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A New Concept for the Direct Funding and Evaluation of Scientific Journals

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Contents

Summary

The results of publicly funded science are a public good and should be generally and freely accessible.[1] This includes the texts of scientific publications as well as the data, the models, the software and the associated analysis procedures on which they are based.

Free access to research results is made possible by making them available on the internet. However, the publication of scientific articles in scientific journals is still largely based on commercial payment models: either through subscriptions, through payment per article (article processing charge – APC) or through transformation contracts (publish and read – PAR fees). This discussion paper deals with the conversion of this current payment system for scientific publications to direct financing at no cost to the users. It focusses on open access publications of scientific articles.

The majority of academic publishing is dominated by a few profit-orientated publishers. These publishers have considerable market power, which has led to continuously rising journal prices and APCs, i.e. costs that are ultimately financed by the taxpayer. High private profits are generated in the process. At the same time, it is becoming increasingly difficult to reconcile the commercial incentives associated with publishing as many articles as possible with the necessary scientific selection and quality assurance. In parallel, publishers have emerged that focus on commercial skimming without quality assurance (paper mills, predatory publishing, etc.).

Scientific publishing should be financed and controlled according to the same general principles used to support publicly funded research. To this end, we are proposing a new funding concept for the operation of scientific journals. It suggests long-term public funding

1 International Science Council: https://council.science/our-work/why-scientific-publishing-matters/ (as of 27 February 2025).

as a continuous task and – as a new element – quality control by the scientific community through journal evaluations and reevaluations. The technical operation for the provision of scientific publications can be carried out via publicly funded platforms or awarded to commercial service providers in a competitive process. Quality assurance should remain the sole responsibility of the scientific community. The new funding procedure should preferably be used to transfer already existing successful journals to a non-profit environment to ensure the scientific community's sovereignty.

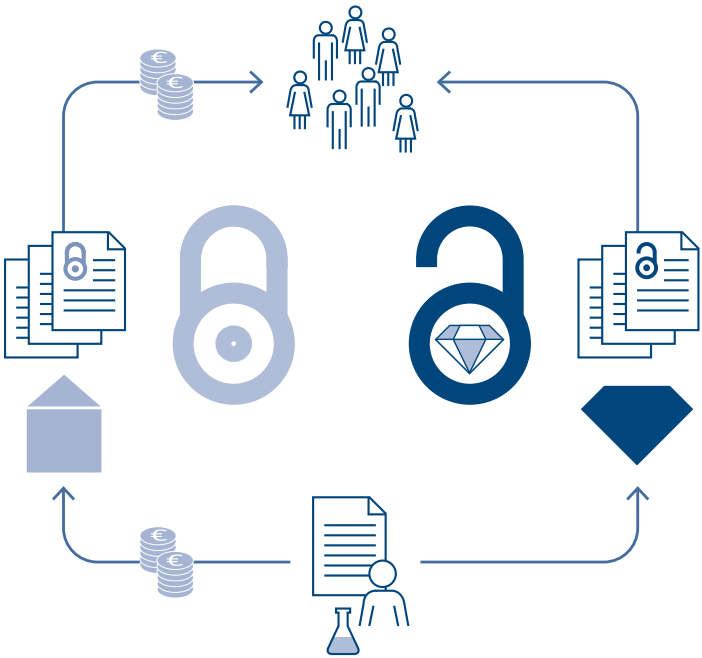

Figure 1: Commercial and non-commercial publication model

Recommendations

The concept presented in the discussion paper leads to the following recommendations for the implementation of the new funding procedure for scientific publications:

1. Involvement of representatives from scientific societies that publish scientific journals to estimate the required budget and design of the application process;
2. Establishment of a budget for the new funding procedure through central funds;
3. Development of a detailed application procedure by an experienced third-party funding organisation;
4. Establishment of an international reviewer panel to evaluate applications;
5. National call for proposals to launch the new procedure as a pilot project;
6. Initiation of an international working group to establish supranational co-financing mechanism.

Definitions

Scientific journals are specialised publications that present current research results, scientific findings and theoretical contributions in their respective fields on a regular basis. This distinguishes them from academic books, which are available as individual publication media. Articles in scientific journals generally undergo a peer-review process in which experts in the respective field check the quality, relevance and validity of the submitted work. The peer review process is overseen by a committee of the editors of a scientific journal, the editorial board.

Open Access (OA) refers to the free and unrestricted access to scientific publications and data on the internet that have been produced through publicly funded research. The aim is to make research results accessible to all - without financial, legal or technical barriers. Licences such as Creative Commons regulate subsequent use and guarantee the authors' copyrights.

Article Processing Charges (APCs) are fees charged by scholarly journal publishers to publish open access articles. The fees cover, among other things, the costs of editing, peer review and publication on the internet.

A **public good** is an economic good that is characterised by two key features: Non-excludability and non-rivalry in consumption. Non-excludability means that no one can be excluded from consuming the good. Non-rivalry means that the consumption of one individual does not reduce the good for others.

A **continuous public task** is a task that is performed continuously and over the long term by public institutions in order to fulfil basic societal needs and ensure the common good.

1 Background

1.1 The Dual Role of Scientific Publications

Science thrives on the unhindered exchange of ideas and results through publications. Publications present research results, place these results in the context of current knowledge and contain interpretations and ideas that stimulate further research. However, publications also have a second role. They also serve to evaluate the performance of scientists and constitute a central component in decisions on the further funding of their research and their career progress. In this second role in particular, publications themselves have now taken on an economic character, almost comparable to a "currency". Scientists and academics should accumulate as much of this "currency" as possible in order to promote their reputation, their financial resources and their career. The relative value of the "currency" is largely determined by the reputation of the scientific journals in which publications are published.[2]

1.2 The Commercialisation of Academic Publishing

Today's culture of scientific publications began in the middle of the 17th century, originally as part of the exchange of printed works at scientific conferences.[3] Soon a system emerged in which periodicals were published in the name of learned societies or academies of sciences, such as the Royal Society, the Académie Française and the Leopoldina. This also provided an incentive for scientific publishers to organise the printing process and distribution for a fee. The content and quality assurance remained with the scientific editors, who considered the associated tasks and duties as part of their scientific activity.

2 See Deutsche Forschungsgemeinschaft 2022.

3 See Maclean 2022.

However, this sensible division of labour was gradually broken up by the expansion of publisher activities with the aim of maximising profits.[4] Publishers began to publish journals under their own responsibility, claiming the rights to titles and content from the authors and working with their own editorial teams. Quality assurance of individual works continued to be carried out by academics, who essentially worked for the publishers free of charge. The transfer of exclusive exploitation rights to the publications gave the publishers the monopoly over the published content. Access was restricted by payment barriers in the form of subscription fees, which had to be paid primarily by libraries and academic institutions and which have risen sharply over time. As the financing of science and academic libraries is a public task, the publishers ultimately made their profits by utilising public funds, although the public authorities had no influence on the publishers' pricing. This resulted in continuous price increases that were often disproportionate to the services provided by the publishers. In addition, institutions that were unable or unwilling to pay the escalating subscription fees were prevented from engaging in international academic exchange.

