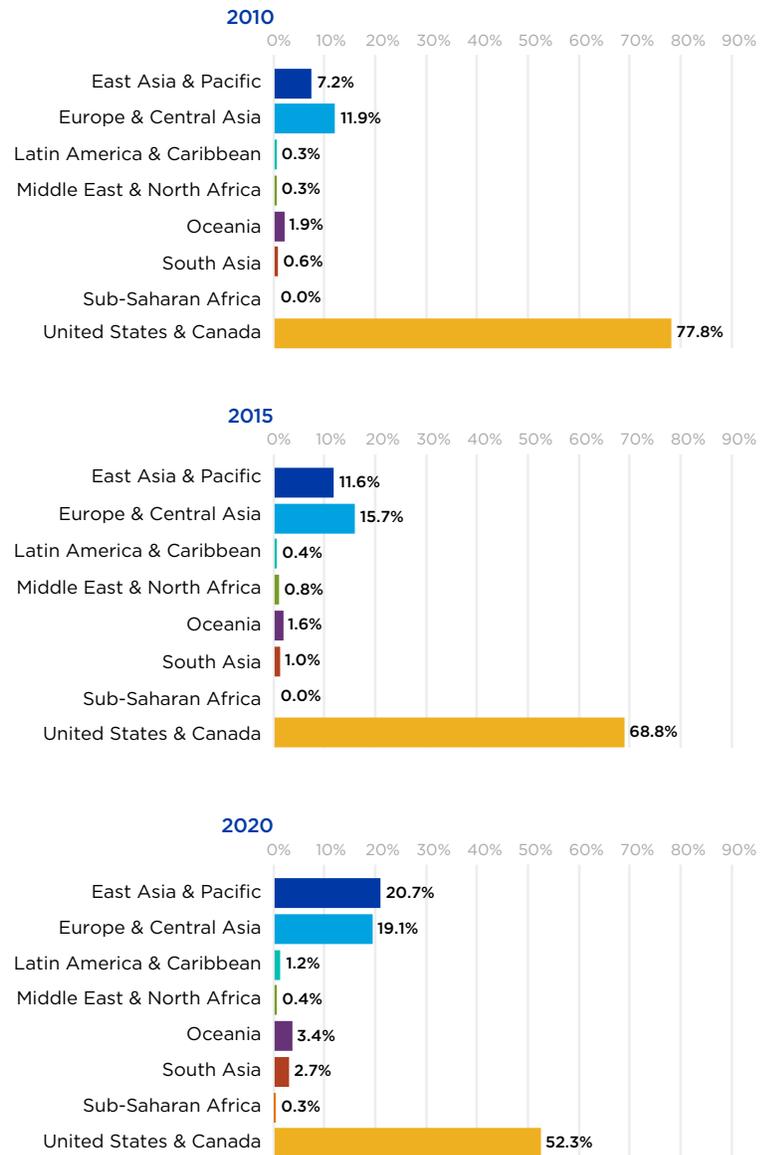
During the same period, the number of Editorial Board members outside the United States and Canada grew from 22% in 2010 to 48% in 2020 (and 52% in 2021), with the representation from East Asia and the Pacific expanding threefold in the past 10 years.

While the gains here are very real and important, more work needs to be done, and the survey and data collection described here will help us monitor ongoing and future efforts.

## Editor Gender over Time



## Editor Geography over Time



## Long-Term Educational Programs

ACS has a strong history of focusing on educational initiatives to support high school, undergraduate, and graduate students from underrepresented groups in pursuing careers in chemistry. Some of our programs include:

