How a Flagship Journal Guides the Innovative Development of Its Sister Journal eLight: A Post-print

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Abstract

【Objective】 Based on a case study of the high-starting-point new journal eLight under the Excellence Program, this study summarizes universal experiences to provide references for launching new English-language scientific and technological journals in China under the new circumstances, thereby contributing to the construction of a world-class scientific and technological journal stronghold in China. 【Methods】 Focusing on the problems of limited and costly channels for building international influence for new journals, weak discourse power of Chinese scientific and technological journals, and insufficient centripetal force among scientists under the new circumstances, this paper reviews the innovative practices of eLight, analyzes their effectiveness, and extracts universal experiences. 【Results】 Using high-quality academic resources such as leading journals and clusters as the driving force for new journal construction can help new journals efficiently and rapidly establish international influence; voicing opinions around the international situation of scientific and technological publishing and the core needs of scientists helps journals establish discourse power; strengthening innovation and refinement of responsibilities, systems, and workflows, developing mutually beneficial resources between journals and scientists, and establishing multi-dimensional evaluation systems can help expand scientist relationships. 【Conclusion】 China should fully utilize advantages such as leading journals and clusters, leverage the driving role of high-quality resources, strengthen the collective voice and value output of Chinese scientific and technological journal groups, foster scientist communities, promote the aggregation of publishing resources, enhance the discourse power of Chinese scientific and technological journals, and achieve efficient construction of a world-class scientific and technological journal stronghold.

Full Text

Preamble

Leading STM Journal Cultivates High-Profile New Journal: The Innovative Development Path of eLight

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Abstract
[Purpose] This case study of the high-profile new journal eLight, launched under the Excellence Program, summarizes transferable experiences to guide the establishment of new English-language scientific journals in China under evolving circumstances, thereby advancing the construction of world-class Chinese scientific journal clusters. [Methods] Addressing challenges including limited and costly channels for building international influence for new journals, weak discourse power of Chinese scientific journals, and insufficient scientist cohesion, this paper systematically reviews eLight's innovative practices, analyzes their effectiveness, and distills generalizable lessons. [Findings] Leveraging leading journals and high-quality academic resource clusters as drivers enables new journals to rapidly and efficiently establish international influence. Voicing positions on global publishing trends and addressing scientists' core needs helps journals build discourse power. Innovating and refining rights/responsibilities frameworks, workflows, and multidimensional evaluation systems while exploring mutually beneficial journal-scientist resources can strengthen scientist relationships. [Conclusions] China should fully utilize leading journals and clusters to leverage elite resources, amplify the collective voice and values of its scientific journals, foster scientific communities, promote publishing resource aggregation, and enhance discourse power to achieve efficient construction of world-class journal clusters.

Keywords: Excellence Program leading journal; high-profile new journal; constructing world-class Chinese scientific journals; eLight; innovative development

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Introduction

On November 14, 2018, the Central Committee for Comprehensively Deepening Reform approved the *Opinions on Deepening Reform to Cultivate World-Class Scientific and Technological Journals*, emphasizing that journals inherit human civilization, aggregate scientific discoveries, and lead technological development,

directly reflecting national scientific competitiveness and cultural soft power. The directive called for targeting world-class status, scientifically compiling key journal development catalogs, and strengthening foundational and traditionally advantaged field journals [1]. In September 2019, the China Association for Science and Technology and six other ministries launched the "China Scientific and Technology Journal Excellence Action Plan," which for five consecutive years has selected high-profile new journals under principles of filling gaps, addressing 空白 areas, and promoting quality resource aggregation, prioritizing support for leading journals to launch sister or sub-journals [2]. In September 2020, President Xi Jinping stressed at a scientists' symposium the importance of developing first-class academic journals and platforms and strengthening domestic and international academic exchanges [3]. In May 2021, the Publicity Department, Ministry of Education, and Ministry of Science and Technology jointly issued the *Opinions on Promoting the Prosperous Development of Academic Journals*, advocating resource reorganization around quality journals to build clusters with correct orientation, first-class quality, resource efficiency, and core competitiveness [4].

These policies signal that China's journal development has risen to a strategic height concerning national cultural soft power, presenting unprecedented historical opportunities. Consequently, China's exploration of world-class journal construction has attracted significant attention, with practitioners conducting extensive research on developing industry-leading journals, serving national strategies, journal planning, and cultivating editorial talent [5-9].

