



Twenty-Fifth General Assembly and International Congress of Crystallography, Prague, Czech Republic, 14–21 August 2021

A. T. Ashcroft*

International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, United Kingdom. *Correspondence e-mail: ceo@iucr.org

Keywords: International Union of Crystallography; IUCr; General Assembly; International Congress of Crystallography.

Supporting information: this article has supporting information at journals.iucr.org/a

1. Introduction and Opening Ceremony

By invitation of the Czech and Slovak Crystallographic Association, the Twenty-Fifth General Assembly and International Congress of Crystallography were held in hybrid mode, in person at the Prague Congress Centre, Prague, Czech Republic, and online through the gCon presentation system, 14–21 August 2021.

The meetings were attended by 1638 participants from 71 countries. Because of travel restrictions, fewer than one-third of those registered were able to travel to Prague; most of these were from the Czech Republic, Poland and Germany, although participants from France, Spain, Sweden, Denmark, Finland, Croatia, Italy, the USA and other countries were also present.

The General Assembly and Congress were opened at 5:30 p.m. on 14 August at the Congress Centre. Masters of ceremonies were Pavlína Řezáčová, the Chair of the Local Organizing Committee, and Ivana Kutá Smatanová, the Chair of the International Programme Committee. The Chair of the Congress, Radomír Kužel, summarized the history of the Czech and Slovak Crystallographic Association's bid to host the Congress, and thanked the city of Prague, the Congress Centre and the sponsors and exhibitors for their support. Jindřich Hašek, President of the Czech and Slovak Crystallographic Association (the CSCA), talked about the history of crystallography in Czechoslovakia and the CSCA, and Geoffrey Boulton, a governing board member of the International Science Council (ISC), spoke about the importance of the ISC. Professor Lidin delivered the IUCr President's message and declared the meeting open. A concert of Moravian folk music by the group Úsměv ('Smile') concluded this part of the Opening Ceremony.

The Ewald Prize was awarded to Olga Kennard (UK) for the development of the Cambridge Structural Database. Suzanna Ward from the Cambridge Crystallographic Data Centre presented the Ewald Award Lecture on her behalf.

The evening ended with a welcoming reception with more music from the group Úsměv.

2. Twenty-Fifth International Congress

2.1. Scientific programme

Three plenary lectures, five lectures connected with prizes, 35 keynote lectures, 103 standard sessions, seven special sessions and a Software Fayre were held. There were also 55 poster sessions and several commercial presentations. In total 624 lectures and over 550 posters in different forms were presented at the Congress.

Recordings of all lectures and other sessions, such as meetings or concerts, and posters were available to be viewed by registered participants until the end of March 2022. Statistics regarding the numbers of people accessing the presentations online were collected. It was noted that at every point during the Congress some participants somewhere in the world were watching online presentations. The numbers of daily views during the month after the Congress were similar to those during the Congress.

2.2. Exhibitions

A commercial exhibition comprising 14 companies and booksellers was organized. There were also 22 virtual commercial booths. Full statistics for online accesses to individual items for each booth were also available.



2.3. Social events

In addition to the scientific programme, a social programme was organized, including boat trips on the Vltava river, a conference dinner with a concert by Brand New Band in the National House of Vinohrady and a train trip to a Pilsen brewery.

3. Minutes of the Twenty-Fifth General Assembly

These minutes have been prepared by A. T. Ashcroft, Executive Secretary, under the authority of L. Van Meervelt, General Secretary and Treasurer of the IUCr and Secretary of the General Assembly.

3.1. Introduction and list of delegates

Sessions of the General Assembly were held on the evenings of Sunday 15 August, Monday 16 August and Thursday 19 August. The attendance list gives the names of official delegates appointed by the Adhering Bodies (see Appendix D in the supporting information) and the alternates who substituted at one or more sessions. The names are listed by the countries to which the respective Adhering Bodies belong. The Chairs of the delegations are indicated where they are known. There were no delegates from Algeria, Chile, the Irish Republic or Singapore.

Owing to the pandemic, the General Assembly was a hybrid of in-person and virtual participation, so many of the delegates and many of the IUCr officials were not physically present in the assembly room. Those who were present in the assembly room are shown in bold.