This development was accompanied by an increasing market concentration: between 1980 and 2021, the share of articles listed on the Web of Science (WoS)[5] held by the five largest publishers (Elsevier, Springer Nature, Wiley, MDPI and Taylor & Francis) rose from 35 % to 59 %.[6] Following the takeover by Clarivate, WoS itself now has a dominant market position, which is directed against smaller publishers and new publication models in particular via the selection of listed articles. The large publishers often offer the journals they publish to libraries in packages that can only be subscribed to as a whole or where the individual purchase of titles would be more expensive than the whole package. The pricing is not transparent. However, no academic library can permanently do without access to literature through these packages.

4 See Walter & Mullins 2019; Buranyi 2017.

5 Clarivate: www.webofscience.com (as of 27 February 2025).

6 See van Bellen et al. 2024.

The original role of scientific publishers was to act as service providers for the dissemination of scientific publications. Today, many journals are operated directly by publishers whose primary goal is to increase sales and profits. In many cases, commercial publishers have partially taken over the first step of quality control for submissions by employing their own full-time editors to make a pre-selection. However, these are only an inadequate substitute for a scientific editorial board (see Appendix: Requirements for the operation of a scientific journal). Quality control by reviewers, the actual peer review process, is still carried out by members of the scientific community, even in the case of commercial publishers, who generally do not receive any payment from the publishers. The reviewers' working hours are paid by the institutions at which they work. As this cost reduction is only partially passed on to libraries via prices due to the oligopolistic market structure, the current publication system results in considerable state subsidisation of private companies. At the same time, publishers prohibit manuscripts from being submitted to different journals at the same time, which can be interpreted as preventing competition. A lawsuit on this issue was recently filed in the USA against major publishers (Elsevier, Wolters Kluwer, John Wiley & Sons, Sage Publications, Taylor & Francis and Springer Nature).[7]

1.3 The Open Access Movement

Since the 1990s, the scientific community has been increasingly discussing how the publication system could be changed. The basic idea emerged that access to scientific publications should be made possible without hindrance, i.e. without payment barriers and via publicly funded repositories.[8] Today, this is generally referred to as Open Access. The costs for the administration, peer review, editing, publishing and online hosting of an article are often financed by APCs, which must be paid for by the authors or their institutions or by project funds. The articles themselves are then freely accessible online.

7 See Scarcella 2024.

8 See Budapest Open Access Initiative: https://www.budapestopenaccessinitiative.org/read/; Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities: https://openaccess.mpg.de/Berlin-Declaration ; Plan S Initiative: https://www.coalition-s.org/ (all websites as of 27 February 2025).

New journals emerged that systematically implemented this model, some with start-up funding from third parties (e.g., PLoS journals, *New Journal of Physics*, *eLife* etc.), but some also as new commercial publishing initiatives (e.g., Biomed Central – BMC, Frontiers, MPDI).[9] The established publishers also increasingly offered open access options, but then usually charged APCs ("double dipping") in addition to the subscription fees.

An undesirable side effect of this payment model is the emergence of so-called predatory journals, whose sole purpose is to skim off APCs without guaranteeing scientific quality assurance. As the number of publications plays an important role in the review process of universities and funders, a large market for fast publications without sufficient quality control has emerged, which continues to grow through paper mills and AI-generated fake publications.

An additional business model that has recently emerged for large publishers is the trade in scientists' personal data or search, access and usage information, which is detached from the core interests of science.[10]

1.4 The DEAL Process

The DEAL project was initiated in 2014 by the Alliance of German Science Organisations to negotiate new contract models with the three major scientific publishers Elsevier, Springer Nature and Wiley throughout Germany.[11] The aim of the project was initially to establish transparent pricing for comprehensive access to scientific content and then to include open access publication options in the contracts. Contracts were concluded with Wiley in 2019, Springer Nature in 2020 and Elsevier in 2023. In the negotiations, it was possible to establish open access options for all authors employed at the participating institutions in Germany. At the same time, the increase in payments to the three publishers was successfully limited.

9 Public Library of Science: https://plos.org/; eLife Sciences Publications: https://elifesciences.org/; Biomed Central: https://www.biomedcentral.com/; Frontiers: https://www.frontiersin.org/; MDPI: https://www.mdpi.com/ (all websites as of 11 March 2025).

10 See Deutsche Forschungsgemeinschaft 2021; Zweck et al. 2024.

11 See DEAL Consortium: https://deal-konsortium.de/ (as of 27 February 2025).

However, reducing the overwhelming influence of the market power of these three major publishers is not achievable through these contracts alone. The negotiations have shown that it is very difficult to find regulations in the current system that primarily reflect the interests of science. When the DEAL contracts expire at the end of 2028, the question will arise as to whether such contracts with oligopolistic publishers are expedient and under what conditions the financing of scientific publications via such models should continue to be pursued.

1.5 The Diamond Open Access Model

The aim of the Diamond Open Access model (often also referred to as the Platinum Open Access model) is to create free access not only for readers, but also for authors. The operation and financing of such journals must remain in the hands of academic institutions, which receive a budget for this purpose. They can use this budget to commission service providers to implement individual publication management components (e.g. manuscript management systems, handling of the review process, professional editing, operation of websites, etc.) in a competitive process. The new National Service Centre for Diamond Open Access (SeDOA)[12], which is currently being set up and funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), will be a key point of contact for this publication model in the future.

The model is gaining increasing support, there are thousands of journals worldwide that are run according to this model[13] , and there are meta-analyses that evaluate the success and hurdles for these journals to date.[14] However, the precarious funding situation for most of these journals is problematic. Current studies on journals that are operated according to this model in Germany and Switzerland by various institutions came to the conclusion that:

12 See Deutsche Forschungsgemeinschaft 2025a.

13 See Bosman et al. 2021.

14 See Yoon et al. 2024.

"The interviews have demonstrated that the editors are highly committed to their journal and ... [are] convinced of the value of a publishing model that comes without financial barriers for both authors and readers. However, if we want Diamond OA journals to succeed, it is necessary to develop funding mechanisms that are not limited in time."[15]

"Editorial tasks are mainly done by small teams of collaborators, often young researchers in the roles of PhDs, postdocs, or academic assistants. Nearly all journals heavily rely on volunteer work with only very few journals being able to financially compensate editors, editorial managers, assistants and other contributors. Relying on volunteers also means that most journals do not have the capacities to acquire the specialised knowledge needed in some areas of open access publishing such as IT and legal aspects."[16]

The principles of the Diamond Open Access model are therefore already being implemented by many players, but there is a lack of solid funding. This problem has already been addressed at EU level. The Council of the European Union states this in the document "Towards high-quality, transparent, open, trustworthy and fair scientific publishing":

"[The Council] ENCOURAGES Member States and the Commission to step up support to the development of aligned institutional and funding policies and strategies regarding not-for-profit open access multiformat scholarly publishing models in Europe with no costs for authors or readers, and to set and implement roadmaps or action plans for a significant expansion of such publishing models" (under "Way forward"-item 11).[17]

15 Taubert et al. 2024, p. 224.

16 Hahn et al. 2023, p. 8.

17 Council of the European Union 2023, "Way forward", item 11.

The present discussion paper, written by members of the Leopoldina working group "The Future of Scientific Publishing"[18], aims to put forward a concrete funding proposal for a Diamond Open Access procedure that fulfils this requirement of the Council of the European Union.