However, we must recognize that over the past five years, shifting international dynamics have dramatically altered the environment for English-language scientific journals. According to the *Blue Book of Chinese Scientific and Technology Journals (2023)*, China's total journal count grew from 4,973 to 5,163 between 2018-2022, with English-language journals surging from 333 to 434—a net increase of 101 titles representing 30% of the 2018 baseline. This explosive growth means China's new English journals face a transformed landscape, yet few studies have examined development pathways under these new conditions.

This paper employs case study methodology to examine eLight's innovative construction strategies under new circumstances, extracting generalizable insights for China's world-class English journal development. The study's novelty lies in three aspects. First, as one of the Excellence Program's first high-profile new journals, eLight began preparation in late 2019 and officially launched in June 2021. It has been indexed in ESCI, EI, and Scopus, and in July 2024 received its first impact factor of 27.2, ranking 2nd in the international optics field. Since its founding, eLight articles have averaged over 10,000 downloads and 70 media mentions, with coverage by hundreds of global media outlets including Xinhua News Agency and multiple appearances on social media trending lists, demonstrating broad academic and societal impact. eLight's rapid ascent from preparation to world-class status during the Excellence Program period showcases the initiative's effectiveness and provides a valuable reference.

Second, to address challenges of high costs and limited channels for building international influence and insufficient scientist cohesion, eLight leveraged the Light Publishing Group cluster and its Excellence Program leading journal *Light: Science & Applications* to intensively build a high-impact sub-journal. The driving measures employed by the leading journal and cluster offer important references for using quality journals as engines to drive world-class journal construction and promote quality resource aggregation.

Third, eLight's launch during volatile international conditions makes its adaptive strategies highly relevant for new journal development under new circumstances. As an interdisciplinary journal spanning optics, biology, chemistry, medicine, materials, energy, and artificial intelligence, eLight's practices offer practical references for journals across diverse Chinese scientific fields.

Note: Data sources in this paper: Impact factor and rankings from JCR2023; article downloads from the publisher's data displayed on journal article homepages; media metrics from Altmetrics displayed on journal article homepages.

1.1 Leveraging Leading Journal Resources for Clustered, Collaborative International Impact Development

International major publishers and society publishers have long utilized flagship journal advantages and cluster resources to support new journal launches and rapid development. However, China's scientific journals have historically been small, scattered, and weak, limiting such explorations. Under new circumstances, reduced channels and increased costs for building international influence constrain rapid development of China's English new journals, necessitating more effective pathways. Accordingly, eLight proposed leveraging the leading journal *Light: Science & Applications* and its Light Publishing Group cluster platform, using quality journals as engines to innovate, aggregate resources, and support new journal development. Key measures include:

First, fully exploiting scientist resources from the leading journal. The Excellence Program leading journal *Light: Science & Applications* has ranked in the top 3 in international optics for nine consecutive years since its 2012 launch. In recent years, its annual article volume has led among the top 5 optics journals by impact factor, with 2.87 million downloads in 2023. It has been named a gold partner for the UN International Year of Light and International Day of Light, won the 5th China Government Publishing Award, and become a high-quality academic resource with vast international influence. Building on this scientist base, eLight selected hundreds of top scientists passionate about and aligned with eLight's vision through consultation, interviews, and visits. Through careful selection across discipline, age, gender, and geography, it formed a 50-member editorial board with high contribution levels, international representation, broad interdisciplinary span, and balanced age/gender structure, plus a 10-member tiered editorial team of first-class scientists. Leveraging *Light: Science & Applications*'s 25 regional offices across 25 countries/regions,

eLight recruited a global team of volunteer scientist editors providing crucial support. Additionally, based on *Light: Science & Applications*'s reviewer pool, eLight built a high-quality reviewer database of over 5,000 members by analyzing past review frequency, quality, and efficiency.

