



INTERNATIONAL UNION OF
PURE AND APPLIED CHEMISTRY

Chemistry International:
Recommendations for the Future

Submitted from the Committee on Publications and Cheminformatics Data Standards (CPCDS):
October 15, 2015

Index

Executive Summary	P. 2
Background	P. 2
Survey Summary	P. 4
Recommendations	P. 5
Survey Results	P. 12

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Executive Summary

At the request of the IUPAC Executive Committee, the Committee on Publications and Cheminformatics Data Standards (CPCDS) has developed recommendations for the future production and dissemination of the IUPAC news journal, *Chemistry International (CI)*. The recommendations are based upon a detailed review of the results of a survey sent earlier this year to an estimated 2,000 *CI* readers and focuses on such issues as content, format, and mode of presentation; what *CI* content should be on IUPAC.org and what might available and sold in the public domain; how the IUPAC web site can be used to engage members and others with *CI*; and how *CI* can be used to engage members and others with IUPAC.

In summary, CPCDS believes that moving forward, *CI*, in conjunction with the new IUPAC website, should serve as a key promotion and communication tool to increase the awareness and visibility of IUPAC both internally to members and externally to other Chemical Societies, students, researchers, and interested members of the general public. Its current editorial perspective can and should serve a broader audience to IUPAC's advantage. At present, *CI* is underutilized.

CPCDS recommends that the primary format for *CI* both now and in the future be a digital version that leverages dynamic publishing opportunities offered by current web and information technologies. In parallel, it is recommended that a print version continue for an interim transition period that could run for the remainder of the contract with De Gruyter (through December 2020), allowing current subscribers to gradually migrate to a new digital version on the IUPAC website, allowing IUPAC sufficient time to build a robust digital version, and allowing the subscriber base and overall usage to increase through De Gruyter's sales and marketing efforts. CPCDS believes that a reduction of the print publication frequency from six to four issues per year and the implementation of a new business model may make a print edition financially-viable and CPCDS recommends that such a financial analysis be initiated.

CPCDS recommends that the survey feedback on content and the concept of thematic issues should be utilized as a foundation for the content of future issues of *CI*. CPCDS also recommends that a small Editorial Advisory Board be established to provide periodic external reviews of the publication, its content, publishing schedule, and its success against its mission and objectives. CPCDS recommends that a publishing partner be retained as IUPAC does not have sufficient staff nor sufficient publishing expertise to broadly market and distribute its publications.

The above recommendations and rationale for each are detailed in this report. CPCDS recommends that as soon as the IUPAC Executive Committee determines its objectives for *CI* (e.g. use as a member benefit; as a tool to increase IUPAC visibility; as a potential revenue source, etc.) and the format(s) in which it will be distributed, discussions with De Gruyter be initiated. IUPAC has a good working relationship with de Gruyter and open and forthright conversations have been the norm for at least the past eighteen months. Both organizations have much to gain by openly discussing how *CI* can be promoted and how it can be better utilized to promote IUPAC as well as *Pure and Applied Chemistry*. Even if the Executive Committee decides to terminate the *CI* publishing agreement before it expires, CPCDS believes that the relationship with De Gruyter is strong enough to allow that conversation to happen.

Background

The publishing and marketing of *Chemistry International (CI)* was contracted to the De Gruyter Publishing House in July 2013 with the agreement in place through December 31, 2020. During the production transition two things became apparent: 1) The De Gruyter production system is unable to easily produce a news magazine with short articles, photos, etc. as the system was created to handle the

format of a traditional scholarly journal; 2) The *CI* copy editor contracted by IUPAC actually served more as a co-editor, offering a lot more added-value. This was not made clear in advance and when De Gruyter took over the publication process they replaced the IUPAC contractor with an actual copy editor, not a co-editor. These two factors resulted in a complete transformation of the *CI* production process, and while it is certainly better now than it was two years ago, the process remains less than ideal for both organizations.

In 2014 De Gruyter proposed a digital format for *CI* similar to one that they use for their digital publication *Public History Weekly* (<http://public-history-weekly.oldenbourg-verlag.de>). While the IUPAC Committee on Publications and Cheminformatics Data Standards (CPCDS) recommended against using the format, the proposal did raise a number of questions regarding *CI* format, content, features/functionality, etc. It was agreed that IUPAC had insufficient knowledge about how and why users read *CI*. While the already agreed-upon business plan for 2016 assumes no changes in format or distribution, it was decided that *CI* readers would be surveyed regarding their *CI* usage behavior, with any recommended changes resulting from the survey to be considered for implementation in 2017.

Chemistry International Survey

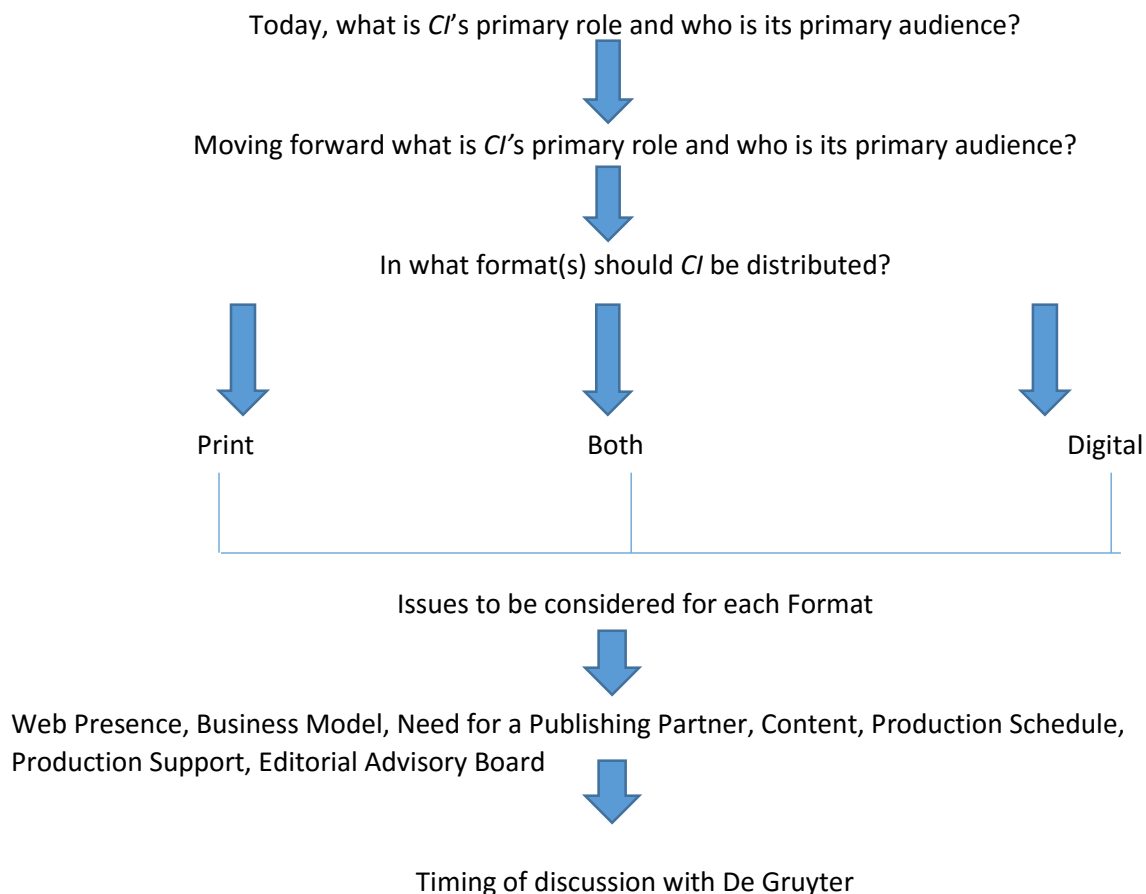
The survey was conducted early in 2015 to learn more about how *CI* is accessed, read, and used in its current print and digital versions; what content is most valuable; what, if anything, needs to be added or changed; and what features and functionalities are absolutely essential for the provision of an enjoyable and informative reader experience. The survey was sent to just under 2,000 *CI* readers and 143 or just over 7% responded (See detailed results and comments submitted by survey respondents in Appendix A starting on page 11). A brief summary is as follows:

- 70% of the respondents read some or all of each issue
- 53.57% read *CI* in the office and 40.71% read it at home
- The most read sections are: Featured articles 77.14%; News 72.86%; IUPAC Projects 67.14%; Updates on units/symbols/terminology, etc. 50.00%; Conference reports 39.29%; and Forthcoming meetings 37.14%
- 70.71% do not believe that additional content was needed
- 80.71% read print only; 6.43% read digital only; and 12.86% read both formats
- The preferred format for reading is: Print 74.29%; Digital 13.57%; and Indifferent 12.14%
- If *CI* were only available in digital format 77.86% would read it; 22.14% said that they would not
- The preferred format for reading online articles is PDF 63.57% and HTML 22.14%
- The methodology used to access online content is: Computer browser (HTML-5) 77.14%; Computer (print out a PDF to read) 62.14%; Tablet 33.57%; Smartphone 30.00%; and other 4.29%
- 55.71% read other news magazines focused on the global chemistry community (e.g. *Chemical and Engineering News*, *Chemistry World*, etc.)
- 69.29% have no objection to having advertising in *CI*; 10.71% do object; and 20% had no opinion
- 79% of the respondents were age 46 or older; 10% were age 35 or younger

In addition to the above, survey respondents commented on possible content changes, new features, etc.