Albania and Kosovo (category I): D. Siliqi. Alternates: B. Dida, A. Mele, D. Karaj (1 vote)

Algeria (category I): no delegates

Argentina (category I): D. G. Lamas. Alternate: S. Klinke (1 vote)

Australia (category III): M. Parker (Chair), M. Maher, N. Sharma. Alternates: B. Heras, H. Maynard-Casely, C. Ling (3 votes)

Austria (category I): K. Hradil (1 vote)

Bangladesh (category I): A. Hussain. Alternates: Q. Hassan, T. Roy (1 vote)

Belgium (category II): Y. Filinchuk (Chair), J. Hadermann. Alternate: D. Maes (2 votes)

Brazil (category I): E. Granado (1 vote)

Bulgaria (category I): D. Karashanova (1 vote)

Cameroon (category I): P. Kenfack (1 vote)

Canada (category III): L. Dawe (Chair), T. Friscic, M. Fraser. Alternates: G. Audette, M. Fodje (3 votes)

Chile (category I): no delegates

China, People's Republic of (category IV): J. Sun (Chair), **H. Liu**, C. Jin, D. Yin (4 votes)

China, Taipei (category II): C.-J. Chen (Chair), U-S. Jeng (2 votes)

Costa Rica (category I): A. Araya (1 vote)

Croatia (category I): **M. Dakovic**. Alternate: D. Matkovic-Calogovic (1 vote)

Czech and Slovak Republics (category II): **P. Mikulik** (Chair), **I. K. Smatanova**. Alternate: M. Koman (2 votes)

Denmark (category I): **A. O. Madsen** (1 vote)

Egypt (category I): A. Farghaly (1 vote)

Finland (category I): K. T. Rissanen (1 vote)

France (category IV): S. Ravy (Chair), P. Guionneau, **C. Sauter**, **A. van der Lee** (4 votes)

Germany (category IV): T. Gesing (Chair), H. Ehrenberg, N. Dubrovinskaia, **N. Strater** (4 votes)

Greece (category I): K. Bethanis (1 vote)

Guatemala (category I): L. Velasquez. Alternate: I. Benitez (1 vote)

Hungary (category I): P. Bombicz. Alternate: G. Faigel (1 vote)

India (category III): B. Gopal (Chair), C. Narayana, D. Jain (3 votes)

Ireland, Republic of (category I): no delegates

Israel (category I): Y. Opatowsky (1 vote)

Italy (category III): M. Saviano (Chair), A. Altomare, A. Zappettini (3 votes)

Japan (category IV): Y. Sugawara (Chair), M. Kawano, G. Kurisu, S. Toma-Fukai. Alternate: T. Inoue (4 votes)

Korea (category I): S. Lee (1 vote)

Mexico (category I): M. Ramirez-Cardona. Alternate: J. Martinez-Juarez (1 vote)

Morocco (category I): A. Thalal (no votes)

Netherlands (category II): L. Kroon-Batenburg (Chair), M. Lutz (2 votes)

New Zealand (category I): K. Krause (1 vote)

Norway (category I): H. P. Hersleth (1 vote)

Pakistan (category I): I. Choudhary. Alternates: S. Yousuf, M. Ahmed, M. Rahman (1 vote)

Poland (category I): **K. Wozniak** (1 vote)

Portugal (category I): T. Duarte (1 vote)

The Regional Committee of Crystallographers from Cambodia, Indonesia, Malaysia, Sri Lanka, Thailand and Vietnam (category I): S. N. Abdul (1 vote)

Russia (category V): O. A. Alekseeva (Chair), A. E. Blagov, M. Marchenkova, A. Petrov, M. Rychev (5 votes)

Serbia (category I): T. Todorovic (1 vote)

Singapore (category I): no delegates

Slovenia (category I): A. Meden (1 vote)

South Africa (category II): C. Esterhuysen (Chair), C. Oliver. Alternates: D. Billing, S. Bourne, W. Mogodi (2 votes)

Spain (category III): **G. Garcia-Ruiz** (Chair), I. Lourdes, J. Gavira. Alternates: M. A. Garcia-Aranda, E. Gutierrez, A. Albert (3 votes)

Sweden (category II): E. Sauer-Eriksson (Chair), **Xiadong Zou** (2 votes)

Switzerland (category II): **A. Neels** (Chair), A. Linden (2 votes)

Tunisia (category I): M. Oumezzin (1 vote)

Turkey (category I): S. Ozbey (1 vote)

United Arab Emirates (category I): P. Naumov. Alternate: L. Li (1 vote)

Uruguay (category I): L. Suescun. Alternates: N. Alvarez, A. Buschiazio (1 vote)

UK (category V): J. Helliwell (Chair), C. Beavers, C. Naylor, G. S. Nichol, A. Stanley. Alternates: L. Brammer, R. Cooper, M. Glazer, S. Parsons, H. Sparkes, A. Warren (5 votes)

USA (category V): B. Campbell (Chair), S. Byram, J. Ferrara, I. Guzei, D. Tomchick. Alternates: J. Tanski, V. Young (5 votes)

Venezuela (category I): A. Briceno. Alternate: M. Delgado (1 vote)

Present as members of the Executive Committee: S. Lidin (President), H. A. Dabkowska (Vice President), L. Van Meervelt (General Secretary and Treasurer), M. L. Hackert (Immediate Past President), W. Depmeier, G. Diaz de Delgado, R. Kužel, S. Garcia-Granda, J. L. Martin, M. Takata (Ordinary Members). A. T. Ashcroft was in attendance as Executive Secretary.