Second, building a first-class editorial team from the leading journal. Drawing on *Light: Science & Applications*'s decade-plus foundation, eLight rapidly assembled a top-tier team by selecting 2 full-time and 4 part-time editors during its preparation phase. All founding editors had 3-8 years of experience at *Light: Science & Applications*, possessing strong academic backgrounds, professional editorial expertise, international perspectives, mature operational skills, and established networks within the scientific community. Consequently, eLight editors secured over 50 heavyweight submissions from academicians across China, the US, UK, France, Germany, Australia, and Singapore at launch. Their capabilities in assisting with science news writing, efficient promotion, and graphic design impressed scientists and demonstrated excellent team quality. They also established efficient manuscript processing workflows. Excluding one journal without published data, eLight's average processing time was at least twice as fast as comparable journals, with data from the same publisher (Springer Nature) for eLight, *Nature Photonics*, and *Light: Science & Applications* (Table 1). Given eLight's interdisciplinary nature, Table 2 compares eLight's processing speed with Nature sub-journals in related cross-disciplinary fields, with all data from Springer Nature. The results show eLight has established absolute processing speed advantages among international top-tier journals in interdisciplinary fields.

Third, leveraging cluster readership and promotion channels to build a high-exposure eLight platform. To compensate for new journal influence disadvantages, eLight fully utilized cluster journal readership resources. The Light Publishing Group currently comprises 9 proprietary and 26 strategic partner journals, forming a small, elite, strong cluster with millions of professional readers across multiple disciplines. By promoting eLight and its articles across cluster websites, WeChat groups, and email lists; inviting top scientists to write News & Views for eLight articles in *Light: Science & Applications*; and publishing joint special issues with cluster journals, eLight rapidly expanded its readership. Additionally, leveraging the cluster's diversified social media and science media channels—including global outlets like EurekAlert and Phys.org, WeChat (the self-operated "Chinese Optics" account with 120,000 professional readers averaging 3,000+ views per article), Twitter, Facebook, Instagram, and LinkedIn—eLight achieved high-timeliness, highly personalized news distribution to boost international influence.

Fourth, aggregating cluster resources for coordinated operations and creating high-impact international academic events. To save costs and achieve intensive operations, eLight and the Light Publishing Group jointly established a cluster Chinese website and unified management for finance, secretariat, typesetting, graphic design, and distribution. They created unified

evaluation systems, editorial rotation mechanisms, AB role systems, and internal manuscript transfer protocols, greatly promoting resource sharing and intensive development. Moreover, leveraging cluster strength, eLight co-hosted series of high-impact international academic events, including the Light Conferences series (selected for CAST's *Important Academic Conference Guide 2023* and UN International Day of Light events), the Global Optical Future Stars Competition (attracting professors from MIT, Stanford, Oxford, Cambridge, with 800,000 online viewers over four years), the National Optics and Optical Engineering PhD League (selected as a national-level event by multiple Double First-Class universities, with 300,000+ annual online/offline viewers), China's Top 10 Optics Social Impact Events (100,000+ annual participants), overseas Light Conferences (featuring presidents from Peking University, University of Hong Kong, and other top institutions and academicians from China, US, Israel, Australia, and Singapore), the Seed of Light Scholarship Program, Optics Science Popularization Workshops (21 published articles with 800,000 cumulative views), and Light Salon/Light Shiguang academic culture columns. These community-building activities created an environment comparable to international societies, uniting scientists around the journal cluster and rapidly elevating eLight's international influence while strengthening the cluster's overall capabilities.

1.2 Responding to a Changing International Landscape: Voicing Positions and Shaping Discourse

At the 2016 Party News and Public Opinion Work Conference, President Xi Jinping noted that China's global image remains largely "shaped by others" rather than "self-shaped." Chinese scientific journals face similar challenges, with international top journals, major commercial publishers, society presses, and authoritative databases controlling discourse. As international dynamics have intensified, this "shaped by others" predicament has increasingly constrained China's already weak journal discourse power. Accordingly, eLight has called on scientists to separate academia from politics while continuously "voicing positions" (outputting journal viewpoints) and "self-shaping" (practicing those viewpoints) to build core advantages and discourse power, transmitting its image, characteristics, and strengths to the international scientific community. Since its founding, eLight has consistently voiced and shaped in the following areas:

First, advocating academic freedom and refusing to become a channel for international political disputes. Since its founding, eLight has firmly opposed scientists' political alignment or endorsement initiatives in international disputes, preventing scientists from using scientific research manuscripts or review comments to output potentially controversial political viewpoints. Simultaneously, eLight advocates academic freedom across all its channels, steadfastly maintaining equitable protection of scientists' rights worldwide.