Survey Analysis/Recommendations

CPCDS began the survey analysis in June 2015 and held five teleconferences plus an in-person meeting in Busan, Korea. The analysis was done by addressing the questions that are listed below. Recommendations, along with the rationale, are noted where appropriate. They are based upon an ideal world and CPCDS is aware that IUPAC financial constraints may prohibit implementation of some of the suggested strategies. CPCDS strongly recommends that the IUPAC Executive Committee follow CPCDS's questioning process detailed as follows in making their decisions.



1. Who is the primary audience for *CI* today? What is its current primary role? And what primary role should *CI* play as IUPAC moves forward?

Recommendation: The IUPAC Executive Committee needs to answer these questions to their own satisfaction before making any decisions on the future of *Chemistry International*. CPCDS' perspective appears below.

Rationale: CPCDS believes that today the **primary audience** for *CI* is the IUPAC membership, including the NAOs. *CI* may also be a useful mechanism for communicating with Chemical Societies, at least in some electronic form, and possibly also with Ministers of Science/Research in governments. There is a secondary, general interest audience, especially for many of the feature articles, articles on science history, etc. CPCDS strongly believes that *CI* is underutilized (note: Some CPCDS committee members never heard of *CI* until they became involved with IUPAC. Unfortunately, it is a well-kept secret).

CPCDS views *CI*'s current **primary role** as serving as an internal communication organ for IUPAC members, including NAOs. Secondly, it serves an external communication medium for non-members, including other Chemical Societies, students, researchers, and interested members of the general public. CPCDS believes that at present the content for both IUPAC members and non-members is adequately balanced. It is re-iterated that as a communication vehicle CPCDS believes that *CI* is underutilized and can better serve IUPAC.

CPCDS believes that **moving forward**, *CI*, in conjunction with the IUPAC website, should serve as a key promotion and communication tool to increase the awareness and visibility of IUPAC both internally to members and externally to other Chemical Societies, students, researchers, and interested members of the general public. Its current editorial perspective can and should serve a broader audience to IUPAC's advantage.

2. In what format(s) should *CI* be distributed - print, digital, both? If both, what is the content and publication frequency of each format - the same, different?

Recommendation: If financially feasible, *CI* should continue in both print and digital formats for an interim transition period that could run for the remainder of the contract with De Gruyter (through December 2020), allowing current subscribers to gradually migrate to a new digital version on the IUPAC website and allowing IUPAC sufficient time to build a robust digital version.

It is recommended that there be no fewer than four print issues in order to retain and attract paid subscribers. The print should only include content that has a long shelf-life and that is not out-of-date at the time of or shortly after receipt by the reader¹. Print subscribers should also have access to the digital version on the web. The digital version should be made available at least six times per year if not on a much more frequent basis and should be in a format that leverages use of current information and web technologies (*Note:* the reduction of print publication frequency and the implementation of a new business model may make a print edition financially-viable).

Rationale: CPCDS believes that a digital version of *CI* should be the main focus for both now and in the future even though only 13.57% of current *CI* readers prefer the digital edition. Newer and younger generations of IUPAC members will prefer digital information and a digital version opens up opportunities to have an interactive, dynamic, and more current publication. With the upcoming launch of a new IUPAC website the timing is perfect to reinvent a digital *CI* - adding podcasts, videos, etc. - for engaging interaction with members and non-members alike.

However, if financially feasible, print should remain as a secondary focus for an interim transition period, perhaps for the remainder of the *CI* contract with De Gruyter that runs through December 31, 2020. (Note that 80.71% of *CI* users read only the print edition). The print should have a less-frequent publication cycle than at present. Without having discussed this issue with De Gruyter they, too, have suggested a "seasonal" *CI* (four issues/year). They noted that the cost/issue is \$11,000 for the print version (printing and distribution). So savings of \$22,000 would result by going "seasonal," assuming that the page count remains the same (*note:* the most recent issue of *CI* had about forty pages, of which twenty-six pages were featured articles or standards and recommendations all or which would go nicely into a print edition. The remaining content (events, conferences, etc.) is suited for a digital version and/or the IUPAC web site. Since *CI* is now published six times/year, the current amount of content suitable for a print version ($6 \times 26 \div 4 = 39$ pages) would fit nicely into four issues, keeping the page count about the

¹ Examples of content with a long shelf life are featured articles, conference reports, book reviews, etc. If calls for nominations or notices of conferences are included their due dates should be well-after the date by which the reader will receive his/her copy.

same as today). Although there are other print options such as an annual edition or an edition associated with IUPAC General Assemblies, CPCDS believes that four print issues is the minimum number that will still attract paid subscribers. (72.86% of the survey respondents said that they believe that there are benefits in having a print version; see question #7 on page 17).

It should be noted that 77.86% of the survey respondents did say that they would continue to read *CI* if it were to be made available only in digital format. However, they made it quite clear that their usage would not be as often or as thorough and that they would only do so if they remembered to go to the website to find it. If at all possible, it would be better to “wean” readers off the print and “train” them to use the digital version (*note*: any digital version of *CI* will require consistent pro-active outreach to “pull” readers to the web site). The transition period would also provide time to continue to build a subscriber/user base working with De Gruyter who has already grown *CI* usage (number of downloads) by more than 50% over 2014.

3. Should *CI* be an integral part of the new IUPAC website?

Recommendation: The new IUPAC website should be used throughout 2016 to explore new production, distribution, and format possibilities for *CI*; e.g., podcasts, videos, current news, etc. CPCDS is willing to assist in the exploratory process. (*Note*: the future of the digital version should be part of a discussion with De Gruyter).

Rationale: When surveying IUPAC members on their usage of the current IUPAC website 61.36% said that they used the site to access IUPAC publications; 62.86% said that they used it specifically to access *CI*; and 51.43% said that *CI* was the publication that they accessed most frequently. Therefore, CPCDS believes that *CI* should be seamlessly accessible via the IUPAC website even if the publication ultimately resides elsewhere (e.g. on De Gruyter servers).

Based upon discussions and previews to date, it appears that the new IUPAC web site will be able to support *CI* should IUPAC choose this route. The site will facilitate the incorporation of fresh and dynamic content and provide opportunities to create a new digital publication. It will also allow for user-authentication so that those who have the right can access digital versions of *CI*.

4. What business model(s) should be implemented for *CI* distribution? (*CI's* role as a member benefit will impact this decision)

Recommendation: The IUPAC Executive Committee should re-evaluate the current *CI* business model with the goal of increasing the awareness of both *CI* and IUPAC while increasing revenue and minimizing costs. As noted earlier, the combination of a reduction in publication frequency of the print edition and the development of a new business model may make an interim continuation of the print viable, and it is recommended that such an analysis be pursued. CPCDS recommends that the Executive Committee consider a model that includes some level of free content to elevate the visibility/awareness of IUPAC and paid advertising to increase revenue.

