

APPENDIX D

Annual journal reports

Overview

	2018	2019	2020	2021	2022	2023
No. of submissions (all)	2678	2424	2121	1802	1523	1549
<i>without Acta E or IUCrData</i>	1880	1732	1528	1495	1148	1105
Rejection rate (%)	27	32	28	24	24	31
<i>without Acta E or IUCrData</i>	34	35	31	30	28	38
No. of published papers (all)	1793	1710	1583	1373	1220	1103
<i>without Acta E or IUCrData</i>	1139	1153	1079	1015	865	738
No. of open-access papers (all)	999	923	936	834	888	846
<i>without Acta E or IUCrData</i>	345	365	430	475	533	481
No. of pages (all)	12473	12854	11819	11145	9644	8542
<i>without Acta E or IUCrData</i>	9856	10443	9539	9551	8065	6940

A. Allen, Editor-in-Chief, IUCr Journals

Reports by Commissioning Editors

Biology

R. Steiner, Commissioning Editor, Biology

Chemistry

In 2023, work continued on the virtual collection of high-pressure crystallography papers published in the IUCr journals since their foundation with some editorial comments summarizing the trends and achievements. This job is not completed yet, but it is hoped that it will be completed in 2024. A Feature Article on High-pressure crystallization is in preparation for *Acta B* in a co-authorship with Iain Oswald. A list of potential topics for Special Issues and Feature Articles for *Acta B* has been prepared with the names of potential invited authors. The list was sent to Main Editors, the Executive Managing Editor and the Editor-in-chief, and it was agreed that they would invite the contributors and Guest Editors using this list as appropriate.

Other activities included involvement in Raw Data publications led by Loes Kroon-Batenburg. A contribution was also presented virtually at the CommDat workshop in Melbourne jointly with Nicola Casati. A Topical Review is in preparation based on this contribution for a virtual CommDat issue led also by Loes Kroon-Batenburg. Publication of a number of research articles in *Acta B* and *JAC* was also undertaken, as was participation in online meetings.

E. Boldyreva, Commissioning Editor, Chemistry

Materials, Methods and Instrumentation

The main achievement for the year is the cross-journal special collection *Machine learning in crystallography and structural science* published in January 2024. The collection and the editorial were created in collaboration with Simon Billinge the *Acta A* Section Editor. The collection highlights over 70 papers in *Acta A*, *Acta B*, *Acta D*, *JSR* and *IUCrJ* including the earliest AI publication in the IUCr journals, rather remarkably, from 1977. Each paper was classified by crystallographic problem addressed and the machine learning approaches used. Independently, *JAC* published a *special collection* of its journal's papers at the same time.

Other activities in 2023 included participation in editorial meetings and participation in the JMB in March in Chester and the Editorial Meetings during the IUCr Congress in Melbourne.

Th. Proffen, Commissioning Editor, Materials, Methods and Instrumentation

	2018	2019	2020	2021	2022	2023
No. of submissions	150	115	94	90	81	98
Rejection rate (%)	29	38	35	34	38	42
No. of published papers	76	88	79	65	57	55
research papers – foundations	45	59	50	42	36	40
advances	9	15	5	8	6	6
short communications	2	0	4	2 (1 advances)	5 (1 advances)	3
lead articles	0	0	2 (1 advances)	1	0	0
feature articles	1 (advances)	0	0	1	0	0
topical reviews	1	0	1 (advances)	0	0	0
editorial	1 (advances)	1	0	1	0	0
commentaries	0	1	2 (1 advances)	2	0	1
abstracts	1124	1217	227	1566	1020	390
other	0	12	15	9	10	5
No. of open-access papers	13	28	20	20	16	24
No. of pages	713	918	783	638	519	601
Average length (pages)	11.1	11.3	11.4	11.8	10.4	11.3
Average publication time (months)	5.7	6.1	6.2	5.8	6.0	6.1
Impact factor	1.9	2.0	2.3	2.3	1.8	
5 year impact factor	4.6	3.1	3.3	2.7	2.2	
Cited half life (years)	>10.0	>10.0	>10.0	8.2	>10.0	

Acta Cryst. Section A publishes articles reporting advances in the practice and theory of all areas of structural science. As well as traditional crystallography, this includes nanocrystals, metacrystals, amorphous materials and quasicrystals. It also covers electron crystallography, diffuse scattering, pair distribution function studies, time-resolved XFEL studies, cryo-EM, tomography, small-angle scattering, coherent scattering, diffraction imaging, and the structure of strain and defects in materials. We also welcome contributions on advances in analysis tools that are foundational to crystallography, including descriptions and applications of methods, algorithms and software, and the use of emerging computational approaches such as artificial intelligence and machine learning as applied to structural science.

The journal has two sections: Advances and Foundations. Articles are selected for the Advances section based on their likely impact and broad interest. They benefit from rapid publication and may be highlighted by an accompanying scientific commentary and/or feature on the cover, and tend to be our most read and most highly cited articles. The six Advances papers we published in 2023 give a idea of the wide scope of Acta A:

A general force field by machine learning on experimental crystal structures. Calculations of intermolecular Gibbs energy with FlexCryst. Hofmann, D. W. M. & Kuleshova, L. N. (2023). Acta Cryst. A79, 132-144.