Second, shouldering mission and responsibility for scientists by voic-

ing and operating for their needs. From its preparation phase, eLight has been committed to identifying scientists' needs and filling critical gaps rather than blindly launching a journal. Through questionnaires and visits to *Light: Science & Applications*'s core scientist community, eLight recognized that interdisciplinary optics research has brought transformative impacts to multiple fields. However, due to dispersed audiences and difficulty in follow-up work, many groundbreaking studies from 0 to 1 have been overlooked, leaving interdisciplinary scientists in difficult positions. Therefore, eLight established its mission to "disseminate and lead emerging interdisciplinary optics fields." To implement this, eLight assembled a top-tier editorial board with interdisciplinary breadth and depth—40% academicians and 75% international members—who serve as crucial arbiters for resolving reviewer disagreements on pioneering work. The editors-in-chief, editorial board, and editorial office clearly communicate this mission in every presentation. In article selection, eLight prioritizes manuscripts' profound interdisciplinary impact far above popularity or citation potential. For example, eLight published the first work on brainwave-controlled metamaterials [10-11] and the first work on vectorial adaptive optics [12]—neither from hot fields but both achieving massive cross-disciplinary impact due to their revolutionary nature. The most frequent question eLight receives from scientists is how they benefit from the journal. eLight's proactive voicing and consistent self-shaping have earned high trust from the scientific community.

Third, outputting "impact factor is not everything" values. eLight has noted international scientists' concerns about "impact factor credibility crises" and "predatory journal crises," advocating that while impact factors are important credibility indicators and amplifiers for attracting quality articles and promoting dissemination, they must not supersede journal mission, article quality, impact, reader reputation, or audience. To practice this value, eLight has continuously increased its original article proportion since founding. As shown in Table 3 , eLight's original article ratio rose from 57.1% in 2021 to 100% through July 2024 (estimated 87.5% for the full year). From 2021-2024, original articles accounted for 82% of total publications, with plans for further increases. Additionally, to properly distribute disciplines and benefit readers, eLight refuses to cluster around hot topics. For instance, in 2022 eLight received four submissions on "micro-nano spectrometers"—a current international hotspot with numerous publications in *Nature* and *Science* and their sub-journals. All four were high-quality submissions from top international teams, but eLight only published two [13-14], rejecting the others that subsequently appeared in other top international journals. A key reason for rejection was eLight's desire to avoid hot-topic clustering and instead demonstrate broader disciplinary insight and leadership. This stance against impact factor obsession has earned eLight respect and support from the international scientific community.

Fourth, voicing and working for scientists' core interests. Since preparation, eLight has focused on protecting scientists' core interests. Addressing the publishing dilemma where top journals require substantial detailed reviews

(slowing processes) but lower-tier journals reduce exposure and impact, eLight proposed high-efficiency operations by editors-in-chief/editorial board/editorial office, incentive systems for rapid high-quality reviews, parallel work by publishing/promotion/graphic teams, editorial comparison of review comments, and innovative video review conferences. These measures significantly shortened review cycles while maintaining quality. Simultaneously, eLight enhanced article exposure through: inviting top scientists to write News & Views in *Light: Science & Applications* [15]; editorial assistance in writing science news in both languages; multi-version simultaneous promotion; interactive multi-person promotion on mainstream social media; and deep, innovative promotion like article-specific covers. These efforts gave eLight exposure comparable to top international journals even in its startup phase. Furthermore, addressing scientists' concerns about peer review fairness and transparency, eLight pioneered transparent review, publishing peer review reports and author responses with author-reviewer agreement [17-18]. This discloses more review information for public supervision and publishes review discussions to spark academic exchange. Currently, 56% of eLight articles feature transparent review, receiving widespread reader acclaim. By voicing and working for scientists' core interests, numerous top scientists worldwide have joined eLight to build a better scholarly publishing ecosystem.