3.2. First Session, Sunday 15 August 2021, 8.00 p.m.

(1) *Introductory remarks by the President*

Professor Lidin welcomed the delegates and observers, reviewed the financial state of the Union over the past quadrennium, emphasized that the IUCr publications provided 92% of the Union's income and urged delegates to send their best papers to IUCr journals.

(2) *Procedural matters*

Professor Lidin and Dr Ashcroft explained the online voting procedure that would be used by delegates throughout the General Assembly sessions. Delegates who would not have internet access during the sessions were given the option of emailing votes to the Executive Secretary. In order to verify the list of voting delegates, the President requested that delegates vote in the 'roll call' election. This would also help to familiarize the delegates with the voting software before the elections at the third session of the General Assembly.

Delegates were also advised that a fifteen-minute voting window would open after point (7) on the agenda in which they would be given the opportunity to approve the items denoted with an asterisk in the agenda papers.

(3) *Approval of agenda*

The agenda and appendices to the agenda had been distributed to Secretaries of National Committees in June 2021. The agenda were approved.

(4) *Amendments to Statutes and By-Laws affecting adherence to the Union*

The President reported that there were no proposals for amendments.

(5) *Applications for membership of the Union*

Applications for membership of the IUCr had been received from the United Arab Emirates (UAE) (Category I) and Guatemala (Category I). The application from Guatemala had been received very close to the start of the Congress, so the Executive Committee had not made a recommendation to the General Assembly.

The applications were both accepted by the General Assembly.

(6) *Withdrawal of Adhering Bodies*

(a) *Ireland*. The subscriptions due from the Adhering Body in the Republic of Ireland, the Irish Crystallographic Association, had not been paid for the years 2017, 2018, 2019 and 2020. Accordingly, the membership of the Adhering Body for Ireland had been automatically suspended in February 2021, in accordance with Statute 9.6. The President indicated that the General Assembly could either confirm the withdrawal of Ireland (in which case the membership arrears would be written off and Ireland could re-apply for membership in 2023) or freeze the membership until such time as the arrears could be paid. In this case, no further dues would be incurred, and membership could be reactivated immediately on payment of dues.

(b) *Morocco*. The subscriptions due from the Adhering Body in Morocco, the Moroccan Crystallographic Association, had not been paid for the years 2017, 2018, 2019 and 2020. Accordingly, the membership of the Adhering Body for Morocco had been automatically suspended in February 2021, in accordance with Statute 9.6. The President indicated that the General Assembly could either confirm the withdrawal of Morocco (in which case the membership arrears would be written off and Morocco could re-apply for membership in 2023) or freeze the membership until such time as the arrears could be paid. In this case, no further dues would be incurred, and membership could be reactivated immediately on payment of dues.

The General Assembly voted to freeze the membership of both adhering bodies.

(7) *Changes in names of Adhering Bodies*

The change in the name of the adhering body of Albania and Kosovo from Polytechnic University of Tirana (PUT) to the Ivodent Academy was approved.

The change in the name of the adhering body of the AsCA Regional Committee from The Regional Committee of Crystallographers from Indonesia, Malaysia, Thailand and Vietnam to The Regional Committee of Crystallographers from Cambodia, Indonesia, Malaysia, Sri Lanka, Thailand and Vietnam was approved.

(8) *Changes in category of adherence of Adhering Bodies*

The President reported that no application for a change in category of adherence had been received.

(9) *Approval of minutes of Twenty-Fourth General Assembly*

The minutes, which were contained in the published report of the Twenty-Fourth General Assembly and International Congress of Crystallography [*Acta Cryst.* (2020), **A76**, 217–224], were approved and two copies would be signed by the President and the General Secretary, in accordance with By-Law 1.13, when the Executive Committee next met in person. There were no matters arising from the minutes.

The President advised the delegates that the fifteen-minute voting window for the above items had begun. The results were announced by the Executive Secretary once the voting window had closed.

(10) *Amendments to Statutes and By-Laws not affecting adherence to the Union*

The President reported that there were no proposals for amendments.

(11) *Report of Executive Committee*

The report of the Executive Committee on the activities of the IUCr since the Twenty-Fourth General Assembly had been submitted to the National Committees and the Commissions in June 2021, in accordance with Statute 6.8, and is available as Appendix A1 in the supporting information.