Crystal diffraction prediction and partiality estimation using Gaussian basis functions. Brehm, W., White, T. & Chapman, H. N. (2023). *Acta Cryst.* A79, 145-162.

Crystallography of homophase twisted bilayers: coincidence, union lattices and space groups. Gratias, D. & Quiquandon, M. (2023). *Acta Cryst.* A79, 301-317.

New benchmarks in the modelling of X-ray atomic form factors. Thorkildsen, G. (2023). *Acta Cryst.* A79, 318-330.

Molecular replacement for small-molecule crystal structure determination from X-ray and electron diffraction data with reduced resolution. Gorelik, T. E., Lukat, P., Kleeberg, C., Blankenfeldt, W. & Mueller, R. (2023). *Acta Cryst.* A79, 504-514.

Small-angle scattering tensor tomography algorithm for robust reconstruction of complex textures. Nielsen, L. C., Erhart, P., Guizar-Sicairos, M. & Liebi, M. (2023). *Acta Cryst.* A79, 515-526.

We also published two papers based on talks at the Melbourne Congress:

Perfect precise colorings of plane semiregular tilings. Loquias, M. J. C. & Santos, R. B. (2023). *Acta Cryst.* A79, 440-451.

Permissible domain walls in monoclinic MAB ferroelectric phases. Biran, I. & Gorfman, S. (2024). *Acta Cryst.* A80, 112-128.

Vitaliy Kurlin (University of Liverpool, UK) continued to act as a Guest Editor throughout 2023, alongside Mois Aroyo, for a special issue on crystal lattices. The first eight papers in this special issue were published in regular issues.

In addition, Commissioning Editor Thomas Proffen worked with us on a cross-journal virtual collection of papers on machine learning (which was published in February 2024, see https://journals.iucr.org/special_issues/2024/ML/).

Acta A's impact factor has remained around 2 in recent years, but a higher impact factor would bring more papers to the journal. We plan to increase our impact factor by (1) pre-screening by the Section Editors of all articles that are submitted, (2) emphasizing the wide scope of the journal by categorising all papers by general topic (in a similar way to IUCrJ), and (3) introducing a new category of short 'how to' perspectives in which experts are invited to outline how best to perform different types of analyses (e.g. PDF, structure prediction with DFT...).

(1) Pre-screening. An Editorial published in January 2021 (*Acta Cryst.* A77, 1) outlined some simple steps that authors could take to help maintain the relevancy, vibrancy and broader impact of the journal. These included making sure that the crystallographic context of the work was emphasized early on in the article (e.g. in the title, synopsis, keywords or abstract), thus making it clear who in the materials or structural communities will use it and what they will use it for. While the main aim was to help to boost readership, these steps should also make an article more appealing to possible reviewers, speeding up the review process. For the last three years all our Co-editors and the staff in the Editorial Office have been encouraging authors to do this. However, we are still finding that some authors put relatively little effort into this even when prompted to do so, so we plan to move to pre-screening of all articles (not just *Advances* submissions) by the Section Editors early in 2024. Authors whose papers do not explain the broader context of their work will be told to address this before their paper is released to a Co-editor.

(2) Work has also started on categorising papers by general topic. We hope that including short headers such as 'computational methods' will help to alert readers to the fact that our journal scope has been changing over the years to encompass a wider range of studies.

(3) 'How to' perspectives are likely to be highly cited. To make the job of writing such an article more appealing to a potential author, we plan to provide a basic template and an example to guide them.

We are continuing to hold annual meetings with our Editorial Board, at which new plans for the journal are discussed and newer Co-editors can benefit from 'tips and tricks' for handling papers from more experienced Co-editors.

Finally, we would like to thank all our Co-editors for their hard work for the journal over 2023, and particularly Dave Keen, who stepped down at the end of the year after nearly nine year's service.

A. Altomare and S. J. L. Billinge, Editors

	2018	2019	2020	2021	2022	2023
No. of submissions	168	201	168	162	115	100
Rejection rate (%)	43	32	31	28	30	42
No. of published papers	75	136	117	112	95	63
research papers	63	120	107	102	81	52
short communications	1	0	0	0	0	0
lead articles	0	2	0	0	0	0
feature articles	1	1	0	0	0	0
topical reviews	3	1	0	0	2	0
editorial	1	1	0	1	1	1
commentaries	1	2	5	2	2	7
other	5	9	5	5	9	3
No. of open-access papers	8	12	17	30	22	19
No. of pages	744	1227	1147	1054	892	546
Average length (pages)	10.7	9.7	10.5	10.0	10.3	10.0
Average publication time (months)	5.0	5.2	4.6	4.5	4.7	4.6
Impact factor	6.7	2.0	2.3	2.7	1.9	
5 year impact factor	4.7	4.7	4.7	4.9	2.1	
Cited half life (years)	>10.0	>10.0	>10.0	>10.0	>10.0	

In 2023 *Acta Crystallographica Section B* continued to publish six issues per year, the number of articles (pages) published in 2020, 2021, 2022 and 2023 being 117 (1147), 112 (1054), 95 (892) and 63 (546), respectively. These numbers are highly dependent on the number and size of any special issues published in a particular year. No special issues were published in 2023.