Rationale: CPCDS is aware that the *CI* business model is an IUPAC Executive Committee decision and that it goes hand-in-hand with the Executive Committee's objectives for *CI* (e.g. use as a member benefit; as a tool to increase IUPAC visibility; as a potential revenue source, etc.). However, CPCDS believes that IUPAC needs to re-evaluate its current model for *CI* and for reference purposes the models used by the American Chemical Society (ACS) and the Royal Australian Chemical Institute (RACI) for their news journals are included below.

a. American Chemical Society Business Model

ACS has three versions of their news journal, *Chemistry and Engineering News (C&EN)*, the print, a traditional online web version, and a page-turning version. The print edition of *C&EN* is the default version for ACS members residing in the USA. These members also have access to the web version and they have the option to decline to the print and obtain access to the page-turning magazine reader version. For ACS members living outside the USA, the page-turning magazine reader edition is the default, but they can opt into the print for an additional fee. All editions are weekly. (Since IUPAC is international, the digital version could be the default with the print being a for-fee option).

b. Royal Australian Chemical Institute Business Model

RACI has recently established a dedicated website (<http://chemaust.raci.org.au>) for *Chemistry in Australia*. All members are encouraged to visit the website to appreciate the work that has gone into making this magazine even more accessible. This year a membership fee differential will appear where members taking the online-only version of *Chemistry in Australia* will receive a \$15 discount from their fee.

c. Free vs. Fee-based

Some publishers offer a mix of free and fee-based content (e.g. digital newspapers). This model has been successful in increasing the awareness of their publications and, to a certain extent, increasing paid subscriptions. CPCDS believes that this approach should be considered in order to develop a broader audience for *CI* and increase the visibility of IUPAC (e.g. make certain featured articles free on the IUPAC website for access by non-members; send the url to other scientific societies for inclusion in their newsletters; etc.; the more clicks on and views of *CI* on the web increase its attractiveness to advertisers).

d. Advertising

Of the IUPAC members who responded to the *CI* survey only 10.71% objected to having advertising in the publication (69.29% had no objection and 20% had no opinion). This remains a revenue-generating option and De Gruyter is developing an advertising sales strategy for *CI* as follows:

- Compile membership demographic data.
- Create editorial calendar for forthcoming content (need to be at least one issue ahead)
- Create rate card and share current print distribution numbers along with NAO distribution.

De Gruyter needs to track online usage and the tools are in place to track clicks, views, etc. These tools are being piloted now and will be rolled-out at the end of this year. Note that with De Gruyter as a publishing partner *CI* usage has gone up through the first half of 2015. In 2014, *CI* was downloaded 1,867 times. Through June of 2015, issues have been downloaded a total of 1,437 times. As viewership increases *CI* will become more attractive to advertisers both in print and on the web

CI has well-defined sections that may be of interest to advertisers, although IUPAC needs to ensure that they do not influence editorial content. (Note: ACS does not have sponsors for *C&EN*, but their themed issues do attract related advertisers).

5. Can IUPAC create/market/distribute *CI* as defined by the IUPAC Executive Committee without a publishing partner? (Note: the De Gruyter contract ends December 31, 2020)

Recommendation: A publishing partner should be considered, at least for an interim period, if *CI* is viewed as a journal to be broadly disseminated - even if it is “published” only in digital format.

Rationale: IUPAC does not have sufficient staff nor sufficient publishing expertise to broadly market and distribute its publications. Although IUPAC will be launching a new website that could host *CI*, it would be naïve to adopt the mindset that “if we build it they will come.” Promotion is essential to “pull” readers to a digital publication.

For example, De Gruyter, IUPAC’s current publishing partner, has recommended a promotional plan for *CI* that would begin in December 2015. If approved by the Secretariat, an email will be sent to all members who receive *CI* in print format with information regarding the online version. The plan also recommends that for the months in which issues are published, e-Table Of Contents alerts be sent to all members and subscribers in advance of their receipt of the printed issue, and for months in which issues are not published, email blasts be sent with highlights from past issues, forthcoming content, highlights from past or current *Pure and Applied Chemistry (PAC)* issues, events calendar, conference reports, etc. Either IUPAC or De Gruyter can do the actual e-mailings. De Gruyter is willing to draft the content for IUPAC’s approval. The goal is to keep *CI* “in the face” of readers.

They are also planning to promote *CI* to all *PAC* subscribers who in the past received complimentary subscriptions to *CI*. Without a publishing partner who can focus on identifying new subscribers and on increasing the usage by existing subscribers, it is unlikely that *CI* will get the broad audience that it deserves and that is required to raise the visibility and awareness of IUPAC.

6. What content is needed to allow *CI* to fulfill the role it should play?

Recommendation: The survey feedback on content and the concept of thematic issues should be considered as a foundation for future issues of *CI*. (Thematic issues have the possibility of attracting advertisers whose products and services are aligned with the theme; e.g., *CI* had recent Solvay ads because of articles on the Solvay Prize in *CI*). *CI* and *PAC* should be more closely-linked (*PAC* with its scientific content and *CI* taking that content to a more general level is already being considered; e.g. a themed issue in *PAC* on “Women in Science” with scientific papers, and general interest coverage in *CI* with interviews, biographies, etc.).

Rationale: Those who responded to the *CI* survey were asked what sections of *CI* were of most value and for the respondent to check all that applied. The results are as follows:

Featured articles:	77.14%
News:	72.86%
IUPAC Projects:	67.14%
Updates on units/symbols/terminology, etc.	50.00%
Conference reports:	39.29%
Forthcoming meetings:	37.14%
Book Reviews:	35.00%
Discussion section (e-version only):	5.71%
Other (please specify):	1.43%

When asked to provide examples of what additional content they would like to see, there were 37 comments; e.g. offer podcasts, information on NAOs, governance and the Secretariat, more history, opinions on current issues, etc. (See responses to question 4 on page 12). De Gruyter has suggested that there be better cross-promotion between *CI* and *PAC* and that conference reports in *CI* and *PAC* issues be connected (this connection has already been implemented). Other initiatives may include *CI* thematic issues, cover contests, student member perspectives. *CI* can be used to engage more closely and effectively with the NAOs as well (see comments).

7. Does *CI* need an active Editorial Board?

Recommendation: An Editorial Advisory Board should be established for *CI* as soon as possible. It should be a small group (five or six full members) whose interest and experience are related to *CI* content. Consider recruiting at least one member with publishing experience. EAB members can assist in the recruitment of authors for 2017 and perhaps provide input on content based upon the feedback provided by the survey.

Rationale: CPCDS believes that every publication should have an Editorial Advisory Board (EAB) so that there is periodic external overview of the publication, its content, publishing schedule, and its success against its mission and objectives. Board members can also serve as a sounding board for new ideas and as a resource for recruiting authors, identifying production resources, etc.

CI is not a scholarly scientific journal so its Board members need not be recruited based upon their experience in specific scientific fields, but rather upon their interests and the experience and expertise that they can bring to *CI*'s specific sections. The EAB should be small (five or six full members with *ex officio* members as needed from the IUPAC Secretariat and Governance).

8. What will the 2017 production schedule look like and when does it need to begin?

Recommendation: Development of the 2017 *CI* production schedule should be left to the Secretariat. It should be in place by mid-2016 for the format(s) in which *CI* will be distributed.

Rationale: The schedule will depend upon the decisions that are made with regard to distribution format, publication frequency, content and, to a certain extent, on the business model (advertisers want to see a regular, predictable schedule). However, the schedule should be finalized to allow sufficient time to develop a content pipeline and, if appropriate, to attract advertisers (e.g., will there be themed issues? What are the themes? Who will be recruited as authors? Etc. The Editorial Advisory Board could assist in this process).

9. What production support is needed? Do we need to add staff/volunteers responsible for supplying regular reports from Divisions, NAO's, etc?

Recommendation: The Secretariat needs to determine, based upon *CI* formats, publication frequency, and requisite content, what level of additional support, if any, needs to be put in place. This should be done in parallel with the development of the 2017 production schedule. (Note: A few CPCDS members are willing to help to get the initial pipeline of content flowing).

Rationale: With the changes in *CI* production due to the move to De Gruyter, it appears that the process is more time-consuming for IUPAC. Regardless of the addition of any "regular" columns/articles from NAOs, Divisions, Governance, the Secretariat, etc., it appears that some level of production support may be needed in order to meet deadlines.

10. In what time-frame do we need to bring De Gruyter into the discussion?

Recommendation: As soon as the IUPAC Executive Committee has made a decision regarding the future of *CI*, discussions with De Gruyter should be initiated.

Rationale: If for no other reason than IUPAC is in a contractual relationship with De Gruyter for the production and marketing of *CI*, IUPAC's vision for the future of *CI* needs to be discussed with them. IUPAC has a good working relationship with de Gruyter and open and forthright conversations have been the norm for at least the past eighteen months. Some of CPCDS' suggestions will need their approval (e.g., making some feature articles available for free on the IUPAC website) and both organizations have much to gain by openly discussing how *CI* can be promoted and how it can be better utilized to promote IUPAC as well as *Pure and Applied Chemistry*.