The President highlighted the importance of the IUCr Commissions and IUCr publications working together. He commended the establishment of the Gender Equity and Diversity Committee, welcomed the appointment of Dr Andrew Allen as Editor-in-Chief of IUCr Journals and stressed the importance of journals development succession. He emphasized again the dependence of the Union on the income from the IUCr journals and reminded the General Assembly that any surplus from the journals supports young scientists, the Calendar Committee programme of supported schools, meetings and workshops, the IUCr's Outreach and Education programme and the Africa Initiative. The President noted that Volume H, *Powder Diffraction*, had been added to the IUCr's *International Tables for Crystallography*, and reminded the General Assembly that, in addition to the Ewald Prize, the IUCr was now awarding the W. H. and W. L. Bragg Prize for early-career crystallographers and would be awarding the Struchkov Prize to young, small-molecule crystallographers from the Melbourne Congress onwards.

The President stated his beliefs that more Crystallographic Information File (CIF) standards would be developed, new Commissions would be established and that the IUCr Outreach programme would continue to make science more visible and approachable.

(12) *Financial report*

A financial report, covering the calendar years 2017, 2018, 2019 and 2020, had been prepared by the Treasurer and had been submitted to the National Committees and the Commissions in June 2021. The report is available as Appendix A2 in the supporting information.

The Treasurer reported the composition of the Executive Committee and the Finance Committee. The Union operated in three currencies: member subscriptions were largely paid in CHF; two-fifths of the investments, most of the income and most expenses were in GBP; and three-fifths of the investments and some expenses were in USD. To improve readability, the accounts had been prepared in USD, as allowed by Swiss law, since 2017.

The Swiss authorities now required the Union to provide details of the value of voluntary activities and to demonstrate that the value of these exceeded the income from the journals in order to maintain tax exemption.

Cloud-based accounting software, Xero, had been used since the start of 2018, and this had improved efficiency and transparency. The artificial accounting funds used previously were not compatible with Xero, and the Finance Committee had voted to dispense with these in March 2018.

While the Union had sustained losses between 2013 and 2016, the Treasurer reported that profits had been restored in 2017 and had continued through 2018, 2019 and 2020. The annual turnover was about USD 3 700 000, but the income trend for the Union's subscription journals was still falling and the return to surplus had been due to an increase in open-access income and a reduction in expenditure. The pandemic had reduced expenses owing to less travel and fewer meetings, but it was hoped that a return to normality would soon follow.

Four years of profits had returned the Union's assets to 2013 levels of around USD 5 000 000. The Finance Committee had decided to move the majority of the Union's investments from the USA to Jersey so they would be in the currency of expenditure (GBP) in order to reduce currency risks. Most of these investments could be redeemable quickly if necessary. An Investment Policy had been adopted by the Finance Committee that avoided risk but mandated diversity, ethics, sustainability and social responsibility.

Future concerns were the status of the Union's contract with its publishing partner, John Wiley and Sons, the lease of 2 Abbey Square, the performance of the IUCr's investments and the age profile of the Chester staff.

(13) *Ewald Prize*

Details of the prize, awarded to Dr O. Kennard, who was unable to attend in person, at the Opening Ceremony, and the citation are given in Appendix A3 in the supporting information.

(14) *W. H. and W. L. Bragg Prize*

Details of the prize, due to be awarded to Professor J. Fraser and Dr J.-P. Julien on Tuesday 17 August, and the citation are given in Appendix A4 in the supporting information.

(15) *Struchkov Prize*

The President confirmed that the Union would recruit a prize committee in conjunction with the donors and that the IUCr would award the Struchkov Prize triennially, beginning in Melbourne in 2023. More details are given in Appendix A5 in the supporting information.

(16) *Outreach and Education*

The Executive Outreach Officer, Professor M. Zema, presented a report highlighting the major achievements during the quadrennium. These included:

(a) The formation and expansion of the IUPAP-IUCr project on Lightsources for Africa, the Americas, Asia, Middle East and the Pacific (LAAAMP), of which he was now the Chair, which had developed regional strategic plans for Africa, the Caribbean, Mexico, the Middle East and South East Asia. A colloquium programme had been established, brochures had been produced in five languages, Faculty-STudent (FAST) teams had been funded to visit advanced light sources and presentations were made at the World Science Fora in 2017 and 2019. The X-Tech Lab had been established in Benin, aimed at training Master and PhD students from Benin and neighbouring countries and establishing a permanent user research facility.

(b) New countries had been encouraged to join the IUCr, with United Arab Emirates and Guatemala joining in Prague and more applications expected in Melbourne.

(c) The African Crystallographic Association (AfCA) was due to be established in early 2021 and would apply to become a Regional Associate of the IUCr in 2023. A joint meeting of AfCA, the IUCr Africa Initiative, LAAAMP and the African Light Source (AfLS) had been held in Ghana in 2019 and a strategic network was being built.