In 2023, a continuing concern for the journal was the impact of the war in Ukraine on the number of submissions from Poland and Russia. However, they have remained the two largest sources of articles submitted to the journal, together accounting for more than one-third of the total. The main sources of articles in 2023 by author affiliation were Russia (19.5%), Poland (15.5%), Germany (11%), France (7.6%), India (7.1%), China (5.7%). Articles in *Acta B* involved authors from 28 countries (down from 35 in 2022).

Over the period 2018–2023 the rejection rate has usually been around 28%, so the value of 33% in 2023 is slightly higher. Recently the average length of full articles is 10.0 pages, despite several articles of around twice that length. In 2023 the average time between submission and publication (4.6 months) was in line with recent years. The number of open access papers (16) still represent a significant fraction (25%) of the total published.

Except when we can publish exceptionally high-impact articles, the journal's base impact factor is around 2.0 and we expect a broadly similar value for 2023. In 2022 the impact factor was 1.83.

In preparation for publication in 2024 is a special issue on Magnetic Structures (Guest editors: J. M. Perez-Mato, Branton Campbell and Vasile O. Garlea) and a special collection of Crystal Structure Prediction Blind Test papers.

A virtual special issue on *Chemical Aspects of High Pressure Crystallography* across *Acta B/C/D*, *JAC* and *JSR* (Main Guest Editor: Elena Boldyreva) is in preparation.

We are very appreciative of the work of all our Guest Editors for their efforts in bringing about these special issues. Invited articles and commentaries are regularly sought from prominent scientists, including Keynote Lecturers at IUCr Congresses and Regional Associate Meetings.

Alexander Blake retired as a Section Editor and was replaced by Louise Dawe in August 2023. There were no other changes to the editorial board.

The journal has been extensively supported by the Chester staff, especially our Managing Editor Amanda Berry: we wish to express our appreciation for all their help and advice.

M. de Boissieu, L. Dawe and A. Nangia, Editors

	2018	2019	2020	2021	2022	2023
No. of submissions	441	406	227	180	171	132
Rejection rate (%)	43	49	41	40	43	51
No. of published papers	234	197	143	105	96	62
research papers	227	186	137	98	93	60
feature articles	3	3	0	0	0	0
topical reviews	0	0	0	0	0	2
editorial	1	0	0	0	0	1
commentaries	0	6	2	4	3	3
other	3	2	4	3	0	2
No. of open-access papers	6	9	22	18	24	25
No. of pages	1782	1697	1107	815	759	529
Average length (pages)	7.7	8.2	8.0	8.1	8.1	8.4
Average publication time (months)	2.9	2.8	2.9	2.8	2.7	2.9
Impact factor	0.9	0.9	1.2	1.2	0.8	
5 year impact factor	4.4	6.3	7.3	1.0	0.7	
Cited half life (years)	3.9	4.8	5.8	6.8	7.7	

In 2023, Acta C maintained its push towards being a journal with appeal to the broad range of structural chemists and also expanding its scope to include synthetic, computational and biological papers. The page length has been maintained at just over eight pages per article, a reflection of the increased non-crystallography content.

A general decline in the number of submissions since the start of the pandemic appeared to be slowing down in 2022, however, 2023 has seen a significant decline in the number of submissions (132, down from 171). The rejection rate, which was steady at ca 40%, has increased to 51% in 2023, resulting in 62 published papers (compared with 96 in 2022).

In an analysis of articles rejected and withdrawn from Acta C from July 2021 to July 2023, of a total of 129 papers, 9% came back and were eventually published in Acta Crystallographica Section C, 5% were resubmitted to Acta Crystallographica Section E and published there, 1 paper was transferred to Acta Crystallographica Section B, 1 paper was published in IUCrData, so a total of 16% were retained by IUCr journals. 35% of rejected and withdrawn papers were published elsewhere and 49% do not seem to have been published anywhere at time of writing (February 2024).

The impact factor for Acta C is expected to drop to around 0.6 this year.

A collection of 12 articles was launched in 2023 entitled 'Halogen, Chalcogen, Pnictogen and Tetrel bonds: Structural Chemistry and Beyond' with guest editors Lee Brammer, Anssi Peuronen and Thomas Rosaveare (University of Sheffield). The lead article took the form of a short topical review by the editors. The papers have a healthy number of downloads with two being promoted as front covers. Open access downloads average 1333 per article and the paywall articles average 191 downloads, overall 733 downloads per article which is greater than the average view for general research articles in the journal. The average citation rate is 1.31 which is improved compared to the current journal citation per research article of 0.83.

A number of collections have been planned for 2024:

Advances in electron diffraction for structural characterization [Guest editors: Glenn Yap, Eric Reinheimer, Joe Ferrara, Laura Samperisi and Gunther Steinfeld] The first article, NH3001, on a natural fungal product, has been accepted with excellent review scores.