The proposal is based on the general model in which scientific publications are peer-reviewed and published in scientific journals that are controlled by a board of editors from the scientific community. This is the classic model on which our current scientific knowledge was largely built and which will remain the dominant model for the foreseeable future. There are now also many new ideas and experiments on how scientific publishing could be organised in the future. The funding system proposed here can act as a basis on which these ideas could be further developed without commercial constraints.

18 German National Academy of Sciences Leopoldina: https://www.leopoldina.org/politikberatung/arbeitsgruppen/zukunft-des-wissenschaftlichen-publizierens/ (as of 17 March 2025).

2 Summary of the Funding Principle

The concept proposed here is meant to complement current funding models with the aim of replacing them in the long term and thus saving costs. It includes components that are not covered by existing funding procedures. The aim is to develop a solution comparable to the establishment of an infrastructure for use by the international scientific community.

The key points of the financing system are summarised here and explained below:

a) The publication of scientific papers and data should follow the same funding principle as the public funding of scientific research.
b) The financing of scientific publications is a continuous task, but should be subject to regular peer review.
c) The operation of a journal within the new funding system should be based on an application submitted by a scientific society, an academy of sciences or public institution with a scientific or infrastructural mission.
d) The evaluation of applications should follow the established criteria of those research or funding organisations that also organise the evaluation of research funding.
e) Approved applications should be regularly re-evaluated with the aim of continued funding.
f) With the budget of an approved application, commercial service providers can be commissioned through a competitive process to take over the technical operation of the journal.
g) Archiving tasks should be covered separately by publicly funded scientific libraries.

Explanations

a) Funding Scientific Publications as a Public Task

Public funding of scientific research is subject to general legal and normative principles that reflect societal values and expectations regarding the role of science in public life. One of the main reasons for the public funding of science is the perception of science as a public good.[19] There is no rivalry in the consumption of scientific knowledge that is not protected by patent law. On the contrary, the more these findings are utilised, the greater the benefits. This perspective implies that scientific research represents a value that goes beyond the value for the immediate community of researchers and contributes to technological advances, to improving our daily lives, to overcoming social, economic, medical and environmental challenges and to informed governance.[20] Therefore, no one should be excluded from the utilisation of scientific knowledge.

These principles should also apply to academic publishing. The prerequisite for this is unrestricted accessibility. However, it is restricted by commercial interests. It cannot be in the public interest for payment barriers to limit the use of publicly funded scientific results in order to skim off commercial monopoly profits. Since public funds finance almost the entire scientific publishing system, scientific publications must once again become a public good that is not restricted by payment barriers.

Scientific research at universities and public research institutions is usually funded nationally, although the research results can be utilised internationally. All nations benefit from this free exchange. In this respect, it is only logical that the final step of the research process – the publication of research results in scientific journals – should also be organised according to this model. Of course, this does not exclude international co-financing (see 4.8).

Germany has a range of instruments for the public funding of research. These include the continuous basic funding of universities, combined with application-based procedures for research funding. There are also directly funded non-university institutions, such as the

19 See Yin et al. 2021.

20 See Pamuk 2019.

Helmholtz Association, the Leibniz Association, the Fraunhofer-Gesellschaft and the Max Planck Society. These have different funding systems and different quality assurance systems. In all of them, however, there is a combination of funding for continuous tasks with regular reviews of research results and strategies.

The financing of scientific publications is currently included in the general budget allocations to scientific institutions. In the past, these were mainly the budgets for acquiring scientific literature through libraries, which purchased it in the form of subscriptions. With the Open Access movement, budgets or funds for the direct payment of published articles (APC) have also been added. Some institutions also use their budgets to publish journals under their own responsibility.

Germany has long had an application-based funding procedure for the establishment of scientific journals.[21] However, according to the current rules, this can only be used as start-up or temporary funding; continuous funding is not possible. In a recently published study on collaborative approaches to academic publishing in Germany, long-term funding for Diamond Open Access publications is identified as "still the greatest challenge".[22]

A modified funding system would not generate any additional costs if it replaces the commercial journals over time. It should even lead to savings in the long term. Commercial publishers could continue to act as service providers for the system, but they would have to face more competition. The aim is to completely separate scientific quality assessment from economic considerations.

b) Continuous Task with Quality Control

The operation of a scientific journal is based on the assumption that it meets a long-term need for publications in a particular subject area. The long-term nature is crucial to building and maintaining a reputation in the scientific community. This is necessary in order to convince authors to choose the journal as a publication medium on the one hand and to attract reviewers to work for this journal on the other. In this respect, running a scientific journal is a continuous task.

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21 See Deutsche Forschungsgemeinschaft 2025b.

22 Henkes et al. 2025.

The necessity of preserving their reputation generally ensures effective self-regulation, which is why many scientific journals have maintained high quality for decades. However, regular external review of the operation and performance of scientific journals is not yet widespread. It should therefore be introduced as a new element as part of the proposed funding model.

The aim of the review is to ensure the quality of the journal and the economic viability of its publication. As a rule, the review will result in a recommendation for further funding. However, if scientific standards are violated, the quality level is unsatisfactory or the operating costs are inadequate, there must be the possibility of budget cuts or a cancellation of funding.

Such a review process marks a new approach that could also help consolidate the number of journals. Until now, the founding of journals has been practically uncontrolled, which has led to unregulated growth. However, anyone who claims public funding directly or indirectly (e.g. via APCs) for the operation of a scientific journal should also be subject to a scientific evaluation procedure. At the same time, peer review can also replace the previous practice of assessing the quality of journals primarily according to their *impact factors* or similar purely bibliometric measures (see 4.7).

c) Applicants

Within the scientific community, there is a well-functioning system of self-organisation in scientific societies.[23] These can have a national or international character. Scientific societies traditionally play a role in the organisation of scientific conferences and the promotion of young scientists. Many scientific societies also run their own scientific journals in order to support their disciplinary work with profits from subscription fees. Scientists are often active in more than one scientific society. Scientific societies would therefore be best suited to submitting applications for direct funding of journals.

23 See Wissenschaftsrat 1992.

Academies of sciences also have a long tradition of publishing journals, often with overarching themes. They thus complement the more specialised journals of the scientific societies.