2022 would be the International Year of Basic Sciences for Sustainable Development, the International Year of Glass and Mineralogy 2022. The Executive Outreach Officer closed by stating that since the start of the International Year of Crystallography in 2014, the IUCr had provided more than USD 2 000 000 in funding to support the crystallographic community, and encouraged delegates to join the IUCr Associates Programme, donate to the Outreach and Education fund, publish their best papers with IUCr Journals and be proactive within the crystallographic community. A full report is given as Appendix A6 in the supporting information.

(17) *IUCr Associates Programme*

The President reminded the delegates that the programme offers a series of benefits and tools to help Associates network, share ideas and discover more about crystallography. In addition, those who joined would be supporting the IUCr in its many charitable activities, such as sponsoring international meetings and schools and its OpenLabs initiative.

The benefits of joining include, for example, a 20% discount on the open-access fee for publishing an article in an IUCr journal, the facility to download six free articles from Crystallography Journals Online, a 50% discount for individuals purchasing the print version of *International Tables for Crystallography*, and many others.

The Associates Programme welcomes individuals at any stage of their career, from undergraduates to postdoctoral and senior researchers, with a reduced joining rate available for students and retired scientists. The IUCr also offers three categories for Corporate Associates, each with different levels of benefits and visibility. The President thanked Dectris, Rigaku and Eldico Scientific for joining in Category 1, ThermoFisher Scientific for joining in Category 2 and Stoe for joining in Category 3.

The President then adjourned the session at 9:16 p.m.

3.3. Second Session, Monday 16 August 2021, 8:00 p.m.

The President opened the session by asking the delegates to take part in a quick voting test to confirm attendance, with a live vote due to start after point (27) on their agenda, asking them to approve items covered previously that were noted with an asterisk in their meeting papers.

(18) *Commission on Journals*

The report of the Commission on Journals had been distributed to the National Committees and the Commissions in June 2021 and is given in Appendix A8.1 in the supporting information.

Dr Andrew Allen, the Editor-in-Chief, addressed the General Assembly. He informed the General Assembly that, despite the pandemic, approximately 10 000 pages had been published in 2020, with high-quality papers being published

across the whole range of crystallography by the dedicated Editorial Office staff in Chester, UK. He then went through the ten IUCr journals individually:

(a) *IUCrJ* now comprised six main subject areas, with a seventh area, Electron Crystallography, being planned. The journal was fully open access with a pre-selection of papers for review. The number of papers has doubled over the previous five years and the average impact factor had been 5. Although the journal had lost money every year since its launch, losses had been shrinking steadily and it was hoped that break-even would be achieved over the next few years.

(b) *Acta A* comprised two sections: Foundations and Advances, with the latter selecting papers based on likely impact and broad interest. The proportion of open-access papers was approaching 40%, the impact factor was consistently above 2 and a machine-readable literature project led by Professor Billinge was underway.

(c) *Acta B* was due to be the new home for studies on crystal growth and characterization, with the proportion of open-access papers now above 15% and an impact factor consistently above 2.

(d) *Acta C* continued to broaden its readership within the chemistry community, had more than 15% of papers available as open access and an underlying impact factor above 1.1.

(e) *Acta D* had made significant contributions (along with *IUCrJ* and *Acta F*) to COVID-19 research, had more than 60% of papers available as open access and had an impact factor above 7. Data-deposition requirements had been increased in line with recommendations from the PDB, the IUCr Commission on Biological Macromolecules and the IUCr Committee on Data.

(f) *Acta E* had an increased role in teaching and education as well as with IUCr outreach. The Journal Citation Index factor and notional impact factors were both approaching one. It was hoped that the machine-readable literature product for *Acta A* would also benefit *Acta E*.

(g) *Acta F* had a new category of articles: Methods Communications, and a new initiative on Topical Reviews with Professor Helliwell. The percentage of open-access papers had doubled from 15% in 2019 to around 30% in 2020. The impact factor was sustainably above 1. The new data-deposition requirements adopted for *Acta D* were mirrored in *Acta F*.

(h) *Journal of Applied Crystallography* had continued to thrive with the proportion of open-access papers increasing to 40% and the impact factor now above 3.

(i) *Journal of Synchrotron Radiation* was due to become fully open access in January 2022, but already had almost 60% of papers open access in 2020, and the impact factor was around 2.5.

(j) *IUCrData* was publishing short structural reports with a very rapid publication time. Traditional submission had been declining but an increasing need for data publication options was anticipated. A new Raw Data Letters section was imminent.

Three Commissioning Editors had been appointed to work with the Journal Main Editors and the Editor-in-Chief to commission topical reviews, feature articles, special issues and

special collections and work with IUCr Commissions to identify Guest Editors, areas for development and Main Editor candidates.

The Editor-in-Chief closed by welcoming an increasingly open-access future for IUCr Journals. Green open access article deposition was being facilitated in addition to gold open access, so all IUCr Journals were Plan S compliant, with growing evidence that gold open access significantly increases paper citations. With more than 200 editor volunteers, many regular reviewers motivated to see high-quality work published and 25 professional staff in Chester dedicated to help authors to get the best possible publication results and then facilitate the publicity of fine articles, the Editor-in-Chief asked the delegates to bring their best work and submit it to IUCr journals.