Crystallography in Latin America: a vibrant community [Guest editors: Maria Rosales-Hoz (Cinvestav, Mexico) and Renata Diniz (Universidade Federal de Minas Gerais, Brazil)] This special issue is hoped to coincide with the Sixth Latin American Crystallographic Association (LACA) Meeting. Initial responses to this special issue have been promising.

Best practices in crystallography (an occasional series for 2024) [Guest editor: Alan Kennedy (University of Strathclyde)]

Exploring intermolecular forces and interactions [Guest editors: Joseph Reibenspies (Texas A&M University USA) Peter Corfield (Fordham University).] A series of articles from a session at the 2023 ACA meeting.

Paul Raithby and Larry Falvello have formally retired as Section Editors of Acta C, being replaced by Amy Sarjeant and Alan Kennedy. The journal is very grateful for their excellent long-term contributions to Acta C and their mentorship to both Co-editors and Section Editors.

The team of Co-editors have done an excellent job reviewing submitted manuscripts, selecting referees, accepting or rejecting the submissions and carrying out careful editing of the chemistry and crystallography. Two new Co-editors have been appointed, Carol Hua (University of Melbourne, Australia) and Xiaoping Wang (Oak Ridge National Laboratory, USA), who bring a combined expertise in synchrotron radiation and neutron diffraction.

The review panel set up in 2016 has worked well and has been revisited and updated recently. With the increased scope of material being submitted to Acta C, it has been recognised that many crystallographic referees may not have the necessary expertise to properly assess every aspect of a submitted manuscript. For an increasing number of manuscripts report the results of DFT calculations and/or microbiological assays (being the most common) in addition to chemical synthesis and characterisation including NMR and Mass Spectrometry.

It is hoped to continue to build up a so-called 'Panel of Experts' who can provide an assessment of non-crystallography content in submitted manuscripts when required. The panel of experts could be sourced from early career researchers identified initially by main/associate editors. There is a high degree of rigour in the assessment of the crystallography reported which is recognised by readers of the journal, a similar level of rigour should also be applied to the non-crystallographic content. Co-Editors have been made aware of this panel and encouraged to use them as they see fit.

An online Editorial board meeting was held in February 2024. A summary of the items discussed includes:

- The identity of the journal: its place between Acta B and Acta E and overlaps between these journals, particularly Acta C and Acta E.
- Transfer between the IUCr chemistry journals: the Editorial boards of Acta B and E to be made aware that transfer to Acta C can be considered for suitable submissions.
- Submissions: discussion of initiatives to increase these and reverse the general decline.
- Notes for Authors: how can these be altered to be more attractive and more informative to potential authors?
- Impact factor: discussion included inviting reviews on selected software packages which would likely be highly cited.
- Collections: discussion on current special issues and proposals for future collections.

Early-career crystallographers: initiatives to bring in early-career scientists were discussed.

The main editors would like to thank all the Co-editors and review board members, past and present, for their support of the journal. Finally, we wish to express our thanks to the Chester Editorial Office staff who have maintained an outstanding professional standard throughout the recent turbulent times, and without whose hard work and dedication the journal would simply not exist.

A. R. Kennedy, A. Sarjeant and J. White, Editors

Acta Crystallographica Section D

	2018	2019	2020	2021	2022	2023
No. of submissions	152	160	194	186	153	113
Rejection rate (%)	19	29	15	20	24	22
No. of published papers	120	112	129	146	129	105
research papers	110	98	115	133	122	89
feature articles	0	2	2	1	1	1
topical reviews	0	1	1	3	2	1
editorial	1	2	3	2	1	3
commentaries	1	1	1	2	0	3
other	7	8	7	5	3	8
No. of open-access papers	66	60	69	93	83	77
No. of pages	1244	1147	1279	1623	1473	1119
Average length (pages)	10.9	10.9	10.5	11.7	11.6	11.7
Average publication time (months)	5.6	4.9	4.7	5.4	4.9	
Impact factor	3.2	5.3	7.7	5.7	2.2	
5 year impact factor	3.0	3.2	5.0	6.0	5.7	
Cited half life (years)	8.7	9.6	>10.0	>10.0	12.4	

Acta Cryst. D celebrated its 30th year in 2023. During this anniversary year there was one feature article (*20 years of crystal hits: progress and promise in ultrahigh-throughput crystallization screening*), 1 topical review, 3 commentaries and 8 other papers. These included two editorials addressing important aspects of structural biology, the first celebrating *30 years of Acta D* and the second addressing the highly topical *AlphaFold and the future of structural biology* which was also published in *Acta F*. In addition, there were 2 Letters to the Editor, Obituaries of Alexei Vagin, Raimond Ravelli and Michael James, and the special issue Introduction detailed below.

Special issues continue to play a positive role for the journal, particularly those from the recurring series of annual CCP4 Study Weekends and CCP-EM Symposia. As instituted in recent years, the timeliness of the papers is ensured by publication in regular issues as soon as they are accepted and typeset, rather than waiting until all the papers in preparation are ready. Once all papers for a special issue are available, they are also collected into a ‘virtual special issue’. An additional virtual issue on *Room-temperature Biological Crystallography* was heralded with an *Introduction* paper in April.