CPCDS does not recommend ending the relationship with De Gruyter before the contract terminates in December 2020. However, for reference purposes earlier termination is possible in the event of a contract breach that is not fixed or as follows:

“Both parties agree to allow an early termination of the agreement to the end of the calendar year 2016 which has to be announced nine months before the Term expires. Early termination can only be due to a significant mismatch of the projected profit share for the parties within the first three year period of operation. A significant mismatch of projected profit share shall be defined as decrease of profit share of more than 50% from one year to another or failure to achieve the profit projections from the Journal in the financial plan in two succeeding calendar years of more than 30%.”
(Section 8iv of the contract).

Should the Executive Committee decide to end the agreement before it expires, CPCDS believes that the relationship with De Gruyter is strong enough to allow that conversation to happen. IUPAC has a good working relationship with de Gruyter and open and forthright conversations have been the norm for at least the past eighteen months.

APPENDIX A

Chemistry International Survey (4-11 -15)

1. Which of the following statements most accurately reflects your use of *Chemistry International*?

I read some portion of every issue:	70.00%
I read some portion of most issues:	22.14%
I rarely read it:	6.43%
Other, please specify:	1.43%

Comments:

1. I used to read most of every issue but, as I no longer receive a copy, I don't read it.
2. It depends how much other work I have to do at same time.
3. I read all portions if I get an issue. I do not have access to it most of the time, though.

2. Where do you most frequently read *CI*?

In the office:	53.57%
At home:	40.71%
While commuting/traveling:	5.71%
Other:	0.00%

Comments:

1. I don't know what you want this for. But you should have given more than one possibility. I read *CI* on the train and at home, for example.
2. I am retired and have an office at home.

3. What sections are of most value to you? Check all that apply.

Featured articles:	77.14%
News:	72.86%
IUPAC Projects:	67.14%
Updates on units/symbols/terminology, etc.	50.00%
Conference reports:	39.29%
Forthcoming meetings:	37.14%
Book Reviews:	35.00%
Discussion section (e-version only):	5.71%
Other (please specify):	1.43%

1. From the Editor
2. Stamps International
3. Mark your calendar

4. Is there additional content or features that you would like to see added? If "yes" please specify in the comments section.

Yes: 29.29%

No: 70.71%

Comments:

1. More about project reports, international events, and innovations for school instruction.
2. I would like to see additional reports on activities of the NAOs
3. Something like "What's going on in the Secretariat" - similarly perhaps for the Bureau and the Divisions... more about the persons there and what they do - usually we just get a group photo in front of some castle where the group met last and had a nice dinner.
4. I wish to get information of the activities of the countries in the IUPAC.
5. Chemistry Olympiad, (international, including some notes on national levels of Olympiad). Not entirely "added", but "more space devoted".
6. Any benefit.
7. Potential funding/collaboration opportunities in various countries/regions (e.g., European Union).
8. Information about NAOs: 1 or 2 times a year some news about the life of chemistry in one of our NAOs.
9. New projects coming from the project committee.
10. Presence of role models for women. Looking around a room in IUPAC makes me think that this is important to support stronger female participation.
11. Developments in Chemical Education.
12. Examples of good practice in writing scientific documents and reporting results.
13. Excellent experts' introduction.
14. I would like to know more about the individual Division activities, especially Divisions II and VII.
15. Special articles from particular regions or countries. Every issue a small article dedicated to chemistry in a particular country. As a way to help small countries to show their efforts in chemistry.
16. More features on core IUPAC activities, future looking, international, funding possibilities,
17. Invited contributions from various stakeholders
18. Short historical notes (not more than a page) on 20th century chemists that are not well known to the international community, particularly if they have had any involvement with IUPAC during their careers. Another suggestion would be to include in every November/December issue a note describing the experiences of former Young Observers (from any country, not only the US), especially if they remained involved in IUPAC activities after attending a World Congress and General Assembly.
19. Articles on trends in the international economy as they affect, and are affected by, chemistry.
20. Careful book reviews on (I) Physical Chemistry or Chemical Physics, (II) Biophysical Chemistry and (III) Chemical Engineering are VERY rare. This feature should be improved!
21. Columns on current issues with Chemistry - problems, ideas, solutions etc.
22. It would be good to have articles that help to link IUPAC to other Unions and also ICSU. Collaboration between the scientific unions is increasingly important and desirable, and suitable articles could help.
23. Articles illustrating how important it is that a country becomes a NAO.
24. Opinions
25. Regular country updates from the NAOs. i.e.: what's new in Mongolia in chemistry?
26. Nomenclature- and terminology-related articles.
27. A column for regular news (in the form of brief updates) from Divisions.
28. More presentations given at international IUPAC World Chemistry meetings.
29. IUPAC News, Scientific Break throughs

30. More articles on the applied part of IUPAC. So information about Companies large and small.
31. More information on the activities of IUPAC Committees or similar IUPAC groups.
32. Chemical reactions
33. Environmental chemistry and climate change topics that will help many students to know more about the topics related to environment.
34. Regular reports on chemistry AND chemical engineering programs and activities on a regional basis.
35. Simple test I can do at home or job.
36. Maybe some more historical notes on how some of the ideas of chemistry came about? Particularly those which have not been quite known to the public yet or those about discoveries which sprung from other sciences.
37. News in section (field of chemistry): organic, analytical, physical, etc.

5. Which of the following versions of *Chemistry International (CI)* do you read?

Print: 80.71%
 Digital: 6.43%
 Both: 12.86%

Comments:

1. I don't read the digital version, but it is useful for e-mailing to colleagues.
2. Digital when looking for a special topic: it is easier than to leaf a book.
3. Originally I left this unticked, since I don't read it at present, but the monkey objected. I used to read the print edition until it stopped arriving.
4. I did not know there was a digital version, and I do not know how to access it. On top of receiving the print version, I would like to receive e-mails with the digital version (or a link to the digital version).
5. I use the digital to save interesting articles for the future.
6. In my experience, only print journals (such as *CI*) are read regularly.
7. The digital version is difficult to access.

6. What version is your *preferred* format for reading *CI*? (Please explain why in the comments section)

Print: 74.29%
 Digital: 13.57%
 Indifferent: 12.14%

Comments:

1. Saves paper.
2. It gets attention because it is not one of several e-mails that come in each hour or so.
3. I like print: books, magazines, newspapers etc. I sit at the computer in the office all day and don't want to continue with leisure reading on the computer!!
4. I find it easier to read. I like it as is.
5. Print - more comfortable "at home", digital - interactive.
6. It is convenient and comfortable.
7. It's better.
8. In my retirement, I can pick this up and out it down at leisure.

9. I currently get print version, but would be happy to move to digital only.
10. Beautiful to watch with students, and to learn coordination for explanation in chemistry!
11. I read it mainly at home, but also frequently in the metro, bus, train, etc.: easier to have it in my handbag.
12. Digital is by far the best nowadays; however, it has to arrive, either as an email or as a link in the way that, for example, *Chem and Eng News* does. Without the reminder of a new issue one stops reading it.
13. I still prefer to read the paper versions. The paper version is friendlier as we can handle them easier in different occasions than in the lap top. If I want to refer some subject either for reports or for other uses, as buying a book or analyzing documents, or even read again some interesting text, I like to have the print paper nearby me.
14. I receive the printed Version and I favor reading printed versions over reading on the PC.
15. I like to hold the printed page rather than reading text on the computer where e-mail and other distractions interfere. Like to read during leisure times or on a trip, and the printed version is most convenient for this.
16. Easier on the eyes and can pick up and read.
17. I already sit too long in front of the computer.
18. I like reading it on paper (as a break from my computer work), but I prefer the digital version for saving relevant articles (nomenclature etc.).
19. I much prefer to read print than a digital screen, but I am admittedly old-fashioned.
20. Rapid and Convenient.
21. I am 82 and prefer to read printed information overlooking at the screen.
22. I read it as an informative magazine in leisure time. I do not own a tablet son reading it in the computer is not practical.
23. I can read it in the bath!
24. I would be fine to receive a link to the digital version instead of the printed version.
25. I can go through it at any time whenever I like.
26. I'm too old to be comfortable reading a screen for hours.
27. I read Print as I get a copy. But electronic is much comfortable as you may read almost anywhere.
28. I don't want to read more on the screen than I absolutely have to!
29. I keep a reading pile on my desk to use during breaks, when my computer is booting up, waiting for teleconference to start, etc. This pile contains things that distract or relax me (*C&EN* and *CI* and the most common titles in the pile). I also read *CI* and national chemistry news magazines during breakfast - this is always hard copy.
30. I find it easier to read the printed version. In general I read a greater of a print version than of a digital version.
31. Because I receive it by post. If this is not the case, I would switch to e-version.
32. It is nicer to read a printed journal.
33. I am an old-fashioned guy ...
34. Inconvenient presentation of on-line content.
35. Better for my eyesight.
36. Easier to handle and I can take it home, on train etc.
37. It is more portable, counterintuitive as that may sound.
38. I like to read it in my spare time.
39. Ease of reading
40. The print version is handy, and easy to start reading the contents without (starting up of) PC and suitable to take a casual glance at the contents.
41. I was not aware of any other format.
42. See above: digital articles etc. I read only focused, while printed work I scan more comprehensively, and I may read articles I had no intention to read when I started.