- **Project SEED:** Since 1968, ACS has run Project SEED, a paid summer internship program for high school students from economically challenged households in the United States. The program places students in chemistry laboratories for the summer, giving them hands-on experience and the opportunity to form mentor relationships as they prepare for college. To date, more than 11,000 students have participated in the program, carrying out research at academic, industry, and government labs, and hundreds more will join them each year.
- **ACS Scholars:** Each year since 1995, ACS has granted more than \$1 million in renewable scholarships to undergraduate, Black, Hispanic, and Indigenous students through the ACS Scholars program. These awards go to students majoring in chemistry-related disciplines and aspiring to pursue chemistry-related careers. More than 3,500 students have benefited from the program to date.
- **ACS Bridge Program:** ACS works to increase the number of chemical sciences doctorate degrees awarded to Black, Hispanic, and Indigenous students by creating sustainable transition (bridge) programs and a national network of doctoral-granting institutions that provide substantial mentoring to help students complete Ph.D. programs successfully. The program, launched in 2018, also establishes links between minority-serving and doctoral-granting institutions through research activities, collaboration, and personal contacts.

Additionally, ACS has long worked with other organizations within the chemistry community, such as the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, the Society for Advancement of Chicanos/Hispanics and Native Americans in Science, and the American Indian Science and Engineering Society. ACS also has several governance diversity committees, including the Women Chemists Committee, the Younger Chemists Committee, the Senior Chemists Committee, the Committee on Minority Affairs, the Committee on Chemists with Disabilities, and the DEIR Advisory Board.

## Progress on June 2020 Commitments

This report was created in response to our pledge made in the June 2020 joint editorial, "[Confronting Racism in Chemistry Journals](#)." That editorial made four other commitments that ACS has continued to work on for the past year and a half. Here is where each of them stands as of December 2021.

- **Training new and existing editors to recognize and interrupt bias in peer review:** ACS Publications offered foundational training to Editors in 2021 to establish a shared understanding of DEIR principles and embrace the spectrum of human diversity, with about 60% of Editors having completed this training to-date. Building on that experience, we are currently developing a more tailored, application-based training program focused on bias in peer review that will launch in 2022. Participation in this training is now required of all new and renewing editors.
- **Including the diversity of journal contributors as an explicit measurement of EIC performance:** The data used in the creation of this report will form a baseline that will inform and be an integral part of the five-year vision statement by each journal's EIC and be used to evaluate the progress made by the journal in increasing its diversity over that time.
- **Appointing an ombudsperson to serve as a liaison between Editors and our community:** ACS Publications [appointed Dr. Kathleen Canul](#) as our inaugural ombudsperson. In this new role, Dr. Canul will help bring problems, concerns, and conflicts regarding the peer-review process to the attention of ACS Publications for resolution. She will be available to hear concerns about editors, EAB members, or reviewers, including suspected bias, handling of the peer-review process, mismanagement of appeals, and concerns around scientific misconduct. The ombudsperson will also prepare an annual report for ACS, informing our organization of trends they believe may help the organization improve the climate for membership, or address or improve ACS' policies and practices.
- **Developing an actionable diversity plan for each ACS journal:** Journal diversity plans have been incorporated into the annual journal planning process. These plans are an opportunity to support individual journal community needs while setting goals and creating accountability.

## Additional Recent Initiatives

Beyond the specific commitments ACS Publications detailed in our June 2020 editorial, we have continued to evaluate existing processes to identify opportunities to make the publishing environment more inclusive. These include ensuring inclusive communications, being intentional about celebrating the achievements of a diverse array of researchers, and ensuring that our journal leadership is increasingly representative of the communities. These kinds of organizational cultural changes are important to our goal of building a chemistry community where everyone feels welcome, represented, and able to do their best work.