With the rise of open access concepts, scientific institutions, universities, libraries and research funding organisations have also developed platforms for hosting scientific publications, which may be managed by different groups within the respective institutions. The EU initiative "Open Research Europe (ORE)" also pursues this approach.[24] With regard to Germany, a study on open access infrastructures at universities and research institutions was recently completed for the Alliance of Science Organisations.[25]

The main objective of the new funding system is to transition existing journals to the new funding procedure. This applies particularly to journals that have so far been published by scientific societies through contracts with commercial publishers. In addition, and in cooperation with the scientific societies, the specialised information services can also play an important role in this funding system.

d) Review of Applications

The review of applications for direct funding of journals should be based on similar principles as the general review of applications for research funding. Even if the criteria for this would have to be adapted in detail, the established research and funding organisations are the most suitable agencies for such a review process. In Germany, this would primarily be the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), at European level possibly the European Research Council (ERC). In any case, reviewers should be recruited from an international environment.

During the establishment phase of the new funding procedure, it is expected that applications will primarily be submitted by operators of already established journals. In these cases, a simplified application and review process may be implemented on assessing the journal's importance for the given field in question and determining budget allocations.

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24 See European Commission 2024.

25 See Biela et al. 2023.

The additional review effort for the research and funding organisations should remain manageable if it focuses on journals that are already of particular importance for their given field. Applications for funding new journals would have to demonstrate that there is a specific additional need for a new journal.

e) Re-evaluation

A positive approval should guarantee continuous funding as long as the operation of the journal remains appropriate and is recognised by the scientific community. This should be verified by re-evaluations at regular intervals (e.g. 5–7 years). The re-evaluations should be based on operational reports that are prepared according to standardised guidelines. The detailed criteria for this must be developed on a discipline-specific basis. The re-evaluations should aim to ensure the continuation the journal unless significant issues have arisen and the relevance of the topic or discipline is still given.

In parallel, there should be a process allowing for budget adjustments if the journal is particularly successful or does not achieve its objectives to the planned extent. The criteria for this should be part of the initial application process.

f) Service Providers

The activities of publishers have led to many technical advances in publishing in recent years. These should be maintained and further developed. Within the new funding model, commercial publishers could therefore continue to play a role in the technical operation of journals. However, the main responsibility for publishing should remain with the scientific community.

In the new funding model, journal operators (e.g. scientific societies) would conduct a public tender for the provision of services and evaluate the results based on established criteria.[26] Contracts should be valid

26 A similar proposal was also made by the German Science and Humanities Council (Wissenschaftsrat) in 2022 in the "Recommendations for the transformation of academic publishing to open access" (see Wissenschaftsrat 2022, p. 49-51).

for several years, ensuring financial stability for the contracting parties during that period. This would be particularly important for smaller publishers.

Alternatively, publicly funded platforms could assume the role of the technical publication management of the journal.

g) Archiving

If publishers' services are only remunerated for limited periods, this typically cannot include long-term archiving. This form of archiving is a core responsibility of academic libraries and other organisations that already receive permanent funding for this purpose. Therefore, service agreements with publishers should include the creation of interfaces with publicly funded libraries to ensure archiving and long-term availability incorporating these aspects in the budget planning.

Archiving also includes the permanent storage of freely accessible data. Publishers have hardly taken on this task so far and already delegate it to repositories operated by scientific institutions, such as Zenodo from CERN as the EU Open Research Repository[27], Dryad from an international association of universities[28] or Edmond from the Max Planck Society[29] as well as many repositories specialising in specific research areas, such as those emerging within the National Research Data Infrastructure and/or accessible via the RISources portal for research infrastructures.[30] These initiatives show that the self-organisation of scientific institutions is effective when provided with the right framework conditions.

27 Zenodo: https://zenodo.org/ (as of 27 February 2025).

28 Dryad: https://datadryad.org/ (as of 27 February 2025).

29 Max Planck Society: https://edmond.mpg.de/ (as of 27 February 2025).

30 Deutsche Forschungsgemeinschaft: https://risources.dfg.de/ (as of 27 February 2025).

3 Strategic Issues

3.1 Why Should There Be National Funding for International Journals?

The operation of a scientific journal will generally be aimed at an international audience, both with respect to authors and readers. Ideally, there should be international funding for this, although this would be very difficult to realise in an application-based procedure.

In general, the funding of science is considered a national responsibility, even though its results can be utilised internationally. This principle of establishing scientific infrastructure can therefore also be applied to the publication system. Providing such resources enhances the reputational of the country offering them. In industrialised nations, this approach is already being implemented on a broad scale, e.g. in the form of repositories and publicly funded databases or libraries that are, in principle, accessible worldwide.

Well-established scientific journals play a defining role in their respective disciplines. Publications in such journals also serve an essential function in enhancing the reputation of authors and their academic institutions. The national funding of such an internationally utilised infrastructure therefore also leads to reputational benefits for the funding country. Platforms such as PubMed (funded by the National Institutes of Health – NIH, USA), arXiv (funded by contributions from member institutions, USA), European Bioinformatics Institute (EBI, funded by the member states of the European Molecular Biology Laboratory – EMBL) are proof that this principle works.

Germany could take on a pioneering role for the new funding model proposed here. This would also be in line with the position paper published by the science ministers of the German federal states at the end of January 2025. It explicitly states: “Germany must aspire to remain

among the global leaders in the future."[31] Section 2 in this paper is titled: "We need state-of-the-art infrastructures for cutting-edge research in Germany."[32] It specifically mentions the data infrastructure, which requires a secured perspective. Scientific publications and the associated data undoubtedly form a crucial part of such an infrastructure.

National funding of internationally orientated scientific journals therefore does not contradict long-established principles of research funding. Even if a country provides advance funding in favour of authors from other countries, this creates a body of knowledge that benefits national scientific societies. Nevertheless, safeguarding all co-funding opportunities by research organisations from other countries should also be part of the strategies of such journals (see also 4.8).

3.2 Why Should Scientific Societies Engage in the Operation of a Scientific Journal?

For scientific societies and institutions submitting an application to operate a scientific journal initially involves an additional workload. However, running the journal itself does not necessarily mean an increased burden, as many members of scientific societies are often already involved in editorial boards of journals within their field. Moreover, editorial boards are also recruited internationally.

If routine editorial tasks can be outsourced to a service provider, the primary responsibility for the scientific society remains community building within its field, which is one of its core tasks anyway. If the funding obtained through the application process also supports this community building effort (see 4.4), there is also a positive incentive to take on the initial application work.

Further, the general problem of market distortion in the current publication system is being discussed in most scientific societies, so it is to be expected that there is a willingness to reform the publication system in this way. Many scientific societies collaborating with large publishers have also experienced that the general publishing policies of these publishers do not necessarily go along with their own interests.

31 Wissenschaftsministerkonferenz 2025, p. 2.

32 Ibid, p. 3.

Direct funding would restore autonomy to scientific societies in running their journals.