43. I receive prints regularly.
44. I prefer print but I would not freak out if the switch were made to digital.
45. I look first in a hard copy and then use electronic format for sharing Information, archiving, etc.
46. More comfortable.
47. Just seems the most enjoyable way for me as I spend so much of my day on-line already.
48. Sent via e-mail.
49. I am an old fashion person and I like to read in a hard copy format.
50. I am old!
51. It is a magazine that I want to read from cover to cover.
52. It comes to my desk. I do not know how to access it in digital form.
53. Read online only for work.
54. Print is easier and less tiring to read, but nowadays the costs are probably enormous. On-line versions have one big advantage: you can search them easily, and you can be linked by a click to other places of interest. Thus I can cope with a digital version if you decide to switch.
55. More convenient in my circumstances.
56. Easier to read at home.
57. Reading on paper is much more convenient. Adding notes for future work with the document on the document.
58. I didn't know there was a digital format!
59. This is an age-related thing - I prefer books to eBooks.
60. It is possible to leaf through a paper copy easily and see what is of most interest, as well as moving backwards and forwards fast and at will.
61. Two reasons: 1) easier to read while lounging or in bed 2) much easier on the eyes than electronic version.
62. I carry it around in my bag, read it when I get a minute (usually commuting), and occasionally rip a page or two out to file (which I would not bother to do electronically).
63. I'm old fashioned and like to hold something in my hands.
64. Too many journals in digital form
65. I stare into the computer screen most of the day at work.
66. I am quite happy to hold a printed version in my hand. I spend so many hours in front of a computer screen, that it relaxes me to read a printed text.
67. Easy to pick up a read at will. The electronic version of this and other magazines suffer from the "keyhole" effect.
68. Convenience.
69. Old eyes!
70. It will be easier for me to carry in my bag wherever I will go so as to read the content as per my convenience
71. When it is printed and lying on my desk, I can look at in for a while or take it to the train on my way home.
72. I can read the print version in (some of the very few) free minutes in the office; it's much more convenient than scrolling on the screen.
73. No real need for the print issue.
74. Easily accessible.
75. I live and work in Bukidnon, in Mindanao, Philippines. If not for the Net, I would not have seen a copy of CI here. Even so, with our Internet connections and electricity supply a little unreliable ... or even with the flexibility of the digital version, I would have preferred the printed version. It is something one could leave hanging about. In these parts, that would have more "exposure" value. Multiplies readership "accidentally".
76. I can write notes and related articles. Plus, easy to refer whenever needed.

7. Do you see benefits in there being a printed version of *CI*? (Please explain your answer in the comments section).

Yes: 72.86%
No: 12.86%
Indifferent: 14.29%

Comments:

1. I find that physical letters and publications have a greater chance of being read. Once you have had a physical object in your hands then it is easier to remember that it is there. At least that's how it works for me. With regards to *readability* I am indifferent.
2. I am slowly moving to electronic versions of the journals I read. *CI* could in my view do that step!
3. Eye protection
4. I enjoy flipping through the hard copy and skimming for articles of interest and having an easily accessible record on my office shelf. However, while I enjoy it, losing the print version would not cause me great distress.
5. Print can be very useful while travelling (flying particularly)
6. I like print: books, magazines, newspapers etc. I sit at the computer in the office all day and don't want to continue with leisure reading on the computer!!
7. It does not get lost in between so many electronic messages.
8. A printed version of *CI* needs a space of storage and much money due to work of making a printed version and postage.
9. It is more reliable than e-version.
10. I am comfortable with this format and I often refer to several back issues at the same time. That would be difficult if the format was strictly digital.
11. Journal is printing matter. On-line is also convenient to search some topic.
12. It is more comfortable to read a printed version.
13. I think that the question is whether there are members who haven't easy access to electronic materials. I doubt there is a real need today.
14. This print version is not very heavy and as I said in the previous point I carry it with me while I need to consult it. In the computer it will be lost in the middle of the plethora of information it contains.
15. I favor reading printed Versions over reading on the PC.
16. It is available on the shelf whenever I want something to read.
17. I simply do not find a web version easy to hop around in. It makes the table of contents too important.
18. Easier on the eyes and can pick up and read
19. Deep reading and understanding.
20. I like to read it on paper, but if I was given a choice of one version only, I would happily choose the digital version only. There is no cost for distributing a digital version.
21. Because it can be displayed in libraries and attract the casual user to IUPAC.
22. I am pretty sure that scientists older than 65 prefer the printed version of *CI*, simply because continuous looking at the screen is trying for the eyes.
23. I think more people will read it if they have a physical copy. But it's possible I'm in a minority on that, and I understand that printing is expensive.
24. Print still makes more impact, but this is changing as I carry a tablet ore often.
25. I am sharing the printed version with my colleagues.
26. It is nice to not read from a screen and easier to come back to an older issue if there is a print version.

27. A printed version can be read while sitting in an easy chair by those persons who do not yet belong to the 'app's network, in other words the old fashioned folks.
28. I would not read it at all if it were online.
29. It is a little nicer for me to skim through a print copy. But if going to all-digital would save more money that IUPAC could use on projects, it would probably be worthwhile.
30. I'm less likely to go on-line to read *CI*.
31. For me personally, it has certainly benefits.
32. It is nicer, because it is not virtual, I can read it in any position. It would be good to maintain at least *CI* in printed form
33. More convenient to read.
34. Valuable for countries that do not have good internet access.
35. If one share articles with colleagues and students at least it is easier.
36. I find better to read on paper than on screen. I can read paper everywhere.
37. Safer and more permanent storage of past issues; easier to share with students and other chemists who are not very familiar with IUPAC.
38. Ease of reading and impact when in groups.
39. The print version is handy, and easy to start reading the contents without (starting up of) PC and suitable to take a casual glance at the contents.
40. I like the easy access of the print version.
41. I have never seen an electronic copy of *CI*.
42. I can take it with me and read to my children.
43. Portability not tied to a device.
44. Yes, I am still a 'hard copy' person. I keep all issues and can find articles easily. Not so when using electronic copy only. The same is valid for printed IUPAC 'Blue Books'. Since they were abolished in 2004, it is almost impossible to retrieve any historical Information about the committees, sub-committees, membership, projects, etc.
45. I can take it home to read. .
46. It would save \$ if it were distributed electronically. I also like fact that we are generating paper that has to be recycled.
47. To keep memory of very important explanations.
48. I am an old fashion person and I like to read in a hard copy format.
49. I likely wouldn't read *CI* if there wasn't a printed version I received. While I do access the electronic version on occasion, it is primarily to share or draw attention to an article I've read in the hard copy version.
50. Now the hidden agenda emerges! Print is still important. If *CI* was more directed to general articles on chemistry for the general public, it could be sold in railway and other newsagent outlets. These places have a huge variety of print magazines that are still profitable. If you give up print and go solely electronic, you will lose many readers.
51. It is a magazine that most readers want to read from cover to cover.
52. Some things do not change...and paper copies of journals are one of them.
53. I do not know how to access it in digital form.
54. Convenience.
55. Long term archiving, in particular in private environment. Print-outs of digital document (PDF) still lose color (because many printers are still black and white printers), HTML- documents are often not printable at all.
56. Easy to bring along for reading in pauses (at lunch, in a bus etc.).
57. For ease of reference and scanning for articles
58. It is possible to leaf through a paper copy easily and see what is of most interest, as well as moving backwards and forwards fast and at will.
59. Any time readable
60. Easier on the eyes Easier to read while relaxing.