- **Author name change policy:** In September 2020, ACS announced a new, inclusive policy to allow authors to change the names used in their previously published articles. ACS' [policy](#) aims to reduce barriers to inclusion, professional mobility, and author credit for authors who may change their names for reasons including but not limited to gender identity, marriage, divorce, or religious conversion. The policy is designed with the needs of the transgender scientific community in mind and with the generous guidance of several members of that community. The author is not asked to provide proof or documentation of their name change, nor is the name change treated as a correction to their paper. The ACS policy also ensures that all other references to the author's identity, including pronouns, salutations, captions, images, and other elements of the paper, are updated appropriately. Nearly 300 publications have been updated under this policy to date. ACS was the first chemistry publisher to adopt this policy and shared its lessons from implementation with other organizations to encourage them to adopt similar policies.
- **Gender-inclusive communications:** ACS Publications has moved to use gender-neutral language in our communications and is changing our submission portal ([ACS Paragon Plus](#)) to allow gender-neutral honorifics. Editors are encouraged to use gender-neutral language in their communications, and many Editors have also begun voluntarily sharing their pronouns in their email signatures.

- **Using our platform to increase the visibility of historically underrepresented groups:** Individual journals have incorporated special issues to showcase the work of women and underrepresented racial and ethnic groups. [Analytical Chemistry launched a pilot program](#) to use its cover art to showcase artists from diverse backgrounds. Our blog, *ACS Axial*, features profiles and article highlights from a broad cross section of the chemistry community.
- **Improvements to Editor searches:** We are experimenting with our Editorial Board recruitment and selection process to find ways to ensure an unbiased nomination, selection, and interview process with a diverse committee and diverse nominee pool. This has included rethinking our approach to selecting EICs. We experimented with an open nomination process to identify EICs for [ACS Catalysis](#), [ACS Chemical Biology](#), [JACS Au](#), and [the Journal of the American Chemical Society \(JACS\)](#). Search committee members and ACS staff liaisons receive bias training prior to engaging in the committee's work. In all EIC searches, it is part of the standard protocol to reach out to relevant ACS Divisions, groups, and committees, such as the Committee on Minority Affairs, Women Chemists Committee, Younger Chemists Committee, and Committee on Chemists with Disabilities, to seek diverse nominations. ACS Publications is now working with ACS' Office of DEIR and the Committee on Minority Affairs to audit our current procedures and identify areas for potential intervention.
- **Expanding editorial opportunities:** In addition to looking for new ways to select editors, we are also looking at ways to increase the overall number of people involved in a journal's editorial process, such as creating new Topic Editor positions and introducing Early Career Advisory Boards, so that younger chemistry professionals can make their voices heard.

# Looking to the Future

Having baseline diversity data is a critical step for ACS Publications. This report will help us identify opportunities for future action and set goals to test the effectiveness of our efforts. As we continue to work on the initiatives listed in the previous section, we must also look at deeper, more transformative work.

Detailing specific future efforts is outside the scope of this report, but future communications from ACS Publications will outline our long-term plans and goals in this area. Below we outline some of the ideas we are currently evaluating as part of our DEIR work, so that we may gather feedback from the community.

Some areas of opportunity include:

- **Improving journal editorial representation:** We could explore several processes to improve representation in our journals' Editorial Boards. This could mean changes to the Editor and EAB member selection process and/or updating the bias training for EIC search committees.
- **More formal resources for Editors:** This could take the form of additional training or tools. It could also potentially include a DEIR position on the ACS Publications Council of Editors, an advisory group of active EICs and senior ACS Publications leadership.
- **Addressing bias in peer review and reviewer selection:** The ACS Reviewer Lab currently has a module on recognizing and addressing bias during the review process. We may want to review and expand this training. Alternatively, we may need to develop educational tools for Editors selecting reviewers, create reviewer recommendation tools, change how we invite reviewers, expand the use of diversity consideration statements during reviewer suggestions, or even consider different peer-review models.

- **Accessibility initiatives:** ACS is more than 140 years old, which means much of our infrastructure was not built with accessibility in mind. It also means we have had to reinvent our processes many times over the years, and have the capacity to think critically and make continuous improvements to what we have built.
- **More diverse invited content:** While we are working to develop more equitable processes for our journals, we also have the power to improve the diversity of published authors without relying on the diversity of submission pools. Editors can be encouraged to consider author diversity when inviting manuscripts for Reviews, Perspectives, and other article types.
- **Other initiatives:** We are also considering actions that do not fit into the categories above, such as diversity and inclusion statements and Indigenous land acknowledgment statements.