The *Acta D* impact factor dropped to 2.2 in 2022, while the five-year impact factor remains close to 6. In 2023 there were 113 submissions, 40 lower than in the previous year and following a similar drop the previous year. The rejection rate has remained stable at 22% in 2023 – the 5-year mean is 21.4%. Of those published, 91 were research papers (including 15 associated with the CCP4 Study Weekend and 3 from the CCP-EM meeting) compared with 122 in 2021 and 133 in 2020. The proportion of open-access papers has increased to 73% from 64% in 2022. The average length of papers has stabilized around 11.7 over the last three years.

There was a reduction in the length of time for publication from 5.4 months in 2021 to 4.9 months in 2022. We would very

much like to reduce this still further, and to that end have this year shortened the standard time given to authors for submission of revised manuscripts from two months to one month.

The recently introduced mandatory submission of data was communicated at a community session at the IUCr Congress in Melbourne, and the guidelines and their use remain a topic of conversation amongst editors of *Acta D* and *Acta F*.

Structural biology research continues to develop and change at an astounding rate, with new capabilities entering the repertoire constantly. New physical methods, new computational methods, and new approaches to integrating these methods are resulting in amazing new advances. *Acta D* holds a place as a trusted, respected, reliable source of research reports and commentaries in this exciting time.

As ever, we sincerely thank the highly efficient and excellent work of Louise Jones and Simon Glynn in the Chester office, under the supervision of Executive Managing Editor Peter Strickland and Editor-in-Chief Andrew Allen. We are very grateful for their hard work, attention to detail and dedication.

C. S. Bond, E. F. Garman and R. J. Read, Editors

	2018	2019	2020	2021	2022	2023
No. of submissions	506	497	438	307	269	302
Rejection rate (%)	17	20	16	7	11	13
No. of published papers	411	392	365	263	261	242
research communications	408	392	362	262	252	236
teaching and education	0	0	0	0	2	4
editorial	1	0	0	0	1	1
other	2	0	3	1	6	1
No. of open-access papers	411	392	365	263	261	242
No. of pages	1929	1952	1875	1329	1288	1227
Average length (pages)	4.7	5.0	5.1	5.1	5.0	5.1
Average publication time (months)	1.2	1.3	1.1	1.3	1.6	1.6

In 2023, the number of submissions has increased by approx. 12%, going back to the levels of 2021. However, the number of publications has slightly decreased compared to 2022 due to a higher rejection rate.

The journal continues to attract papers from across the world, and authors from 54 countries have published in Section E in 2023. As in the previous year, the top five countries were the USA (16.5%), Germany (15.1%), India (11.5%), Ukraine (5.8%) and Japan (5.3%); there has been an increase in the case of Germany (12.1% in 2022) and India (8% in 2022). The number of downloads has decreased from 2022 (ca. 5.5 million compared to 6.2 million) but it remains the highest value among IUCr Journals. The average publication time and the average length of the papers have remained unchanged from 2022.

Submitted papers usually describe two or more structures, often analysed with complementary techniques (UV-Vis, NMR, DFT, Hirshfeld surfaces, etc.). The Section Editors identify articles that do not contain sufficient scientific discussion at the pre-screening stage; these are either transferred to *IUCrData* or resubmitted after the authors have improved the content.

After last receiving an impact factor of 0.4 back in 2011, Acta E has since summer 2023 a new impact factor of 0.9.

In September 2023, the Special Issue on Modern Approaches and Tools for Teaching Crystallography edited by Graciela Díaz de Delgado and Sean Parkin, collecting papers that can be used as educational materials for young crystallographers and newcomers to crystallography, was published. It comprises 18 publications spanning the years 2018-2023 (https://journals.iucr.org/special_issues/2023/teaching/index.html). Building on this experience, a new section for education and outreach could be launched in spring/summer 2024.

To commemorate the founding of the African Crystallographic Association, the Journal is publishing a special collection of articles from African researchers, including a few articles about outreach activities for the development of crystallography in Africa. The collection is edited by Susan Bourne, Delia Haynes and Michele Zema and it comprises 35 papers published in 2023. More articles will be added during 2024.

We would like to express our thanks to our Co-editors for their dedication and their excellent work. In August 2023, 12 new Co-editors were appointed, namely: Prof. Takashiro Akitsu (Japan), Dr. Natalia Alvarez Failache (Uruguay), Prof. José Miguel Delgado (Venezuela), Dr. Florencia Di Salvo (Argentina), Prof. Fabio Furlan Ferreira (Brazil), Prof. Gregory Ferrence (USA), Dr. Xiang Hao (China), Dr. Steven Kelley (USA), Prof. David Manke (USA), Prof. Yoshiki Ozawa (Japan), Prof. Leopoldo Suescun (Uruguay), Dr. Shao-Liang Zheng (USA).

As always, we are grateful for the constant and excellent support that we receive from the staff in Chester, particularly Gillian Holmes, Sean Conway and Mike Hoyland, for their constant help and support, and Peter Strickland for his sound advice and expert guidance.