61. Our University of Toronto Faculty newspaper asked this question about 5 years ago - obviously with the foregone intention of dropping the print version whatever the outcome of the survey. It went from a pleasant little paper with a few feature articles of campus importance, a lively letters-to-the-editor exchange, a humor column and some useful want ads, to an e-list of new grants, discoveries, prizes, etc. Like most of my colleagues, I now hit delete when it appears in my inbox. I hope that *CI* doesn't become another piece of e-junk mail.
62. The paper remains visible on my desk.
63. Easy to read at home while relaxing. Then I can bring it to work and leave it for students to pick up.
64. Easier to read and archive. An excellent way to present IUPAC to others.
65. It is what I read. But maybe we are a dying breed.
66. Sometimes it is better, e.g. during traveling.
67. Convenience
68. I am getting too much information on the screen in my computer. I tend to delete what is not immediately relevant.
69. The printed Version is visible on my desk; it cannot be ignored. I feel obliged and interested to read it. That would not be the case with a digital version.
70. We can save the paper wastage and in turn we can save our environment from further damage
71. Getting the printed version compels me to read at least some of it. I would probably read little or none of an online version.
72. Can be easily shared with / circulated among colleagues
73. I prefer print. On the other hand, I understand that there are also issues concerning cost and recycling of the paper.
74. Feel and understand the content easily. Furthermore, easier to refer. Nothing can make me better than printed version for reading
75. Yes, because printed versions of *CI* can be easily read, especially in times when you are on an area with limited or no internet access.
76. Digital can be read through mobile, that's enough for me
77. It can be left "hanging" around.
78. It is like documenting information.

8. What do you consider a fair value for an individual annual subscription to *CI* in printed format? (In U.S. dollars)

Under \$50:	52.86%
\$50 - \$70:	26.43%
\$70- \$90:	2.86%
\$90 - \$100:	2.14%
Other (please specify):	15.71%

Comments:

1. For IUPAC body members (TM and AM) the subscription should be covered by IUPAC.
2. The present 110 US\$ seems OK
3. I have no idea - sorry!
4. I can't judge that, but having myself worked for IUPAC for over 40 years and written or edited several IUPAC books, I would resent paying cash. As for outsiders, I guess the price should be low.
5. I don't know, I get complimentary copies.
6. Perhaps there could be a subscription fee that is based on the country's per capita gross national income, i.e., <http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf>

7. If I had to pay then I would switch to digital, but as I have done with *C&E News* I would then read it less often, so this would be an issue if we were to look for advertising income
8. It should be free of cost; otherwise the demand will be reduced. As a result the information that is to be given to the scientific community will be hampered.
9. I pay \$52/yr. for printed *C&EN* (weekly) and get *Chemistry World* with RSC membership. *CI* should not cost more than these.
10. I would not subscribe, if a subscription becomes mandatory I would take the e-version
11. I do not know. How much does it cost to print? And what is the benefit needed for IUPAC to develop its actions? That should give an idea of the right price.
12. But I would probably stick to the online version if it was free and I had to pay for a printed version of the magazine.
13. I have no intention of paying an additional fee for a membership organization's regular newsletter; I expect the membership fee to cover it.
14. I am not sure if I would pay for it.
15. This is like trade magazine, I don't think that anybody would pay for it.
16. If advertisements (other than IUPAC-related) are included the price should be lower.
17. Personally I would not read it - but then I am retired now.
18. For Affiliate Members, it should be free of charge.
19. Unfortunately, I do not think many individuals would pay for a subscription.
20. Fair value - \$0. Surely this is not a repository of scholarly content, but a newsletter within the IUPAC family, to keep many involved, and also to share with NAO's, etc. to raise our profile. Is anyone charged for it now?
21. I would switch to the digital format, if there would be an annual subscription.
22. I don't think people would pay for a newsmagazine. Chemical societies give their newsmagazines for free to their members.
23. If the printed paper is too expensive I would not subscribe it. The paper is more 'nice to know'.
24. But: Members of IUPAC do not get compensations for their work. So it appears fair that they should receive a free *CI* copy that informs them about IUPAC activities.
25. It should be available free of cost to reach out to more number of readers via email.
26. It should be free of charge for affiliate members.
27. I'm not sure.
28. Free for Iranian chemists.
29. \$50 seems reasonable but could it be a little lesser? I am not sure I could afford that.
30. If possible: access free.

9. If *CI* were available *only* in digital format with added interactive features would you read it? If "no," please explain why in the comments section.

Yes: 77.86%
 No: 22.14%

Comments:

1. Yes, but probably not as frequently as now, since electronic stuff is easier "forgotten" as mentioned above.
2. I read it for content, not just for show. I will read it regardless of the format.
3. I am afraid I would not read the digital version. That is what happened with a number of other journals and magazines that I used to read. As explained above, there is enough reading on the screen during the day at the office. Also, an electronic prompt would just be one among very

- many. A physical magazine issue on your desk, in your briefcase or on the bedside table is to me much more of an invitation to read.
4. But maybe it will be less than the present printed version.
 5. I would be less likely to read it and I would not read it as thoroughly if it was only digital.....
 6. Provided I didn't have to remember that a new one might be available and have to go digging through IUPAC's web-site to find it.
 7. I have to read it as a member of the IUPAC Division and chair of a subcommittee, but for sure only when extremely needed.
 8. But not happily...
 9. But probably not its entirety.
 10. I'd read it but would find it harder to follow I think... unless format / text size is very well done.
 11. Perhaps, if the aforementioned examples could be put in digital and interactive form.
 12. To stay in touch.
 13. I will probably invest in a Tablet soon anyway.
 14. Honestly, I would probably read it a lot less. When the physical magazine is mailed to me, I bring it to my office and it sits on my desk. My students come in and browse through it. I look through it when I've got 10 minutes in between one and another thing to do and it's not enough time to accomplish something on my list. If the digital format were to take the form of an email with links to the magazine (for example, how the online *C&E News* of the American Chemical Society does), I would click on it once, when I receive the email, and probably read one thing that looks interesting, but I would read far less of it than I do now.
 15. Yes but perhaps less often than in print but again thesis all changing as more contents delivered in digital only and the iPad etc. makes it easier to read on the move.
 16. But in this case the time schedule may not be maintained; as a result it may be that all the issues I may not go through.
 17. I read enough technical material on-line.
 18. Less likely to read the on-line magazine, reading the print edition is much simpler because no technology is required to access it.
 19. I cannot justify reading such general interest material during working hours, so tend to read *CI* whilst at home or travelling, in leisure. I spend too much time reading on screens.
 20. I spend 10 hours a day on line. This is already not healthy enough!
 21. Probably not, there is too much digital stuff coming in...
 22. However, it would be sad.
 23. But with regret for the absence of the print.
 24. I do like to read on screen. When I am reading newspaper I want to be relax, and it cannot in front of a screen
 25. Of course I would read it, but I hope the print version is not discontinued, which I suspect would lead to significant savings and is one of the reasons for this survey.
 26. I might scan it occasionally. I am inundated with e-versions of everything and it is becoming very, very boring
 27. I would never remember to go looking for a digital copy; it is the arrival of a hard copy that reminds me the publication exists.
 28. Of course, if there is no other option. I would read it even without added interactive features. I actually like current Version of *CI*.
 29. Direct links to other book reviews, to meeting programs/abstracts/highlights, etc.
 30. Too many information on the fly.
 31. I spend most of my day with electronic communications (emails, slide presentations, etc,...) and for my news gathering personal preference is to have a hard copy of society magazines or journals to spend quality time with. The last thing I want to do is scroll through another set of

webpages of IUPAC or ACS or other scientific society news and information on my computer screen.

32. But I would read less!

33. It is a magazine that I want to read from cover to cover.

34. I do not know how to access it in digital form.

35. No time left at my computer

36. Yes, but much less. Additionally no browsing only searching (more directed access to specific articles of interest only).

37. I generally do not read online or on screen. Reading on screen is less comfortable and, in addition, marking things with a pencil or a sticker is impossible.

38. Only if there was no other option, also digital access needs to be improved.

39. Personally I would not read it - but then I am retired now.

40. Too many emails.

41. Too much material required for work in electronic versions; too cluttered environment; it is more appealing to have separate print version.

42. There is a benefit in having a print version as I mentioned before (see comment 61 under question 7). And interactive features would soon become just more e-junk, I believe. *CI* is intended for a very casual read, not for study or scholarly content.

43. I have already too many scientific journals to check and read on the screen. Do not like the gimmick of digital page turner. Does not work for me as a replacement of the paper issue.