*If you have comments on the ideas listed above or any aspect of this report, you can visit [axial.acs.org/diversity-data-feedback/](https://axial.acs.org/diversity-data-feedback/) and fill out the form to leave a comment for the ACS Publications team.*

## APPENDIX 1

# Demographic Survey

Thank you for being a part of the ACS Publications community and helping eradicate racism and discrimination in science and engineering.

The information gathered here will be for internal ACS use only and will only be reported in aggregate. It will not be published or shared with ACS editors in any form that identifies individual participants. It will take one minute or less to complete.

Read more about resources for advancing ACS' Core Value of Diversity, Equity, Inclusion & Respect.

Which response best describes your gender?

- |   |  |
|---|--|
| <input type="radio"/> Woman                     | <input type="radio"/> Agender                            |
| <input type="radio"/> Man                       | <input type="radio"/> Self-describe <input type="text"/> |
| <input type="radio"/> Outside the gender binary | <input type="radio"/> Prefer not to say                  |

Please indicate your ethnicity. (Peoples' ethnicity describes their feeling of belonging and attachment to a distinct group of a larger population that shares their ancestry, color, language, or religion.) Please select all groups you identify with.

- |  |   |
|--|---|
| <input type="checkbox"/> African/Black   | <input type="checkbox"/> Middle Eastern/North African       |
| <input type="checkbox"/> African American/Black  | <input type="checkbox"/> South Asian                        |
| <input type="checkbox"/> Caribbean   | <input type="checkbox"/> Southeast Asian                    |
| <input type="checkbox"/> East Asian  | <input type="checkbox"/> White                              |
| <input type="checkbox"/> Indigenous (e.g., Native American, Aboriginal Australian, etc.) | <input type="checkbox"/> Self-describe <input type="text"/> |
| <input type="checkbox"/> Latino or Hispanic  | <input type="checkbox"/> Prefer not to say                  |

What year were you born?

- |   |   |
|---|---|
| <input type="radio"/> Year <input type="text"/> | <input type="radio"/> Prefer not to say |
|---|---|

### TERMINAL DEGREE

What is the highest academic degree you have completed (or plan to complete)?

- |  |   |
|--|---|
| <input type="radio"/> Bachelor's or equivalent | <input type="radio"/> Doctorate or equivalent |
| <input type="radio"/> Master's or equivalent   | <input type="radio"/> Prefer not to say       |

In what year did you complete (or anticipate you will complete) this degree?

- |   |   |
|---|---|
| <input type="radio"/> Year <input type="text"/> | <input type="radio"/> Prefer not to say |
|---|---|

## APPENDIX 2

# Country/Region List

Countries were grouped using the World Bank region definitions modified to separate Oceania from the rest of East Asia and the Pacific. The regional groupings are as follows:

### East Asia & Pacific

Brunei Darussalam	Korea, Democratic People's Republic of	Macao	Taiwan, Province of China
Cambodia	Korea, Republic of	Malaysia	Thailand
China	Lao People's Democratic Republic	Mongolia	Timor-Leste
Hong Kong		Myanmar	Vietnam
Indonesia		Philippines	
Japan		Singapore	

### Europe & Central Asia

Åland Islands	Finland	Kyrgyzstan	Serbia
Albania	France	Latvia	Serbia and Montenegro
Andorra	Georgia	Liechtenstein	Slovakia
Armenia	Germany	Lithuania	Slovenia
Austria	Gibraltar	Luxembourg	Spain
Azerbaijan	Greece	Moldova, Republic of	Svalbard and Jan Mayen
Belarus	Greenland	Monaco	Sweden
Belgium	Guernsey	Montenegro	Switzerland
Bosnia and Herzegovina	Holy See [Vatican City State]	Netherlands	Tajikistan
Bulgaria	Hungary	North Macedonia, Republic of	Turkey
Channel Islands	Iceland	Norway	Turkmenistan
Croatia	Ireland	Poland	Ukraine
Cyprus	Isle of Man	Portugal	United Kingdom of Great Britain and Northern Ireland
Czech Republic	Italy	Romania	Uzbekistan
Denmark	Jersey	Russian Federation	
Estonia	Kazakhstan	San Marino	
Faroe Islands	Kosovo		