2. Innovative Approaches to Deepening Journal-Scientist Relationships and Strengthening Cohesion

The foundation of scientific journals is the scientist community—editors-in-chief, editorial board members, authors, and reviewers who contribute and gatekeep content, determining a journal's original innovation capacity and core competitiveness. Maximizing their contributions is crucial. However, unlike international publishers and societies with large loyal scientist audiences, China's journals, especially new ones, lack strong core scientist communities and cohesion. Accordingly, eLight proposes deepening journal-scientist relationships through innovative explorations in three areas: expanding relationships with editors/editorial boards, authors, and reviewers.

2.1 Expanding Relationships with Editors and Editorial Board Members

Editors-in-chief and board members are a journal's cornerstone and public face. Maximizing their motivation and contributions is vital. eLight approaches this from three directions:

First, selecting editors and board members with pure passion and aligned vision. During recruitment, eLight emphasizes mutual understanding and two-way selection, clarifying rights and responsibilities upfront while avoiding political or economic factors. Both editors-in-chief, after thorough communication with the editorial team and sharing common vision, declined offers to lead top in-

ternational optics journals to instead serve eLight and benefit the global optics community. Among eLight's editorial board, 40% are academicians from China, US, Australia, Germany, and France who contribute voluntarily based on shared philosophy.

Second, innovating personalized editorial work systems. Unlike traditional board functions, eLight allows members to choose from various contributions: high-efficiency manuscript processing, pre-review consultation, inviting top submissions, team contributions, adding journal promotion slides to personal presentations, social media forwarding/interaction, providing scientist network lists, and writing news commentaries. This flexibility allows editors to select work matching their interests, strengths, and schedules, greatly enhancing motivation. eLight also established a tiered editorial team of full professors from top global institutions. Beyond selective board functions, tiered editors can organize article explanations, graphic design and video production, and green-channel reviews, with editorial offices assigning point values to each task. Top-scoring tiered editors annually join the editorial board, identifying first-class scientists with strong service commitment.

Third, fostering ownership and shared honor/loss consciousness. The editorial office helps editors understand how journal success affects their careers, assisting them in gaining honor, achievement, academic value, and positive feedback from the journal to promote owner mentality. For example, eLight assists editors-in-chief and board members in establishing partnerships with host institutions and renowned research organizations, helping them secure projects and industrial resources and recommending them for Excellence Program awards.

Fourth, assisting editors in planning journal work and resources. The editorial office helps schedule reasonable time commitments and identify personal resources usable by the journal. By mapping editors' colleague networks, research relationship graphs, and recent recommendation letter lists, eLight has secured important manuscripts, quality reviewers and arbiters, and news commentary experts. With editors-in-chief communicating with the editorial office several times daily, the office plans tasks requiring leadership or coordination, enabling efficient decision-making and time management.

These measures strengthen editorial leadership and build field confidence in the journal.

2.2 Expanding Relationships with Authors

Quality manuscripts are the foundation of journal influence; without them, peripheral efforts are castles in the air. eLight strengthens author connections through depth and breadth.

In depth, eLight first earns respect and trust through rapid, high-quality review organization and editorial feedback that genuinely improves manuscripts. eLight innovated parallel workflows: editors-in-chief and editors conduct simultaneous

initial review; editorial board members and editors simultaneously invite reviewers; review proceeds in parallel with editor-author discussion of comments; editors check author responses against reviewer comments and selectively query reviewers while parallel processing format revisions; editors and authors prepare promotion while technicians process manuscripts; and editors and authors proofread simultaneously. As shown in Table 1, eLight's average initial rejection time is 3 days and submission-to-acceptance is 69 days, far faster than comparable international journals. This speed has inadvertently secured first-authorship rights for some authors unaware of competing work. eLight also provides multiple innovative pre-submission inquiry channels including email, social media, online meetings, and lab presentations, greatly facilitating scientists. Top scientists including US National Academy of Engineering member Baharam Jalali, Australian Academy of Engineering member Dayong Jin, NSFC Distinguished Young Scholar Professor Xi Peng of Peking University, and Professor Mortiz Kreysing of Karlsruhe Institute of Technology have publicly thanked eLight for professional handling and efficient processes, resonating widely in the scientific community. Additionally, eLight uses its platform and resources to broaden article dissemination through professional science journalists, editorial assistance with news writing, top scientist commentaries, high-timeliness promotion across dozens of social media and science media outlets, peer and broad-audience email campaigns, covers and offprints, self-recommendation to authoritative media, and promotional visits. Deep author relationship expansion has yielded tangible support: 60% of authors submitted a second paper shortly after their first eLight publication, with many spontaneously promoting eLight long-term.