The necessity of involving the scientific community was also emphasised in the report of the BMBF-funded research project "Acquisition logic as an obstacle to Diamond Open Access (ELADOAH)"[33]:

"The interviewed experts point out that collaborative models cannot work without scientific communities and call for greater involvement of scientific societies, which in turn could positively impact the reputation of new Diamond Open Access publications."[34]

Ideally, European or international scientific societies should also be eligible to apply, as long as they also have a base in Germany. Ideally, in such cases, an alternative funding system should be considered, supported by several countries, e.g. via special EU programmes or according to the membership model of the European Molecular Biology Laboratory (EMBL). The legal organisational form of a European cooperative could also be a suitable option.[35]

33 Humboldt Institute for Internet and Society: https://www.hiig.de/en/project/eladoah/ (as of 27 February 2025).

34 Henkes et al. 2025, p. 43.

35 See European Union 2003.

4 Cost Estimation and Implementation

4.1 Costs of Open Access Publishing

The transition to online-only publication for scientific journals has led to considerable cost savings in terms of printing and distribution. Today, costs are calculated in relation to open access publication models, where publishers charge a fee per publication (APC). However, the APCs charged are within a very broad range, which does not necessarily reflect the actual costs, but is also an expression of the market position of particularly renowned journals.

In economics, the concept of economies of scale describes how the average cost per unit decreases when the production volume increases. This relationship is usually reversed in the setting of APCs. The more popular a scientific journal is in terms of the number of submissions and its bibliometric impact factor, the higher the APCs (Figure 2).

This is often justified by the argument that highly demanded journals experience a large number of rejections, which cause costs before the APCs are incurred. At the same time, however, the rejection rate also increases the reputation of the journal. The percentage of rejected submissions is regarded as a quality criterion, whereby a high rejection rate is equated with a high reputation. This reputation effect, in turn, allows publishers to further increase APCs for commercial profit.

There are a number of studies on the de facto costs of open access publishing in various countries.[36] However, these studies are typically retrospective and do not account for the continuously rising APCs, which vary in their rate of increase across different publishers.[37]

36 See Jahn & Tullney 2016; Butler et al. 2023.

37 See Borrego 2023.

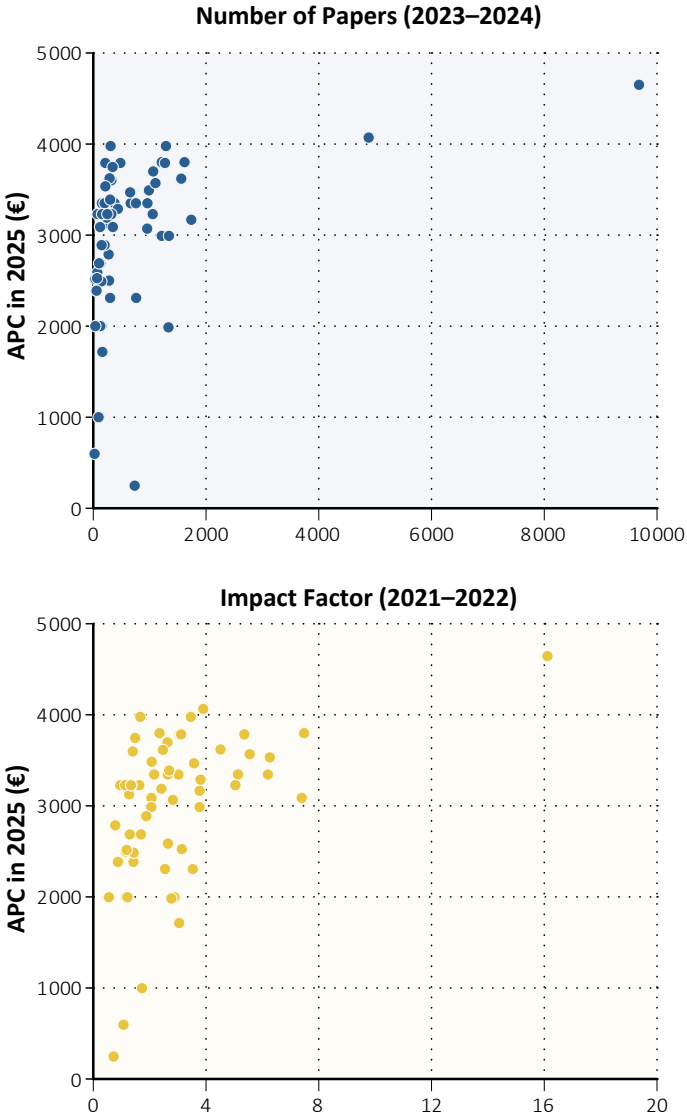

Figure 2: Relationship between APC levels and number of articles (top) and impact factors (bottom) as a measure of the reputation of scientific journals published by German scientific societies. The graphics are based on the data from Table 1 in the appendix.

As a benchmark for the new funding system, an amount determined at the time of the call for proposals for the new funding system can be used. For journals currently published by German scientific societies, the median cost is €3230 per published article (see Appendix, Table 1). However, the range is wide, although the service offered by the publishers for the different journals is generally very similar and not linked to the APC. The actual amount should be based on the specific requirements of each scientific area and should ultimately be determined in the competitive tendering process. In particular, costs should be made more transparent, especially with regard to the separate listing of cost components discussed below.

4.2 Peer Review Costs

In the traditional peer review process for scientific journals, it was not common practice for a long time to pay scientific editors and reviewers. Peer reviewing and engagement in scientific journals were considered part of the core responsibilities of researchers.[38] This created a freely accessible resource that was, however, excessively exploited. Today, the phenomenon of "reviewer fatigue" has emerged: Due to the overload of the system, many requests for reviews are rejected.[39] Even well-established scientific journals have to send out numerous requests in order to secure at least two reviews.

Many research organisations have therefore switched to paying reviewers. However, the amounts involved tend to be nominal and do not cover actual working hours. The work of editors is also increasingly being remunerated financially, although there are different models for payments.

The appreciation of reviewers' contributions is now also recognised via entries in reputation systems, even if these are still in their infancy. Several systems have now been established for this purpose, such as ORCID (Open Researcher and Contributor ID)[40] – a non-profit organisation registered in

38 See Forsberg et al. 2022.

39 See Phuljhele 2024.

40 ORCID: https://orcid.org/ (as of 27 February 2025).

the USA – or Publons from Clarivate[41] as a commercial solution. Some publishers also issue reviewer certificates.

As part of the application process for the new funding system, these cost components and remuneration options should be discussed, subject-specific solutions should be developed. In particular, it should be possible to establish the payment of editors' and reviewers' work as a separate cost item.