(19) Commission on International Tables

The report by the Chair of the Commission on *International Tables* had been distributed to the National Committees and the Commissions in June 2021 and is available in Appendix A8.2 in the supporting information.

The Chair (Professor C. P. Brock) warned delegates that trying to get *International Tables* articles indexed by PubMed was a challenge but one that they would pursue. Delegates were encouraged to look at the new Volume H, *Powder Diffraction*, and the new *Teaching Edition*. Suggestions for new editors for Volumes D and A1 were welcomed.

(20) Committee for the Maintenance of the CIF Standard

The report of the Chair of the Committee for the Maintenance of the CIF Standard (COMCIFS) had been distributed to the National Committees and the Commissions in June 2021 and is given in Appendix A9 in the supporting information.

(21) IUCr Newsletter

The report of the Editor of the IUCr Newsletter had been distributed to the National Committees and the Commissions in June 2021 and can be found in Appendix A10 in the supporting information.

(22) Committee on Data

The report of the Chair of the Committee on Data (ComDat) had been distributed to the National Committees and the Commissions in June 2021 and is given in Appendix A11 in the supporting information.

(23) Gender Equity and Diversity Committee

The report of the Chair of the Gender Equity and Diversity Committee had been distributed to the National Committees and the Commissions in June 2021 and is given in Appendix A12 in the supporting information.

The President gave a short presentation on the new Committee and requested that the General Assembly approve the Gender Equity and Diversity Statement drafted by the Committee. This was approved.

(24) Africa Initiative Committee

The report of the Chair of the Africa Initiative Committee had been distributed to the National Committees and the Commissions in June 2021 and is given in Appendix A13 in the supporting information.

(25) IUCr/Oxford University Press Book Series Committee

The report of the Chair of the IUCr/Oxford University Press Book Series Committee had been distributed to the National Committees and the Commissions in June 2021 and is given in Appendix A14 in the supporting information.

(26) Non-publishing Commissions

The reports of the Commissions on their activities since the Twenty-Fourth General Assembly had been distributed to the National Committees and the Commissions in June 2021. The reports are given in Appendix A8 in the supporting information.

The President reported that the Executive Committee had held in-depth discussions with the Chairs.

The General Assembly accepted all the reports.

(27) Proposals for new Commissions

In 2019, the Executive Committee had been requested to establish a Commission on Diffraction Microstructure Imaging. A formal proposal had been received in 2020 and updated in 2021. The Executive Committee recommended that the General Assembly approve the formation of this new Commission, although it strongly encouraged the new Commission to pursue its stated goal of improving the diversity of its membership. The General Assembly accepted the recommendation.

(28) Review of existing Commissions

The President reported that the Executive Committee had considered the work of the Commissions and recommended no changes. The General Assembly accepted the recommendation.

(29) Determination of number of elected members on each Commission

In accordance with Statute 5.10(d) (see Appendix B in the supporting information), the Assembly had to determine the number of persons to be elected on the Commissions until the Twenty-Sixth General Assembly; these numbers did not include Chairs, Co-editors or *ex officio* members. The numbers of elected members approved by the General Assembly (Chairs not included) are set out below:

1. Commission on Journals 0
2. Commission on International Tables 0
3. Commission on Aperiodic Crystals 8
4. Commission on Biological Macromolecules 13
5. Commission on Crystal Growth and Characterization of Materials 8
6. Commission on Crystallographic Computing 7
7. Commission on Crystallography of Materials 7
8. Commission on Crystallographic Nomenclature 0
9. Commission on Crystallographic Teaching 8
10. Commission on Crystallography in Art and Cultural Heritage 7
11. Commission on Electron Crystallography 9
12. Commission on High Pressure 9
13. Commission on Inorganic and Mineral Structures 9
14. Commission on Magnetic Structures 11
15. Commission on Mathematical and Theoretical Crystallography 8
16. Commission on Neutron Scattering 8

17. Commission on NMR Crystallography and Related Methods 8

18. Commission on Powder Diffraction 9

19. Commission on Quantum Crystallography 9

20. Commission on Small-Angle Scattering 7

21. Commission on Structural Chemistry 10

22. Commission on Synchrotron and XFEL Radiation 9

23. Commission on XAFS 10

24. Commission on Diffraction Microstructure Imaging 8

The President advised the delegates that the fifteen-minute voting window for the above items had begun. The results were announced by the Executive Secretary once the voting window had closed.

(30) *Reports of Representatives on Regional and Scientific Associates*

In accordance with Statute 8.5, the reports of the Representatives on Regional and Scientific Associates had been circulated with the agenda papers in June 2021. These reports are available in Appendix A15 in the supporting information.