In breadth, eLight broke conventional solicitation patterns by innovating approaches: mining preprint platforms for quality manuscripts, finding gems rejected by top journals, tracking lab progress, capturing rising young scientists' representative work, inviting propositional reviews in optics subfields, competing for manuscripts at conferences, soliciting advisors through young scientists, and exploring controversial topics. These efforts secured over 70 heavyweight submissions from academicians across China, US, UK, Germany, France, Singapore, Australia, and Israel, with 30+ passing review and being published. For example, due to connections with *Light: Science & Applications*, the editorial office long tracked the digital coding metamaterials field pioneered by Academician Cui Tiejun of Southeast University. By observing the field's trajectory, they commissioned a propositional review on "intelligent coding metamaterials," published in May 2022 [20] and now cited 180 times in SCI, 214 times on Google Scholar, with 23,000 downloads (data as of July 31, 2024). Through long-term tracking and half-year effort, the editorial office also secured Cui's team's original work on "brainwave wireless communication metamaterials" [10], which became a Weibo hot topic and was reported by hundreds of global media including Xinhua. Multiple articles have exceeded 100 citations within a year, one surpassed 70,000 annual downloads [18], another became an author's key work for receiving the NSFC Distinguished Young Scholar award [21], and another served as the primary work for an author securing a faculty position at

Oxford [12].

Expanding author relationships in both depth and breadth has earned respect and trust, demonstrated the journal's commitment to quality and taste, and further established credibility and influence.

2.3 Expanding Relationships with Reviewers

Reviewers determine peer review quality and safeguard article standards. Addressing concerns about review quality, timeliness, fairness, and report usefulness, eLight developed four innovative approaches to deepen reviewer relationships.

First, multi-channel selection of quality reviewers. Building on *Light: Science & Applications*'s 5,000+ reviewer pool, eLight added 3,000+ high-quality reviewers with diverse perspectives through Google Scholar "label+keyword" searches for top subfield scientists, global highly-cited and top 2% scientist lists, first-author young scientists in recent representative top works, Publons-certified reviewers with excellent records, and industry leaders from patent databases, providing foundational support for rapid, high-quality review.

Second, maximizing time savings for reviewers to enable high-speed review. eLight implements rigorous initial screening to ensure reviewers see only selected work, reducing review volume. From 2021-2023, eLight's initial rejection rate rose from 50% to 78%. The journal uses automatic line-numbering technology for easier reference, editorial checking of author responses to selectively query reviewers, video conference discussions, group review discussions, cross-reading of review reports, and pre-review identification of core editorial concerns to reduce reviewer workload and time.

Third, helping reviewers understand journal positioning and requirements to enhance report usefulness. eLight regularly updates reviewer invitation letters with concrete descriptions of target impact factor, estimated impact factor, article quality and workload, detailed short-term and long-term innovation requirements, and links to representative published works or positioning videos. This accurately conveys journal positioning to prevent mismatched expectations and ensure useful feedback. The journal also decomposes review requirements into specific criteria: innovation-journal positioning fit, scientific correctness, completeness, impact on various reader fields, writing quality, plagiarism/duplication/data falsification suspicions, human/animal ethics issues, technical points needing clarification, required supplementary experiments/discussions, and need for videos/source code. This ensures comprehensive evaluation and improves review quality.

Fourth, promoting review fairness and transparency. eLight pioneered transparent review, publishing review reports and author responses with mutual consent. Initially, most reviewers and authors didn't understand this practice, but through persistent communication, eLight convinced 56% of articles to adopt