4.3 Costs for Pre-screening and Rejected Articles

Scientific journals with a high reputation also have high costs for pre-screening the submitted articles. In particular, it is necessary to identify plagiarised and AI-generated articles. Specialised, fee-based AI systems are increasingly being used for this purpose. After automated screening, an additional scientific screening is also necessary to decide whether reviews should be requested for a submitted article at all. This is the task of the editorial board, which incurs labour costs. If articles are reviewed but rejected for scientific reasons, the costs of the review are still incurred. All these costs should be made transparent and not simply charged via the APC of the final published articles published.

Pre-screening and, where applicable, peer review is a service provided for authors. This service should also be calculated and budgeted for separately. It could be charged in the form of a submission fee, particularly to cover the costs of automated pre-screening. However, such a submission fee should be low and interpreted as a kind of "nominal fee" in order to prevent the system from being overloaded.

Depending on the focus of the scientific journal and the specific needs of its community, scientific pre-screening and peer review could also become part of a submission fee. In fact, commercial business models are already being developed to provide such a service, which would then have to be budgeted accordingly.

Here too, it should be part of the application process to discuss these cost items and develop discipline-specific solutions for them.

41 Clarivate: https://webofscience.help.clarivate.com/Content/publons.html (as of 27 February 2025).

4.4 Costs for Community Building

Competitive scientific journals generally appeal to an international scientific community. It is therefore common for scientific societies to also take care of community building – not only by running the journal, but also by organising conferences and supporting young scientists. The new funding system should therefore allow applicants to request funding for community building efforts. This includes, for example, funds to support conferences or workshops, in particular travel funds for the editorial board, invited speakers or young researchers.

This would also compensate for the potential loss of income that the scientific societies would experience if they terminate their contracts with commercial publishers. To date, scientific societies have often used this income for their community building efforts.

For this component of the application, a fixed amount could be set for the total volume of the application, similar to a programme allowance for research projects (overhead), which could then be used flexibly for the purposes of community building.

4.5 Recovery of Title Rights

The reputation of a scientific journal is closely tied to its title. However, journals founded by scientific societies have often ceded the title rights to the publishers as part of the service contracts. This transfer of title rights has resulted in monopoly positions for the publishers, as it prevents journals from being published under the same title. As a result, competition from alternative operators has been effectively blocked.

The recovery of title rights would therefore be a key element in the transition to the new funding system. Naturally, publishers are unlikely to agree to this, as they cannot be sure whether they will be able to retain the service contracts if these are awarded through a public tender. The business model for assigning titles to publishers was originally based primarily on the need to represent copyright issues and cover financial risks. However, these are no longer relevant in an open access system. This would potentially give rise to the possibility of contesting such contracts because this business model has been superseded.

On the other hand, the reputation of the journal depends not only on the title, but above all on the editorial board. If there is a consensus in the board to run the journal independently, then there is a basis for negotiating with the publisher about buying back title rights. However, the legal and financial implications would have to be examined on a case-by-case basis for each journal.

4.6 Branding

Instead of negotiating the return of established journal titles, it would also be possible to link the new financing system directly with its own branding. This would involve using a generic term behind which the original title of the journal would be listed.

Example: If *Community Journal* (abbreviated *CJ*) is used as a generic term, a journal previously called *Neuroscience* could be relaunched as *Community Journal Neuroscience* (*CJ Neuroscience*). *Community Journal* would then be a brand that could be used for all journals under the new funding model. However, such an approach would enter a legal grey area with regard to existing titles, which would have to be clarified in detail. Irrespective of this, branding can of course be applied to completely new titles without any problems.

This branding principle was already successfully used when the first fully open access journals were founded, e.g. the PLoS journals[42]. Commercial publishers have also founded new journals under this principle and thus directly gained a reputation. The best example is the journal *Nature Communications*, which was directly accepted by the scientific community solely because of the name Nature in its title and as an offshoot of the long-established journal *Nature*, although it initially had no scientific reputation of its own and is operated without the involvement of scientific societies.

Regardless of how branding can be legally implemented in the new funding system, there is also a distinct advantage. It signals that the journal in question has undergone a competitive review process, which would immediately enhance its reputation.

42 Public Library of Science: https://plos.org/ (as of 27 February 2025).

4.7 Expected Financial Demand

Currently, there is no systematic database that provides an overview of which German scientific societies publish their own journals or how they are involved in journals published by international scientific societies. The most recent survey on this issue was carried out as part of the BMBF-funded project "Strategic and Operational Options for Action of Scientific Institutions and Professional Societies to Shape the Open Access Transformation (Options4OA)".[43] As of 9 May 2019, this survey identified a total of 182 journals published by 118 German scientific societies. Most of these are published in collaboration with various publishers.

For the purpose of this discussion paper, a subset of 62 journals was selected from the original list in order to determine the potential financial need for the new funding system with respect to German scientific societies (see Appendix, Table 1). This sub-selection should only be seen as a guideline and makes no claim to completeness due to the limited data availability.

The focus was on journals with an international orientation (publications in English) as well as with open access models and an impact factor determined by the Clarivate Journal Citation Reports[44]. The current APCs and impact factors were retrieved from the journals' websites; while the publication volume was obtained using the OpenAlex bibliographic database[45]. Journals already operating under the Diamond Open Access model were not included in the list, although they might also apply for funding if their current funding is not sufficiently sustainable.

The 62 selected scientific journals published a total of 44,694 articles in the last two years (2023–2024). Based on current APC rates, this amounts to an annual cost of around €81.7 million (see Appendix, Table 1).

43 See Pampel & Strecker 2020.

44 Clarivate: https://jcr.clarivate.com (as of 27 February 2025).

45 OpenAlex: https://openalex.org/sources (as of 27 February 2025).

The new funding model should focus on journals that already have a high scientific reputation. Traditionally, the impact factor, i.e. the number of citations per article in a given 2-year period (here 2021–2022), can been used for such an evaluation. The absolute value of the impact factor has limited significance, as it must be viewed on a subject-specific basis. However, it can be used to determine the relative ranking between journals belonging to the same subject area. This is not an absolute riterion either, as some journals pursue specific strategies to increase the impact factor that are not necessarily scientifically justified. The ranking procedure is therefore only used here as part of an initial assessment, without prejudging full evaluation procedures. As mentioned above (see point b in 2), the peer review process should also ultimately replace the reliance on the impact factor in assessing journal quality.

If we only consider journals in the top third of the impact factor ranking in the respective subject classifications of the Clarivate Journal Citation Reports, we currently have 18 journals with an average of around 10,000 published articles per year and costs of approx. €39.7 million (see Appendix, Table 1). However, more than half of these costs are incurred by just one journal with a particularly high APC (€4650).

Based on these figures, an initial rough estimate can be made of the possible initial funding requirements. Although it is unlikely that all the scientific societies mentioned here will submit an application straight away, it is possible that further applications will be submitted – particularly by scientific societies whose journals are not yet available in open access or are of particular importance to their discipline, regardless of the impact factor ranking. It can also be assumed that a shift to the new funding model will lead to considerable cost savings, as the profit-orientation will no longer apply and the publishing services will be awarded in a competitive process. We therefore propose an initial funding budget of €10–20 million per year, focused on supporting the leading scientific journals currently published by German scientific societies. A more precise needs assessment should be carried out on the basis of a survey of the scientific societies.