All the reports were accepted.

(31) *Reports of Representatives on bodies not belonging to the Union*

In accordance with Statute 8.5, the reports of the Representatives had been circulated with the agenda papers in June 2021. These reports are given as Appendix A16 in the supporting information.

All the reports were accepted.

(32) *Sponsorship of meetings: Sub-committee on the Union Calendar*

The report of the Chair had been distributed to the National Committees and the Commissions in June 2021 and is given in Appendix A17 in the supporting information.

The Committee was thanked for its hard work.

(33) *Date and place of Twenty-Sixth General Assembly*

The Twenty-Sixth General Assembly would be held in Melbourne, Australia, in August 2023, at the invitation of the Society of Crystallographers in Australia and New Zealand.

Before the next item on the agenda, the President requested that the Executive Secretary explain to the General Assembly the online voting procedures that would be used to ensure that elections complied with By-Laws 8.5 and 8.6 while giving delegates around the world sufficient opportunity to be able to cast their votes.

(34) *Determination of date and place of Twenty-Seventh General Assembly*

In accordance with By-Law 1.3 the General Assembly could determine the place of the next but one General Assembly, namely the Twenty-Seventh General Assembly to be held in 2026. The President announced one invitation to host the 2026 General Assembly and Congress has been received, from a group consisting of the Canadian National Committee for Crystallography and the United States National Committee for Crystallography in conjunction with the regional affiliate ACA to hold the Congress in Calgary, Canada.

Although they did not wish to be considered as hosts for the Twenty-Seventh General Assembly, there was a further

presentation from Dr M. Weiss to declare that Berlin would bid for the 2029 Congress.

The President adjourned the session at 9:57 p.m.

3.4. Third Session, Thursday 19 August 2021, 8:00 p.m.

The President opened the session by asking the delegates to take part in a quick voting test to confirm attendance.

A video about the Melbourne Congress was introduced by Professor M. Parker, Chair of the Twenty-Sixth Congress Organizing Committee. This was followed by a video on Xi'an, China, presented by Professor H. Liu. Professor Liu remarked that China had hosted only one Congress in 73 years (in 1993) and intended to bid to host the 2031 Congress.

The Executive Secretary again explained the voting procedure, referred the delegates to the detailed email about the procedure that had been sent out earlier that day and thanked them for their patience as the voting was likely to be spread over several days.

(34) *Determination of date and place of Twenty-Seventh General Assembly (continued)*

The General Assembly accepted the invitation to host the Twenty-Seventh General Assembly in 2026 in Calgary, Canada.

(35) *Determination of general policy and timetable for period to Twenty-Sixth General Assembly*

There were no comments on this item.

(36) *Preliminary consideration of activities for period 2023–2026*

There were no comments on this item.

(37) *Budget estimates for period to Twenty-Sixth General Assembly: determination of unit contribution*

These budget estimates had been distributed with the agenda papers and are given as Appendix A18 in the supporting information.

The General Assembly accepted the budget estimates and approved the recommendation of the Executive Committee to continue the unit contribution unchanged, at CHF 1000, for the years 2022 and 2023.

The President asserted that the Executive Committee would look into ways of making the IUCr more inclusive of developing countries. Non-voting observer status would be considered, but the Executive Committee would look for ways to remain fair to those countries who pay dues while becoming more inviting to those who could not.

(38) *Confirmation of appointments of Editors of publications of the Union*

In accordance with Statute 7.1, the initial appointments and the reappointments of the Editors of the publications of the IUCr were made by the Executive Committee and were subject to confirmation by the General Assembly.

The Assembly confirmed the following appointments and reappointments:

Editor-in-Chief of IUCr journals: A. J. Allen (USA)

Editors of Section A of *Acta Crystallographica*: A. Altomare (Italy) and S. J. L. Billinge (USA)

Editors of Section B of *Acta Crystallographica*: A. J. Blake (UK), M. de Boissieu (France) and A. Nangia (India)

Editors of Section C of *Acta Crystallographica*: L. R. Falvello (Spain), P. R. Raithby (UK) and J. White (Australia)

Editors of Section D of *Acta Crystallographica*: C. S. Bond (Australia), E. F. Garman (UK) and R. J. Read (UK)

Editors of Section E of *Acta Crystallographica*: G. Diaz de Delgado (Venezuela), C. Massera (Italy), S. Parkin (USA) and L. Van Meervelt (Belgium)

Editors of Section F of *Acta Crystallographica*: J. Newman (Australia) and M. J. van Raaij (Spain)

Editors of *Journal of Applied Crystallography*: K. Chapman (USA), J. Hajdu (Sweden) and G. J. McIntyre (Australia)

Editors of *Journal of Synchrotron Radiation*: Y. Amemiya (Japan), D. Bhattacharyya (India), K. Kvashnina (France) and I. Lindau (USA)

Editors of *IUCrJ*: D. Argyriou (Sweden), E. N. Baker (New Zealand), C. R. A. Catlow (UK), G. R. Desiraju (India), J. C. H. Spence (USA) and S. Subramaniam (Canada)

Editors of *IUCrData*: W. T. A. Harrison (UK), J. Simpson (New Zealand), E. R. T. Tiekink (Malaysia), L. Van Meervelt (Belgium) and M. Weil (Austria)

Commissioning Editors: E. V. Boldyreva (Russia), T. Proffen (USA) and R. Steiner (UK).