## Latin America & Caribbean

Anguilla	Costa Rica	Honduras	Saint Vincent and the Grenadines
Antigua and Barbuda	Cuba	Jamaica	Sint Maarten (Dutch)
Argentina	Curaçao	Martinique	South Georgia and the South Sandwich Islands
Aruba	Dominica	Mexico	Suriname
Bahamas	Dominican Republic	Montserrat	Trinidad and Tobago
Barbados	Ecuador	Netherlands Antilles	Turks and Caicos Islands
Belize	El Salvador	Nicaragua	Uruguay
Bermuda	Falkland Islands [Islas Malvinas]	Panama	Venezuela, Bolivarian Republic of
Bolivia, Plurinational State of	French Guiana	Paraguay	Virgin Islands (British)
Bonaire, Sint Eustatius and Saba	Grenada	Peru	Virgin Islands (American)
Brazil	Guadeloupe	Puerto Rico	
Cayman Islands	Guatemala	Saint Barthélemy	
Chile	Guyana	Saint Kitts and Nevis	
Colombia	Haiti	Saint Lucia	
	Heard Island and McDonald Islands	Saint Martin (French)	

## Middle East & North Africa

Algeria	Israel	Morocco	Tunisia
Bahrain	Jordan	Oman	United Arab Emirates
Djibouti	Kuwait	Palestine, State of	Yemen
Egypt	Lebanon	Qatar	
Iran, Islamic Republic of	Libyan Arab Jamahiriya	Saudi Arabia	
Iraq	Malta	Syrian Arab Republic	

## Oceania

American Samoa	Micronesia, Federated States of	Palau	Islands
Australia	Nauru	Papua New Guinea	Cook Islands
Fiji	New Caledonia	Samoa	Christmas Island
French Polynesia	New Zealand	Solomon Islands	Norfolk Island
Guam	Northern Mariana Islands	Tonga	Niue
Kiribati		Tuvalu	Pitcairn Islands
Marshall Islands		Vanuatu	Tokelau
		Cocos (Keeling)	Wallis and Futuna

## South Asia

Afghanistan	British Indian Ocean Territory	Maldives	Sri Lanka
Bangladesh	India	Nepal	
Bhutan		Pakistan	

## Sub-Saharan Africa

Angola	Equatorial Guinea	Mauritania	Somalia
Benin	Eritrea	Mauritius	South Africa
Botswana	Ethiopia	Mayotte	South Sudan
Burkina Faso	Gabon	Mozambique	Sudan
Burundi	Gambia	Namibia	Swaziland
Cabo Verde	Ghana	Niger	Tanzania, United Republic of
Cameroon	Guinea	Nigeria	Togo
Central African Republic	Guinea-Bissau	Réunion	Uganda
Chad	Kenya	Rwanda	Western Sahara
Comoros	Lesotho	São Tomé and Príncipe	Zambia
Congo	Liberia	Senegal	Zimbabwe
Congo, Democratic Republic of the	Madagascar	Seychelles	
Côte d'Ivoire	Malawi	Sierra Leone	
	Mali		

## United States & Canada

Canada	United States	Saint Pierre and Miquelon
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To share feedback about any aspect of this report,  
visit [\*ACS Axial\*](#) and fill out the form to  
leave a comment for the ACS Publications team.

LEARN MORE

[publish.acs.org/publish/diversity](https://publish.acs.org/publish/diversity)



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