44. I don't know.

45. But still I would like to have the printed version.

46. Yes, but probably not a frequently. The paper copy is also a reminder that there is a magazine. I have access to the *SCI* magazine on line but hardly ever remember to look at it. When I got the paper copy I always at least glanced at it.

47. I generally do not read electronic journals. Too much stuff appearing in my computer already

48. It might be helpful to inform IUPAC members by email about the publication of each issue.

49. I would probably read it less than the paper version.

50. There is already too much time in front of the screen.

51. If the price of access is within my budget range.

10. What is your preferred format for reading articles online?

PDF:	63.57%
HTML:	22.14%
Digital page-turner (preserves look/feel of a printed journal):	9.29%
App:	1.43%
Other:	3.57%

Comments:

1. Actually, no real preference!

2. I like the page-turner only if looking at material on a tablet. On a computer, I dislike it quite a bit. I read *C&EN* on the website rather than the e-magazine because of that.

3. I guess it is PDF because if I find the article interesting, I will print it!

4. Everyone can read PDF and they transfer well to tablets.

5. I prefer html but I could easily download and print pdf.

6. HTML if it's got a good layout, otherwise PDF.

7. None.

8. Easy to download would be a plus.

9. I would prefer not to read online at all

10. Zinio
11. Just for print-out.
12. Don't read articles online. If very important and not massive will print out.
13. This already seems to presume the outcome - regrettably, we are saying goodbye to the print version!
14. You are asking about "articles", so I answer that.
15. Easily print if needed.

11. What do you consider a fair value for an individual annual subscription to *CI* in *digital* format? (In U.S. dollars)

Under \$35:	61.43%
\$35 - \$55:	10.71%
\$55- \$75:	3.57%
\$75 - \$95:	0.71%
Other (please specify):	23.57%

Comments:

1. No idea. For IUPAC body members (TM and AM) the subscription should be covered by IUPAC.
2. *CI* is essentially an in house magazine for IUPAC, reporting on IUPAC sponsored events, projects etc. Charging for the electronic version is, to my mind, a mistake. (1) it appears six times a year, suppose one charges \$30, that's \$5 per issue. Would anyone pay \$5 for it in a shop? I doubt many would. While it's not a lot of money to first world chemists it could well be for those from poorer regions. (2) IUPAC is a volunteer organization; I've attended SSED and Solubility Data Commission meetings for over 30 years without any support from IUPAC and have contributed conference reports to *CI* without any reward. To charge members, who donate their time and energy to IUPAC seems to be wrong given that the cost of distribution is negligible. I accept that there is a cost to production, but this should not be massive as the content is largely provided free. .
3. Again sorry have no idea.
4. I have no idea.
5. Free if possible. At least some free content
6. Really not sure about this - it hard to justify, but again interesting articles but there is so much to read anyway!
7. Free of cost.
8. Zero.
9. Free.
10. *CI* should go for low cost / high accessibility rather than trying to maximize profit. What is the total cost of running *CI*? If this is divided by the number of readers, would the administrative cost of collecting the money be a substantial part of the cost of the publication? A low marginal cost electronic-only publication might be best made free to read, with the cost raised through donations, possibly advertising or a relatively small number of institutional subscriptions. As open access funding models become more prevalent, this is a good time to be considering different funding models.
11. I do not know. How much does it cost to print? And what is the benefit needed for IUPAC to develop its actions? That should give an idea of the right price.
12. I say online only should be free. Production costs would be significantly lower than those of the print version but IUPAC should bear the expense given the fact that the magazine is a key information and marketing tool for IUPAC's activities and endeavors.

13. I would not pay an additional fee for a membership organization's regular newsletter; I expect the membership fee to cover it.
14. I am not sure if I would pay for it.
15. It would have to be freely available at no charge for me to have a remote interest in accessing.
16. Free.
17. Should be free!
18. Free.
19. I do not consider a digital subscription to have any other value than earlier availability.
20. Personally I would not read it - but then I am retired now.
21. It should be free of charge.
22. Would not take subscription.
23. Unfortunately, I do not think many individuals would pay for a subscription.
24. \$0. Or perhaps we should be paid a small sum for allowing it to clutter our inboxes :).
25. I would stop reading, if there would be an annual subscription.
26. I have no idea.
27. Free for members and non-members. This is the only way to promote IUPAC and its activities online and through social media.
28. \$25.00
29. Would not subscribe.
30. I don't know. IUPAC members: Since there are so many competing information sources free of charge, any subscription price might be discouraging. Libraries and so on: a Price below \$100 USD might be acceptable.
31. Available free of cost
32. I believe that digital version should be free.
33. Should be free.
34. I'm not sure.
35. Could it be for less or even for free? I mean, if there are advertisements to lower the costs?
36. What if free for members?

12. What method(s) do you currently use to access information online? Check all that apply.

Computer browser (HTML-5):	77.14%
Computer (print out a PDF to read):	62.14%
Tablet:	33.57%
Smartphone:	30.00%
Other (please specify):	4.29%

Comments:

1. Computer browser *without* HTML-5 (JavaScript blocked per default for obvious security reasons).
2. Computer pdf but not printing out.
3. I did not know that there was a digital version.
4. I still prefer the printed version, given a choice.
5. Still prefer reading from printed paper.
6. Terminal at the library of EPFL.
7. Web pages which are accessible without use of cookies and java script (currently by Internet Explorer 6.0).
8. Again, seeming to have presupposed the demise of our hard copy.)
9. Google in a PC browser SciFinder for topical and other search of all articles from chemistry and materials science. Sort out and store pdf and read onscreen.

10. Though currently I am not subscribing due to membership expiration.

13. What is the method that you use most frequently? (Choose only one)

Computer browser (HTML-5):	60.71%
Computer (print out a PDF to read):	27.14%
Tablet:	3.57%
Smartphone:	2.86%
Other:	5.71%

Comments:

1. Computer browser *without* HTML-5.
2. I print only if I want to keep the article, to show it to someone or to have it easily available.
3. I use tablet and computer browser about equally. It depends which one I'm using at the time that I want information. Choosing one makes no sense in my case.
4. Computer pdf, but not printing out.
5. Computer (read PDF file on computer).
6. I also use Tablet in a parallel way.
7. Most common method depends on purpose of enquiry.
8. Terminal at the library of EPFL.
9. PC as detailed above (Comment # 9, question 12)
10. PDF on screen

14. Do you read other newsmagazines that are focused on the global chemistry community? If "yes," please specify the journal(s) and whether you access a print or digital version.

Yes:	55.71%
No:	44.29%

Comments:

1. C&EN
2. Nature
3. C&EN in print and digital
4. C&EN
5. Angewandte Chemie JACS and other chemistry journals all in digital version
6. Nachrichten aus der Chemie (journal of the German Chemical Society). Pure and Applied Chemistry.
7. Chemistry World (RSC)
8. Chemistry World in print Physics world in print
9. ACS JOURNALS RSC JOURNALS
10. Chemistry World. Print and digital content. It is much more interesting than *CI*.
11. C&N news Print Science Print
12. RSC News, C & E News
13. C&EN. Yes, it's an ASC journal, but addresses global issues.
14. Nachrichten aus der Chemie (German) Química, Boletim da Sociedade Portuguesa de Química (Portugal)
15. C&EN, Chemistry World