transparent review. This provides public supervision of review reports, encourages more fair, high-quality, and timely peer review, and publishes review discussions to spark academic exchange and collaboration, now widely recognized by field scientists. Additionally, eLight established detailed conflict-of-interest disclosure rules requiring reviewers to disclose: recent collaborators among first/corresponding authors, recent collaborators among other authors, relatives among authors, former advisors/students/colleagues, competition with authors' ongoing research/commercialization/patents, and other conflicts. Post-review checks examine reports for defamatory/discriminatory/political language, evidence for each criticism, detailed private comments to editors, and unreasonable reference recommendations to prevent bias. The journal also established reviewer protection and comprehensive evaluation mechanisms, including anonymous reviewer accounts and post-editing of documents containing personal identifiers. A multidimensional evaluation system assesses reviewers annually across nine dimensions: review count, average turnaround time, invitation/acceptance ratio, average report length, acceptance-without-completion ratio, undisclosed conflicts, pre-publication confidentiality, plagiarism of author work/ideas, and biased/insulting language. Tables 4 and 5 show eLight's 2023 reviewer evaluation and comparison with 2021-2022, demonstrating significant improvements in review quantity, speed, acceptance rates, report length, and completion probability.

Based on this evaluation system, eLight rewards top reviewers through annual recognition, personal thank-you letters from editors-in-chief and editorial office, recommendations to Excellence Program outstanding reviewer awards, official reviewer certification, and certificates, while eliminating low-quality reviewers. Expanding reviewer relationships creates a closed-loop quality control system with positive feedback, further enhancing academic quality.

3. Implications and Recommendations

From eLight's innovative practices, this paper distills the following implications for China's world-class journal construction:

First, using leading journals and quality academic resources as engines to drive new journal development helps rapidly assemble editorial boards with high contribution levels, international representation, broad interdisciplinary span, and balanced age/gender structure; quickly establish quality reviewer databases and volunteer scientist editor teams; and select highly professional, experienced academic editors. This efficiently transplants leading journals' resources, practices, experiences, and scientist audiences to new journals. Under new circumstances with limited and costly international influence channels, leading journals' and clusters' accumulated readership, promotion channels, technical teams, and high-impact academic events can help new journals quickly build international influence. Meanwhile, strong new journals strengthen the cluster's scientist community and expand its influence. Thus, using leading journals and clusters to launch sister or sub-journals is an effective measure for China to promote

quality resource aggregation and build world-class journals.

Second, facing volatile international situations, Chinese journal practitioners should actively voice positions and self-shape around "scientific freedom, addressing scientists' core needs, and responding to global publishing issues like impact factors and predatory journals." Through innovative, pioneering voicing and actions, journals can earn scientists' respect and trust, shape discourse power, and output values.

Third, scientists are the foundation of journals. Innovatively expanding relationships with editors-in-chief, editorial boards, authors, and reviewers is crucial for development. eLight has pioneered practices in strengthening rights/responsibilities frameworks, innovating and refining systems and workflows, exploring mutually beneficial journal-scientist resources, and establishing multidimensional evaluation and incentive systems (Figure 1 [Figure 1: see original paper]), offering references for Chinese scientific journals.

4. Conclusion

This case study of Excellence Program high-profile new journal eLight—from its pandemic-era founding to rapid world-class status—addresses challenges of "limited, costly channels for new journal international influence building," "weak discourse power of Chinese journals," and "weak core scientist communities and insufficient cohesion." The paper proposes eLight's series of innovative practices and distills generalizable lessons: using leading journals as engines to efficiently transplant resources and audiences; voicing and self-shaping around international publishing trends and scientists' core needs to build discourse power; and innovatively expanding journal-scientist relationships through rights/responsibility frameworks, workflow innovation, mutually beneficial resources, and multidimensional evaluation to deepen the journal's scientific community and strengthen cohesion. This research offers important practical significance and reference value for China to build world-class journals, particularly for new journals under new international circumstances and for leveraging leading journals and clusters.

However, China's practice of leading-journal-driven and cluster-driven new journal development remains in early exploration. Future practice must address: 1) How to differentially position leading journals versus sister journals, rationally plan cluster discipline/scale/positioning/profit models, and establish editorial division-of-labor/collaboration/performance mechanisms—critical for leveraging leading/cluster advantages though not discussed here; 2) How to form cluster-linked voicing and discourse power like international publishing groups, and achieve large-scale linked voicing among China's first-class journals—an urgent future question given single journals' limited channels; 3) How to establish self-sustaining bonds among scientists to create journal-scientist-discipline-activity-resource interconnections like top international societies, rather than relying solely on journal-mediated connections. Building China-led international

societies and strengthening synergies with dominant China-led journals represents a major barrier. These three directions will be future exploration priorities for the Light Publishing Group.

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