4.8 International Co-Funding

The international character of scientific journals implies that, ideally, a given journal should be supported by research organisations and/or scientific societies from different countries. Consequently, there should also be the option of submitting additional applications for co-funding of already existing journals, especially if the journal is in a growth phase.

The biomedical journal *eLife*, which is funded by research organisations from four countries (Howard Hughes Medical Institute, USA; Wellcome Trust, UK; Max Planck Society, Germany; Wallenberg Foundations, Sweden), can serve as a model here.[46]

Expanding the new funding model to include international co-funding should not be an obstacle to first establishing the new funding system in Germany. As explained above, there is a national reputational gain with the introduction of such an infrastructure anyway. At the same time, it should be introduced legally in such a way that the actually desired international expansion remains possible at any time.

The first addressee of an international expansion of the new funding principle in Europe would naturally be EU research funding. As discussed under 1.5, the Council of the European Union recommends that the EU Member States and the European Commission develop a joint strategy for the Diamond Open Access model. A pilot project initially launched in Germany could provide a very good basis for this.

4.9 Coexistence of Different Publishing Models

The transition to a Diamond Open Access model within the new funding model can only take place step by step. Many scientific journals published by commercial publishers enjoy a high reputation. This is why they will continue to be used by scientists who want to publish their work in the highest-ranking journals possible. Restructured or new journals need time to build such a reputation, even though this process can be accelerated through the general journal reviewing model proposed here.

46 eLife Sciences Publications: https://elifesciences.org/about/mission (as of 27 February 2025).

To ensure fair competition between the established commercial journals and the newly funded Diamond Open Access journals, it is important that libraries have the option of cancelling individual journal subscriptions from commercial publishers if there is no longer sufficient demand for them. If the journal packages can be broken up and individual journals cancelled, funds will be freed up that are needed in the academic system to fund new journals. This aspect may also be relevant in future DEAL negotiations.

Journals funded under a Diamond Open Access model should also have the opportunity to earn additional income, e.g. from submission fees, especially if they are in a growth phase that cannot be absorbed by the approved budget. However, in order to maintain scientific sovereignty over the operation of the journal, it is crucial that its economic basis does not depend on such additional income.

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Note: All links were active at the time of going to press.

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Appendix

Requirements for Operating a Scientific Journal

Operators of scientific journals are responsible for the following key tasks:

a) Establishing an editorial board and a peer group
b) Manuscript management
c) Ensuring publication quality in accordance with international standards
d) Publishing scientific results (including data, models, and software)
e) Documentating the scientific contributions of involved researchers

Applicants should address these key points in their applications. The following descriptions of these key points refer to the classic system of individual publications. Although this is a structural component that is currently undergoing rapid transformation, the basic requirements will essentially remain the same even with new publication concepts. This also applies in particular to open peer review concepts, where the selection of reviewers may be skipped, but the reviews must still be assessed by an editorial board.

a) Establishing an Editorial Board and a Peer Group

A scientific journal needs an editorial board made up of respected scientists, as well as a peer group for the review process consisting of established scientists who cover the journal's thematic field. Members of the editorial board should continue to work full-time in academia. They are key to the journal's reputation in the scientific community and ensure its scientific relevance. They should not be replaced by full-time professional editors who no longer conduct their own research, although such full-time editors could support the general operations of the journal.

b) Manuskript Management

Manuscript management includes the submission system, the organisation of the dispatch to editors and reviewers, and, where applicable, the provision of an AI system for the selection of reviewers and the screening of AI-generated contributions. It also covers the handling of revised manuscripts, copy editing, the proofing process and the final formatting of published files. These are standard services that can be outsourced to a service provider.

c) Quality Assurance

Quality assurance must take place at various levels. It includes preselection to ensure alignment with scope and the aims of the journal, as well as *integrity checks* of the data presented, the selection of reviewers from the international scientific community, an evaluation of the reviews, the writing of decision letters and the monitoring of the proce-dures and the fulfilment of the journal's aims. These are the key responsibilities of the editorial board and the peer group.

d) Publication

Nowadays, text publications usually include the publication of data sets and, if applicable, models or the software used for analysis. There are already a number of subject-specific solutions that need to be integrated into the journal concept. Parts of the implementation can be carried out by the service provider.

e) Documentation of the Academic Contributions

Publications in scientific journals with a high international reputation in the relevant scientific community are an essential feature of the documentation of scientific contributions by scientists. Operators of scientific journals must be aware of this responsibility. Journal operators should develop new concepts that can replace the mere counting of citations. These concepts should also include the documentation of the contributions of reviewers and editors.

Table 1

List of international journal titles published by German scientific societies. See text in 4.7 for the selection criteria and data sources.

Scientific society	Journal title	ISSN
Society of German Chemists	Analytical and Bioanalytical Chemistry	1618-2650
Society of German Chemists	Angewandte Chemie International Edition	1521-3773
German Society for Gynaecology and Obstetrics	Archives of Gynecology and Obstetrics	1432-0711
German Statistical Society	AStA Advances in Statistical Analysis	1863-818x
Astronomical Society	Astronomical Notes	1521-3994
Society for Ecology	Basic and Applied Ecology	1618-0089
Society of German Chemists	Batteries & Supercaps	2566-6223
Society for Biochemistry and Molecular Biology	Biological Chemistry	1437-4315
VDE	Biomedical engineering	1862-278x
German Region of the International Biometric Society	Biometrical Journal	1521-4036
German Region of the International Biometric Society	Biometrics	1541-0420
Society for Computer Science	Business and Information Systems Engineering	1867-0202
Society of German Chemists	ChemBioChem	1439-7633
Society of German Chemists	ChemBioEng Reviews	2196-9744
Society of German Chemists	ChemCatChem	1867-3899
Society of German Chemists	ChemElectroChem	2196-0216
Society of German Chemists	Chemistry - A European Journal	1521-3765
Society of German Chemists	Chemistry - An Asian Journal	1861-471x
Society of German Chemists	ChemistryOpen	2191-1363

	Number of articles 2023-2024	IF in the top third	APC per article in 2025 (€)	Total APCs per year (€)	Publisher
	1,215	Yes	2,990	1,816,425	Springer Nature
	9,678	Yes	4,650	22,501,350	Wiley
	988	No	3,490	1,724,060	Springer Nature
	54	No	2,390	64,530	Springer Nature
	280	No	2,500	350,000	Wiley
	160	Yes	1,716	137,280	Elsevier
	666	Yes	3,350	1,115,550	Wiley
	147	No	2,000	147,000	De Gruyter
	121	No	2,000	121,000	De Gruyter
	257	No	3,130	402,205	Wiley
	321	No	3,603	578,281.5	Wiley
	124	Yes	3,090	191,580	Springer Nature
	1,065	No	3,700	1,970,250	Wiley
	154	Yes	3,350	257,950	Wiley
	1,741	No	3,170	2,759,485	Wiley
	763	No	2,310	881,265	Wiley
	4,885	No	4,070	9,940,975	Wiley
	1,289	No	3,980	2,565,110	Wiley
	301	No	2,310	347,655	Wiley