G. Diaz de Delgado, C. Massera, S. Parkin and L. Van Meervelt, Editors

	2018	2019	2020	2021	2022	2023
No. of submissions	200	122	98	97	70	54
Rejection rate (%)	34	32	26	26	29	32
No. of published papers	116	105	85	64	55	42
research communications	113	95	76	48	48	36
topical reviews	2	1	0	1	1	0
editorial	1	5	3	1	0	4
commentaries	0	1	0	1	0	1
other	1	3	6	13	6	1
No. of open-access papers	28	16	27	23	31	18
No. of pages	824	757	623	483	422	307
Average length (pages)	7.1	7.4	7.5	7.8	7.9	7.7
Average publication time (months)	3.4	3.9	2.8	2.8	2.7	3.3
Impact factor	1.2	1.0	1.1	1.1	0.9	
5 year impact factor	0.8	0.9	1.1	1.1	0.9	
Cited half life (years)	6.2	6.5	7.5	8.1	8.8	

Acta Cryst. F aims to be a fast and efficient venue for interesting *Structural Biology Communications*, encompassing original research, *Methods Communications* and *Topical Reviews* about structural biology matters.

In observing the statistics, we note that in 2023 open-access papers remained at a proportion of around 50% of the papers published in the year, but the total number of submissions and published papers has continued to decrease. Many other statistics have stayed constant over the last few years. The average publication time has increased somewhat but is still low at just over 3 months. The average paper length remains at just under eight pages. The current impact factor remains around 1, this year at 0.9, having been at 0.5–0.7 prior to 2017. This is correlated to a rejection rate of around 30% since 2015, which was around 10% before then. We have published more editorials, four in 2023, and aim to continue to do so to help in increasing the visibility of the journal.

The referee panel, in which around 30 experienced scientists have agreed to referee 12 papers a year, to reply to requests promptly and to return reports within two weeks, continues to help in providing relatively rapid and helpful reviews, but needs to be updated because some of its members no longer have sufficient time. We would like to introduce several new members, which will hopefully improve the speed and quality of the review process.

In 2023, two new Main Editors were appointed, Maria Cristina Nonato and Jon Agirre. Janet Newman has stepped down as Section Editor. We thank her for her enthusiasm and significant contributions and hope to continue to develop her ideas for the journal. One of these ideas was to involve young scientists more, including undergraduate students and another was a more rigorous and precise description of crystallization conditions and crystallization experiments.

Maria Cristina Nonato (Cristy) is Full Professor at the School of Pharmaceutical Sciences of Ribeirão Preto at the University of São Paulo and coordinator of the Protein Crystallography Laboratory of Ribeirão Preto. She is President of the FCFRP Research Commission, President of the Brazilian Association of Crystallography, and Co-founder and Coordinator of the division of Structural Biology and Screening of Bioactive Compounds at the Centre for the Research and Advancement in Fragments and Molecular Targets. She is also a member of the IUCr Executive Committee.

Jon Agirre is a Royal Society University Research Fellow (Assistant Professor) at the Department of Chemistry at the University of York, UK. His liaisons with *Acta Cryst. F* started in 2018, guest editing a special issue – *Glycoproteins and Protein–Carbohydrate Complexes* and he has been a Co-editor of the journal since 2019. He also helped edit a special issue of *Acta Cryst. D* on *Model Building, Validation and Representation in MX and cryoEM*. He is co-chair of CCP4 Working Group 2, a member of the CCP4 Executive Committee and the Instruct-ERIC representative on the 3D-Bioinfo (Elixir) steering committee.

For the coming year, we would like to include more data visualization tools and interactive features, such as a 3D structure visualization panel using the *Moorhen* software and video interviews with authors, all dedicated to enhance both the author's and the reader's experience. *Acta Cryst. F* also aims to amplify under-represented voices in structural biology. We will actively seek contributions that reflect a broad spectrum of perspectives, methodologies and applications. By doing so, we hope to enrich the journal's content and provide a more comprehensive view of the field. *Acta Cryst. F* will remain open for focus issues and sections. These thematic collections will delve into specific areas of structural biology, such as fragment screening by X-ray crystallography and artificial intelligence methods for structure prediction.

Acta Cryst. F is committed to nurturing the next generation of structural biologists. We will introduce dedicated sections for early-career researchers. We plan to leverage social media platforms for enhanced visibility and engagement, ensuring that our valuable content reaches a broader audience. We firmly believe that introducing the journal to younger researchers will cement its place in the community.

We also need to make more people aware of the broad structural biology subject range of the journal and attract more papers. Plans are underway to recruit new Co-editors to support these plans. Several candidates have already been contacted and some of them have agreed to take up the role if approved by the IUCr Executive Committee.