Editor-in-Chief of *International Tables*: C. P. Brock (USA)

Editor of Volume A: M. I. Aroyo (Spain)

Editor of Volume B: G. Chapuis (Switzerland)

Editor of Volume C: T. R. Welberry (Australia)

Editor of Volume D: To be determined

Editor of Volume E: G. Madariaga (Spain)

Editors of Volume F: E. Arnold (USA) and L. Tong (USA)

Editors of Volume G: B. McMahon (UK) and J. Hester (Australia)

Editors of Volume H: C. J. Gilmore (UK) and J. A. Kaduk (USA)

Editors of Volume I: C. T. Chantler (Australia), F. Boscherini (Italy) and B. Bunker (USA)

Editor of Volume A1: To be determined.

(39) *Election of Chairs and members of Commissions*

The nominations made by the Executive Committee for the Chairs and members of Commissions, after consultation with the Commissions through their Chairs, had been notified to delegates.

Since no other nominations had been made by the delegates, the persons recommended by the Executive Committee were considered elected.

The current full memberships of all the Commissions, including the *ex officio* members, are given as Appendix C in the supporting information.

(40) *Election of Representatives on bodies not belonging to the Union and on Regional and Scientific Associates*

The nominations made by the Executive Committee for those Representatives to be elected by the General Assembly had been notified to delegates. As no other nominations were made, these persons were considered elected.

The names of the Representatives of the Union, including those appointed *ex officio*, are given in Appendix C in the supporting information.

(41) *Election of Officers of the Union*

The nominations made by the Executive Committee for Officers of the Union had been included in the agenda papers distributed in June 2021. H. A. Dabkowska (Canada) was nominated for President, S. Garcia-Granda (Spain) and R. Kužel (Czech Republic) were nominated for Vice-President and B. Brummerstedt Iversen (Denmark) was nominated for General Secretary and Treasurer. Ten nominations were made for the three six-year vacancies for Ordinary Members: A. Altomare (Italy), D. G. Billing (South Africa), P. Grochulski (Canada), L. Meshi (Israel), T. Proffen (USA), S. Ravy (France), M. S. Weiss (Germany) and K. Wozniak (Poland). In addition to the Executive Committee nominations (and in accordance with By-Law 8.2), L. Brammer (UK) and H. Liu (China) were nominated by six delegates to the General Assembly.

As there was only one candidate for President and for General Secretary and Treasurer, these candidates were considered elected. Elections for the Vice-President and three Ordinary Members for the normal six-year term were held by online secret ballot over a period of days. The following nominees were elected:

President

H. Dabkowska (Canada)

Vice-President

S. Garcia-Granda (Spain)

General Secretary and Treasurer

B. Brummerstedt Iversen (Denmark)

Ordinary Members (six years)

A. Altomare (Italy)

T. Proffen (USA)

M. Weiss (Germany)

(42) *Any other business*

The President thanked the Prague Convention Centre staff for all their help with the online arrangements and presented a gift of appreciation to the Convention Centre technical manager from the IUCr Executive Committee and Chester staff.

As there was no other business, the President declared the Twenty-Fifth General Assembly closed at 9:52 p.m.

4. Closing Ceremony, Saturday 21 August 2021

The Chair of the Congress, R. Kužel, presented a short review of the meeting and thanked everyone who had helped to organize it, in particular the TRI Group, who made sure that the hybrid nature of the meeting ran so smoothly. Professor Kužel noted that 11.8 TB of data were streamed, 18 042 slides were shown and 15 318 hours of content were streamed during the Congress, requiring 1400 hours of work by the technicians.

S. Garcia-Granda (the incoming Vice-President), who was present in Prague, thanked the main organizers and presented the Chair of the Congress, the Chair of the Local Organizing Committee and the Chair of the International Programme

Committee with certificates of thanks from the IUCr. S. Lidin (the outgoing President), who was participating by video link, congratulated the organizers for making the hybrid Congress so successful.

A video from the organizers of the next Congress, inviting everyone to Melbourne in 2023, was shown.

H. Dabkowska (the incoming President) declared the Twenty-Fifth Congress and General Assembly to be closed.