16. Chemistry and Industry....Electronic. London UK The Chemical EngineerPaper. Rugby UK ACChemical NewsBoth. Ottawa Canada. Hydrocarbon Processing....Electronic. Houston USA New Scientistpaper/both London UK
17. THE: it cover other topics including chemistry.
18. Mostly digital versions.
19. RSC ACS Nature Science
20. C&EN
21. C&EN
22. C&EN (online) Chemistry world (print) Chemanager/Chemanager Europe (print) Nachrichten aus der Chemie (German) (print and online)
23. New Scientist issue on iPhone -Chemistry Today on iPhone too
24. I just read journals .. but not News Magazines.
25. C&EN news, a local Danish chemistry monthly that my girlfriend sometimes brings home (can't remember the name).
26. JCE of ACS, Chemistry Education Research and Practice
27. Spectroscopy Europe - both C&EngNews - digital RSC Chemistry World - print Chemistry in Australia - print
28. Chemistry World
29. I read a couple of specialized journals regularly and in print because the company has subscriptions including print versions. Other news magazines like CI: only occasionally, and only if I have a link or reference, and then usually digital versions.
30. Chemistry views, Nature
31. I suppose whether I read other magazines or not depends on other costs.
32. Materials World, Materials Today
33. Royal Society of chemistry. American chemistry society.
34. Chemistry World RSC News
35. ACCN-print C&E News-print
36. ACS "Chemical & Engineering News", on-line only. But I don't get to read every edition...not enough time.
37. CEN RSC
38. Only the magazine of the French Chemical Society. As a global source of information, I read (on-line) information from ICSU
39. Chem and Eng news, electronic version
40. Chemmatters from the American Chemical Society and I read it in the print version as all the other journals I have a signature.
41. Chemical & Engineering News - print version
42. C&E News, MRS Bulletin, Physics Today
43. European polymers chemical engineering chemical & Engineering news Kunststoffe
44. Chemical and Engineering News in print
45. Chemical Letters, Print version
46. Magazines of Societe Francaise de Chimie, Royal Australian Chemical Society, ACS.
47. Chemistry World, print version preferably.
48. Chemical Eng. News
49. ACS C&E News - digital RSC Chemistry World and Education in Chemistry - digital
50. C & E News Chemistry World
51. Dutch chemistry journal, ACS
52. C&ENews, print
53. I get CEN from ACS, but rarely have time to even browse the contents page.
54. C&EN - print Chemistry World - print
55. Elements
56. Chemistry World, C&EN, Nachrichten aus der Chemie. All print.

57. Chemistry World C&E News
58. Chemistry World - print version
59. Chemistry World
60. Print version of the Actualite Chimique, the magazines of the French chemical society
62. C&E News, primarily the print version but also the digital version.
63. Chemistry World
64. Bunsengesellschaft für Physikalische Chemie: print
65. ACS Chemical News - paper version. other digital news.
66. C&EN printed
67. I have only access to almost all international journals through the IAEA Library. I read/browse around 20 journals, including Analytical Chemistry, AOAC Int., Nature, Anal & Bioanal. Chem, Nuclear and Radiochemistry, Talanta, etc.
68. Normally I prefer the printed versions.
69. C&E News
70. Many magazine
71. Chemical & Engineering News
72. Chemical and Engineering News (print version)
73. I used to get print C&E News, but now I get the electronic version only. Consequently my reading has gone from almost complete to very little indeed!

15. Would you object to having advertising included in *CI*?

Yes:	10.71%
No:	69.29%
No opinion:	20.00%

Comments:

1. Should be limited to the back page of front page and at the end.
2. Though I'd prefer that they not be pop-ups if possible.
3. CI already carries advertising for IUPAC sponsored conferences, publications etc. Why wouldn't it (why doesn't it) carry advertising from others? It is a perfectly good vehicle for providing information about available, processes, instruments, services, jobs etc.
4. Depends on the advertising and the extent it occupy.
5. As long as the advertising were responsible and germane to chemists and chemistry, and the material content reliable.
6. Very good idea
7. Perhaps limiting the advertising to 10-20% of the total printed space? That should pay for the entire cost of production for the digital version and perhaps continue subsidizing the print version.
8. I do not like too much advertising but if it helps to cover the cost.....
9. If there were to be a subscription fee required, advertising becomes salt in an open wound.
10. But not overdone and restricted to the field of chemistry.
11. That depends on the cost - more advertising should result in a lower subscription cost.
12. This is a no-brainer to me. Why not keep the cost of subscriptions low by taking advantage of advertising and providing useful information on products and services to the international chemistry community.
13. There is nothing impure about having advertising and it helps to pay for the magazine.
14. The separation of articles and advertisement in journals is often badly managed. But of course that could be done in an acceptable way.

15. We currently do have advertisements. However, I would mind if advertising were significantly increased. Approx. 10 % of the available space is acceptable I think.
16. Having realized that *CI* has no advertisement, I appreciate it even more. I would be just a little disappointed, not really object the advertisement.
17. Absolutely and completely I would object. It is of high value that *CI* is virtually without advertisements.
18. Not interesting in advertising

16. If you have any suggestions for improving *CI* please list them here.

Comments: (also see responses to question 4)

1. Very informative journal
2. We need to support our working with you if you can.
3. *CI* is an outstanding publication. I really like it as it is.
4. *Chemistry International* is an important journal for dissemination of the work developed inside IUPAC. I think that it should be compulsory to have short advertise of the outputs from the projects that were supported by IUPAC, when they are published, and where they were published.
5. Keep Fabienne Meyers as the editor at all costs!
6. More about successful female role models and also more about successful minority role models
7. No
8. There should be regular reports form individual Divisions
9. More features, think about podcast to go with it - I listen to a lot more general material now than I read.
10. Featured articles focusing on selected SCIENTIFIC topics, that is something like "mini-reviews" for the chemist not working in the area covered (non-specialist), would be desirable.
11. N/A
12. No.
13. Be more aggressively controversial and deal with important chemical topics that effect everyone: e.g. sustainable energy, nanotechnology, chemical education, chemistry of life (i.e. biology).
14. No.
15. Each IUPAC report needs a mandatory accompanying article in the *CI*. IUPAC pays for many projects and yet the outcome of most of them is still not well advertised or known within IUPAC. Publication in PAC is not enough.
16. Avoiding colored text on colored background for ease of reading (improved contrast). For the same reason no background graphics behind (or above) text.
17. The delivery of the print version is note up to the time. We receive the print version after one month.
18. The current online version is a mess. It should be more integrated with the IUPAC website, more user-friendly and easier to share using social media.
19. More incentives to young researchers to motivate them to join the *CI* project
20. No.
21. There should be advices & suggestions to do home-experiment lol if it's possible
22. None so far. I like it the way it is.
23. Follow the status of members and try to reach everyone. Good work!

17. What is your age?

Under 25:	1.43%
25 – 35:	8.57%

36 – 45:	10.71%
46 – 55:	22.86%
56 – 65:	20.00%
66 – 75:	25.00%
Over 75:	11.43%

18. Which best describes your involvement in IUPAC? (Check all that apply)

Affiliate Member:	27.14%
Representative of a National Adhering Organization (NAO):	11.43%
Representative of a Company Associate:	1.43%
IUPAC Fellow:	20.71%
Committee Member:	27.86%
Division Member:	27.86%
Project Member:	34.29%
Other (please specify):	10.00%

Comments:

1. I chair the Sub-Committee on Photochemistry already since many years. I was also Titular member of Division III and member of the general panel of advisors of Division I.
2. Past President.
3. Young observer for GA
4. SSED member.
5. Chair of the Subcommittee on Solubility and Equilibrium data.
6. Journal editor.
7. I am involved in some IUPAC projects.
8. I think I'm a Fellow. I know I got an invitation a long time ago.
9. Former Division V President, Chair of the Interdivisional Working Party on Quality Assurance.
10. Member of the Advisory Subcommittee of IUPAC's Division of Chemical Nomenclature and Structure Representation.
11. Former Division member.
12. Former Division President, now Project Committee Chair. (oops! there goes my anonymity)
13. I have gone through many situations before I retired: Representative of NAO Committee member (Secretary of ICTNS) Division member Project member.
14. Retired committee officer.
15. Member of subcommittee.
16. Reader.
17. I was affiliate member for about three years. But now I am not receiving any of the issues even though I reported my status to IUPAC. I want to re~register my membership.

19. In what country do you reside?

Argentina:	1
Australia:	5
Austria:	4
Bangladesh:	1
Belgium:	4
Brazil:	1
Canada:	9
China:	2

Czech Republic:	1
Denmark:	3
Finland:	1
France:	4
Germany:	13
Greece:	1
Hungary:	1
India:	3
Iran:	1
Ireland:	2
Israel:	2
Jamaica:	1
Japan:	3
Kuwait:	1
Libya:	1
Malaysia:	1
Mexico:	1
Netherlands:	6
Norway:	1
Pakistan:	2
Philippines:	2
Portugal:	5
Puerto Rico:	1
Russia:	2
Slovakia:	1
Slovenia:	1
South Korea:	1
Spain:	3
Sweden:	1
Switzerland:	5
Taiwan:	1
Tunisia:	1
Turkey:	1
United Kingdom:	14
United States (USA):	26
Uruguay:	1

(Total: 143 – 3 respondents declared dual locations)

20. May we contact you for clarification of your survey responses? If “yes,” please provide contact information in section 22.

Yes:	63.57%
No:	36.43%

21. Would you be willing to participate in a beta test of any future changes to *Chemistry International*? If “yes,” please provide contact information below (*info captured*).

Yes:	53.57%
No:	46.43%