J. Agirre, M. C. Nonato and M. J. van Raaij, Editors

	2018	2019	2020	2021	2022	2023
No. of submissions	290	195	155	108	106	141
Rejection rate (%)	17	18	13	6	9	9
No. of published papers	243	165	139	94	95	123
data reports	242	162	138	92	94	122
rawdata letters	0	0	0	0	2	1
editorial	0	0	0	0	1	0
other	1	3	1	2	0	0
No. of open-access papers	243	165	139	94	94	123
No. of pages	688	459	405	265	291	375
Average length (pages)	2.8	2.8	2.9	2.8	3.1	3.0
Average publication time (months)	0.8	0.9	0.9	0.9	1.2	1.0

After seeing a decline in submissions over several years, the number of crystal-structure papers submitted to IUCrData showed a modest increase in 2023 and hopefully this trend will continue. The Section Editors continue to work very effectively with the Chester editorial staff to ensure that publication is rapid.

The major development is in the new Raw Data Letters section. The working group has made significant steps forward in setting up the infrastructure for Raw Data Letters, focusing particularly on `imgCIF_Creator`, a tool for generating `imgCIF` metadata files for the raw data including links to the location of the raw files. Additionally, the implementation of `checkCIF` for raw data on the journal's website to verify data integrity and metadata quality, is a prominent achievement. Automation of Table 1 generation streamlines the publication process and ensures consistency. For further development of `imgCIF_Creator` we choose to use `DIALS` for image header interpretation.

The submission rate to Raw Data Letters is currently below expectations. The dissemination of a Raw Data Letter flyer during the IUCr meeting in Melbourne, particularly during the CommDat organized workshop and microsposium on raw data, will aim to engage the crystallographic community.

Ongoing efforts are planned to attract a broader spectrum of researchers to contribute to Raw Data Letters, spanning diverse fields such as powder analysis, accurate electron densities, neutron and electron diffraction, and SAXS.

W. T. A. Harrison, L. M. J. Kroon-Batenburg, E. R. T. Tiekink, L. Van Meervelt and M. Weil, Editors

	2018	2019	2020	2021	2022	2023
No. of submissions	138	147	151	117	105	110
Rejection rate (%)	33	38	41	41	32	31
No. of published papers	95	120	129	108	89	80
research papers	75	94	100	79	62	56
feature articles	1	1	1	3	0	1
topical reviews	1	3	1	1	3	4
research letters	5	6	8	6	5	2
editorial	4	6	5	3	4	5
commentaries	7	8	11	11	12	9
other	5	2	3	5	3	3
No. of open-access papers	95	120	129	108	89	80
No. of pages	879	1133	1215	1034	791	771
Average length (pages)	10.5	10.7	10.8	11.2	11.0	11.2
Average publication time (months)	4.8	4.3	4.3	4.5	4.9	4.9
Impact factor	4.8	5.4	4.8	5.6	3.9	
5 year impact factor	5.4	5.7	5.8	5.4	4.4	
Cited half life (years)	3.1	3.0	3.5	3.8	4.2	

The number of submissions to *IUCrJ* increased slightly in 2023. The journal continued to establish itself within the wider scientific communities that use results obtained from diffraction methods, and impressions from authors, readers, referees and commentators remain positive.

The impact factor of *IUCrJ* decreased to 3.9 in 2023. All submissions are first reviewed by a panel made up of the Main Editors (Dimitri Argyriou, Ted Baker, Richard Catlow, Henry Chapman, Susan Bourne, Sriram Subramaniam and Xiaodong Zou) and the Editor-in-chief (Andrew Allen). This initial pre-screening stage ensures a quick and efficient review. Articles that do not meet the journal's requirement for broad scientific significance are often transferred, with the agreement of the authors, to another IUCr journal. These transfers are smooth and do not require any additional work from the authors.

The six issues of *IUCrJ* published in 2023 have featured papers from a wide variety of areas including biology, chemistry, crystal engineering, cryo-EM, electron crystallography, materials, physics and FELs. The number of articles submitted to the journal was 110; a total of 80 papers were published with an average turnaround time of 18 weeks. Articles have been publicised in *IUCrJ*'s social media feeds and by other methods, with 9 articles highlighted *via* in-depth commentaries.

A total of 17 articles were published in the *Biology and Medicine* section of the *IUCrJ* in 2023, representing approximately 21% of the total papers published. It is evident that the biological sciences are a major source of high-impact crystallographic publications, and it is important that this momentum should be maintained.

IUCrJ published 22 papers in the *Chemistry and Crystal Engineering* section in 2023 out of the total of 240 in this section since the inception of the journal in 2014. We hope to encourage more papers in the MOF/COF area as well as papers in popular areas such as

pharmaceutical cocrystals and polymorphs including the events leading up to their crystallization.

Submissions to the *cryo-EM* section of *IUCrJ* were similar to 2022 with 8 articles published in 2023. *IUCrJ* continues to be a leading forum for the publication of papers in cryo-EM both on the methodological frontier and on advances that exemplify mechanistic insights into specific interesting biological problems. We are especially pleased to be a preferred venue for the publication of papers such as that of Kleywegt *et al.* [(2024). *IUCrJ*, **11**, <https://doi.org/10.1107/S2052252524001246>] that capture the community-wide consensus on standards for deposition and validation of cryo-EM data, and which will be a useful reference document for the community for many years.