Scientific society	Journal title	ISSN
Society of German Chemists	ChemMedChem	1860-7187
Society of German Chemists	ChemPhotoChem	2367-0932
Society of German Chemists	ChemPhysChem	1439-7641
Society of German Chemists	ChemPlusChem	2192-6506
Society of German Chemists	ChemSusChem	1864-564x
German Society for Neuroradiology	Clinical Neuroradiology	1869-1447
German Society for Dentistry, Oral and Maxillofacial Medicine	Clinical Oral Investigations	1436-3771
German Society for Cardiology - Cardiovascular Research	Clinical Research in Cardiology	1861-0692
Society of German Chemists	European Journal of Inorganic Chemistry	1099-0682
Society of German Chemists	European Journal of Organic Chemistry	1099-0690
German Diabetes Society	Experimental and Clinical Endocrinology & Diabetes	1439-3646
Societas Linguistica Europaea	Folia Linguistica	1614-7308
German Zoological Society	Frontiers in Zoology	1742-9994
German Geophysical Society	Geophysical Journal International	1365-246x
Verein für Socialpolitik (Society for Economic and Social Sciences)	German Economic Review	1468-0475
German Society for Ear, Nose and Throat Medicine, Head and Neck Surgery	HNO	1433-0458
German Society for Infectiology	Infection	1439-0973
German Society for Surgery	Innovative Surgical Sciences	2364-7485
German Geological Society - Geological Association	International Journal of Earth Sciences	1437-3262
Society for Hygiene, Environmental Medicine and Preventive Medicine	International Journal of Hygiene and Environmental Health	1618-131X

	Number of articles 2023-2024	IF in the top third	APC per article in 2025 (€)	Total APCs per year (€)	Publisher
	653	No	3,470	1,132,955	Wiley
	378	No	3,350	633,150	Wiley
	1,215	No	3,800	2,308,500	Wiley
	757	No	3,350	1,267,975	Wiley
	1,619	Yes	3,800	3,076,100	Wiley
	242	No	3,190	385,990	Springer Nature
	1,274	Yes	3,790	2,414,230	Springer Nature
	439	Yes	3,290	722,155	Springer Nature
	960	No	3,350	1,608,000	Wiley
	1,561	No	3,620	2,825,410	Wiley
	174	No	3,230	281,010	Thieme
	126	No	2,000	126,000	De Gruyter
	73	Yes	2,590	94,535	BMC - Springer Nature
	956	Yes	3,070	1,467,460	Oxford University Press
	38	No	2,000	38,000	De Gruyter
	273	No	2,790	380,835	Springer Nature
	481	Yes	3,790	911,495	Springer Nature
	97	No	1,000	48,500	De Gruyter
	204	No	2,890	294,780	Springer Nature
	291	Yes	3,622	527,001	Elsevier

Scientific society	Journal title	ISSN
German Dermatological Society	JDDG: Journal der Deutschen Dermatologischen Gesellschaft	1610-0387
German Region of the International Biometric Society	Journal of Agricultural, Biological, and Environmental Statistics	1537-2693
German Society for General and Applied Entomology	Journal of Applied Entomology	1439-0418
German Society for Orthodontics	Journal of Orofacial Orthopedics	1615-6714
German Phytomedical Society	Journal of Plant Diseases and Protection	1861-3837
German Society for Plant Nutrition	Journal of Plant Nutrition and Soil Science	1522-2624
German Society for Radiooncology	Journal of Radiation Oncology, Biology, Physics	1439-099x
German Society for Stem Cell Research	Journal of Stem Cells & Regenerative Medicine	0973-7154
Society for Operations	Mathematical Methods of Operations Research	1432-5217
German Meteorological Society	Meteorologische Zeitschrift	1610-1227
German Society for Medical Informatics, Biometry and Epidemiology	Methods of Information in Medicine	2511-705X
German Society for Mycology	Mycological Progress	1861-8952
German Society for Experimental and Clinical Pharmacology and Toxicology	Naunyn-Schmiedebergs Archives of Pharmacology	1432-1912
Society for Neuropaediatrics	Neuropediatrics	1439-1899
German Physical Society	New Journal of Physics	1367-2630
German Society for Applied Optics	Optik - International Journal for Light and Electron Optics	0030-4026
Society for Biological Systematics	Organisms, Diversity and Evolution	1618-1077
Scientific Society for Production Engineering	Production Engineering	1863-7353

	Number of articles 2023-2024	IF in the top third	APC per article in 2025 (€)	Total APCs per year (€)	Publisher
	1,104	Yes	3,570	1,970,640	Wiley
	146	No	2,490	181,770	Springer Nature
	307	No	3,980	610,930	Wiley
	128	No	2,690	172,160	Springer Nature
	347	Yes	3,090	536,115	Springer Nature
	200	No	3,350	335,000	Wiley
	300	No	3,390	508,500	Springer Nature
	22	No	600	6600	G.N. Corporation Co. Ltd., Japan
	77	No	2,390	92,015	Springer Nature
	58	No	2,520	73,080	Schweizerbart Science Publisher
	36	No	3,230	58,140	Thieme
	159	No	2,990	237,705	Springer Nature
	1,342	No	3,790	2,543,090	Springer Nature
	214	No	3,230	345,610	Thieme
	1,054	Yes	1,985	1,046,095	IOPScience
	1,337	No	2,526	1,688,631	Elsevier
	67	No	2,890	96,815	Springer Nature
	147	No	2,690	197,715	Springer Nature

Scientific society	Journal title	ISSN
Academy for Spatial Research and Planning	Raumforschung und Raumordnung-Spatial Research and Planning	1869-4179
German Society for Thoracic, Cardiovascular and Vascular Surgery	Thoracic and Cardiovascular Surgeon	1439-1902
Society for Thrombosis and Haemostasis Research	Thrombosis and Haemostasis	2567-689x
German Society for Tropical Medicine and International Health	Travel Medicine and Infectious Disease	1873-0442
German Society for Urology	Urologia Internationalis	1423-0399
		Total
		Top third

	Number of articles 2023-2024	IF in the top third	APC per article in 2025 (€)	Total APCs per year (€)	Publisher
	105	No	250	13,125	oekom Verlag
	734	No	3,230	118,5410	Wiley
	322	Yes	3,230	520,030	Thieme
	251	Yes	3,537	443,893.5	Elsevier
	217	No	3,750	406,875	Karger
	44,694			**81,685,977**	
	20,208			**39,749,885**	

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