The new section on *Electron Crystallography*, which acts as a home within IUCr journals for high-quality, high-impact papers in this field, published 4 articles in 2023. The other sections of the journal, covering *Materials and Computation*, *Neutron and Synchrotron Science and Technology*, and *Physics and Free Electron Laser Science and Technology* each published 9 papers in 2023.

At the end of 2023, Gautam Desiraju retired as Main Editor of the *Chemistry and Crystal Engineering* section of the journal after 9 years on the Editorial Board. We thank Gautam for his work over the years and for his active role in helping to establish the journal. Gautam is replaced by Susan Bourne (University of Cape Town), and we welcome Susan to the Board.

The main goal of *IUCrJ* remains to attract high-quality scientific papers of broad significance from across the diverse scientific communities that utilize the results obtained from diffraction methods. We encourage you to consider publishing your work in *IUCrJ*, thereby helping to solidify the journal's position as a leading comprehensive science journal.

D. Argyriou, E. N. Baker, S. A. Bourne, C. R. A. Catlow, H. Chapman, S. Subramaniam and X. Zou, Editors

	2018	2019	2020	2021	2022	2023
No. of submissions	299	284	297	282	275	317
Rejection rate (%)	33	32	33	33	26	37
No. of published papers	201	146	188	202	175	198
research papers	152	121	132	145	131	151
short communications	5	4	4	7	6	2
feature articles	1	0	0	1	0	1
computer programs	20	21	26	23	23	23
editorial	2	1	0	1	0	2
commentaries	0	0	2	1	0	1
other	21	0	24	41	15	18
No. of open-access papers	38	33	55	83	99	109
No. of pages	1776	1468	1631	1902	1706	1884
Average length (pages)	9.7	9.7	9.8	10.5	10.2	10.2
Average publication time (months)	5.5	5.6	5.7	5.8	6.1	6.0
Impact factor	2.9	3.0	3.3	4.9	6.1	
5 year impact factor	3.4	3.4	4.2	4.5	4.6	
Cited half life (years)	>10.0	>10.0	>10.0	>10.0	>10.0	

	2018	2019	2020	2021	2022	2023
No. of submissions	334	297	299	273	178	182
Rejection rate (%)	20	25	24	24	17	31
No. of published papers	222	249	209	215	169	129
research papers	172	203	158	151	130	95
short communications	6	10	14	9	4	5
feature articles	4	0	0	0	0	0
beamlines	17	27	23	39	19	22
editorial	2	1	2	3	1	0
commentaries	0	0	0	2	0	1
other	21	6	12	11	15	6
No. of open-access papers	88	87	91	100	169	129
No. of pages	1894	2096	1754	2002	1503	1183
Average length (pages)	8.9	8.7	9.0	9.9	9.4	9.6
Average publication time (months)	5.6	5.7	5.3	5.3	5.3	5.3
Impact factor	2.5	2.3	2.6	2.6	2.5	
5 year impact factor	2.8	2.8	2.9	2.8	2.4	
Cited half life (years)	8.0	7.8	8.1	8.0	8.5	

2023 marked JSR's second full year as an open access journal. Submissions increased very slightly. The number of papers/pages published was down from that in 2022 [(from 169 to 129)/(from 1503 to 1183)] - the higher number in 2022 was most likely a result of papers published that were already in the system on 1 January 2022. Publication times stayed the same at 5.3 months, which we would like to bring down. The rejection rate was noticeably higher than it has been in the past, rising from 17% to 31%. The impact factor was 2.5 (down from 2.6) and has not varied much from this figure over the last five years.

There were increases in the proportion of papers from Australia, China, Germany and Switzerland, and decreases in the proportion of papers from Russia, the UK and the USA. The top three countries for JSR were the USA (16%), Germany (16%) and France (14%).

We would like to thank the Co-editors for their excellent work for the journal. At the Congress in August two long-serving Co-editors retired: Svante Svanesson and Vincent Favre-Nicolin, who we thank for their work over the years. As replacements and additions we were pleased to welcome Nong Artrith (Utrecht University, The Netherlands), Manuel Guizar-Sicairos (Paul Scherrer Institut, Switzerland), Rebecca Ingle (University College London, UK), Gihan Kamel (SESAME, Jordan) and Diling Zhu (Linac Coherent Light Source, USA). We are looking into bringing in a new Co-editor from the Brazilian Synchrotron.

We feel that special issues continue to be valuable for expanding into new areas and attracting new authors and readers. Although no special issues were published in 2023 we have several proposed or currently in progress including PhotonDIAG-MEADOWS (to be published in summer 2024), X-ray spectroscopy (summer 2024), Asia-Oceania International Conference on SR Instruments (autumn 2024) and 50th Anniversary of the Stanford SSRL synchrotron radiation and protein crystallography initiative led by Keith Hodgson (2025).

We are grateful to the readers of JSR for their ongoing interest and support, to the authors for choosing to publish in our journal, and to the Co-editors for their invaluable service to both the journal and the wider community.

Y. Amemiya, K. Kvashnina and D. Bhattacharyya, Editors