

J. Serb. Chem. Soc. 80 (7) 959–969 (2015)
JSCS–4772

Journal of
the Serbian
Chemical Society

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UDC Vol. 80::2015::85 Journal of the Serbian
Chemical Society

Letter to the Editor

LETTER TO THE EDITOR

A survey on publishing policies of the Journal of the Serbian Chemical Society – On the occasion of the 80th volume

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(Received 6 March, accepted 6 April 2015)

Abstract: Journal of the Serbian Chemical Society (JSCS) is the scientific journal of the Serbian Chemical Society and this year is celebrating 85 years of its publishing and the 80th volume. After so many years of publishing, the idea of the Editorial Board of the JSCS was to investigate the opinion of the authors, reviewers and Sub-Editors concerning the journal and whether their evaluation and suggestions could aid in its improvement. Questionnaires were sent to the three investigated groups as an e-mail link. The responses were analyzed and only the most general and the most important data are presented in this article. The grades, comments and suggestions showed that most of the contributors are satisfied with the present handling and publishing policy of the JSCS, but certain technical aspects should be improved. After a thorough inspection of the data, the Editorial Board decided to introduce a fully automatic on-line system, to speed-up the peer review process, to improve the Instructions to Authors and Reviewer's Report Form. All these novelties commenced from the beginning of March 2015.

Keywords: peer review; publishing; questionnaire; evaluation

INTRODUCTION

Evaluation of journals, especially the peer review process, has attracted great attention in the last decade. There are number of scientometric methods, mostly of the quantitative type, to express the “value” of the journal.^{1–3} The best known is the one that measures journal's impact *via* the citation index. An intensive debate on the positive and negative aspects of the journal evaluation *via* the impact factor (IF) has been in progress for a long time, but officially the IF has been recognized as the measure of impact recognition and a tool for journal

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doi: 10.2298/JSC150306036N



ranking.⁴ There are other ways to investigate the quality of a periodical and one of which is to determine the opinion of associates of the journal.

After so many years of publishing, the idea of the Editorial Board of the Journal of the Serbian Chemical Society (JSCS) was to investigate the opinion of authors, reviewers and Sub-Editors concerning the journal and to determine whether their evaluation and suggestions could help in the improvement of the quality of the journal and the managing process, and raise the prestige of the JSCS. Prior to this study, an educational article recommending how to write a good scientific paper was published.⁵ Both scientific and technical aspect were discussed, as it is equally important to obtain significant research results and to know how to present them.

Journal of the Serbian Chemical Society, as its name says, is an official journal of the Society. The Society was founded in 1897 and its first bulletin appeared in 1899.^{6,7} The Journal was first published in 1930 as the Journal of the Chemical Society of the Kingdom of Yugoslavia, the name was changed in 1947 to the Journal of the Chemical Society Belgrade and under the present name, it exists since 1985.⁷ In this year, the 80th volume of the JSCS is being published. All papers are published only in English. There are 12 issues per volume, 10–13 articles per issue and 2000–2200 pages a year. The JSCS is an open access publication, without page charges and with on-line submission. It has been indexed in the Science Citation Index Expanded since 1995, in the category Chemistry: Multidisciplinary, and its last impact factor (IF 2014) is 0.871 (rank 114/157); 5-year IF is 1.009 (rank 105/157)*.

The journal is managed as a non-profit making periodical by the members of the Serbian Chemical Society (SCS), who work mostly voluntarily. It is supported by membership fees, various institutions of the University of Belgrade, the Ministry of Education, Science and Technological Development of Serbia and occasionally by sponsors. In the last five years, 2130 articles were submitted of which 872 were accepted. During this period, 7 authors complained about rejection of their papers, 33 withdrew their manuscripts after reviewing and 3 manuscripts were recognized as plagiarism.

A questionnaire is a widely recognized method to obtain relatively reliable data on the posed questions and it is used by many publishers. In contrast to the most publishers who interview the authors of accepted papers, it was decided to interview all contributors to the publishing process. It was felt that by examining the entire partnership network, a more reliable overview could be obtained. Moreover, potential authors, a category of researchers whose manuscripts were not accepted for publication, were also interviewed. In addition, a very important decision was made by the Editor-in-Chief to publish openly the results of the survey.

* Data announced June 2015.

Thus, three questionnaires adapted to suit the three investigated population groups were composed and sent as an e-mail link to all participants in the publishing activity of the journal in the last five years. There were cases when individuals performed two or even all three roles, so they received the appropriate number of questionnaires. The questions were composed to evaluate the publishing process in quantitative and qualitative ways, both at the level of peer review and managing, and the results obtained are presented accordingly.

METHOD AND APPROACH

Study population

There were three groups of persons involved in the study. In total, 2422 invitations were sent: 13 for Sub-Editors, 980 for reviewers and 1429 for authors. Certain number of invitations returned undelivered (80 for reviewers and 170 for authors). The inclusion criterion for the survey was at least one type of activity in relation to the JSCS over a five-year period (November 2009–October 2014).

Questionnaires

The three questionnaires contained some questions that were the same for all participants and others that were more specific, suitable for the role played by the surveyed persons (see Supplementary material to this Letter). The participants were asked for their academic title, research field, professional background, previous experience in the same kind of activity that was being investigated in the survey, before being asked direct questions about the JSCS. The survey contained two types of questions: those to be answered by scaling (from 5, excellent to 1, poor) and those to be answered by choosing offered responses (in some cases more than one response could be chosen). Finally, in the last section of the survey, the participants were given the opportunity to express their personal suggestions and remarks.

The surveys were sent time-shifted: the Sub-Editors first, the reviewers two weeks later and the authors a month later. Two weeks after the first invitation, a reminder was sent to those who had not responded. The reports were collected and analyzed. The results of the survey offered many more correlations and conclusions than presented in this paper, but in order not to overload the article, only the most general and the most important data are shown. Thus, the three surveyed populations were analyzed as entire entities.

Data analysis

Data on questions that were answered by scaling (5–1) are given as an average grade. Data on questions that could be answered by multiple responses were grouped as the frequency of each response and are reported as such (in % of the total number of questionnaires). Suggestions and remarks were grouped according to their similarity and are reported as lists.

RESULTS AND DISCUSSION

Twelve Sub-Editors responded to the survey (92 % of the interviewed), 309 reviewers (43 %) and 511 authors (41 %). Depending on the type of data, the analyzed results are presented graphically (in the case of frequency distributions), in tables (in the case of scaling) or in lists (suggestions and remarks). All surveys were analyzed separately and the results reported by the Sub-Editors are given in Fig. 1, Table I and Frame 1, for the reviewers in Fig. 2, Table II and Frame 2, and for the authors in Fig. 3, Table III and Frame 3.

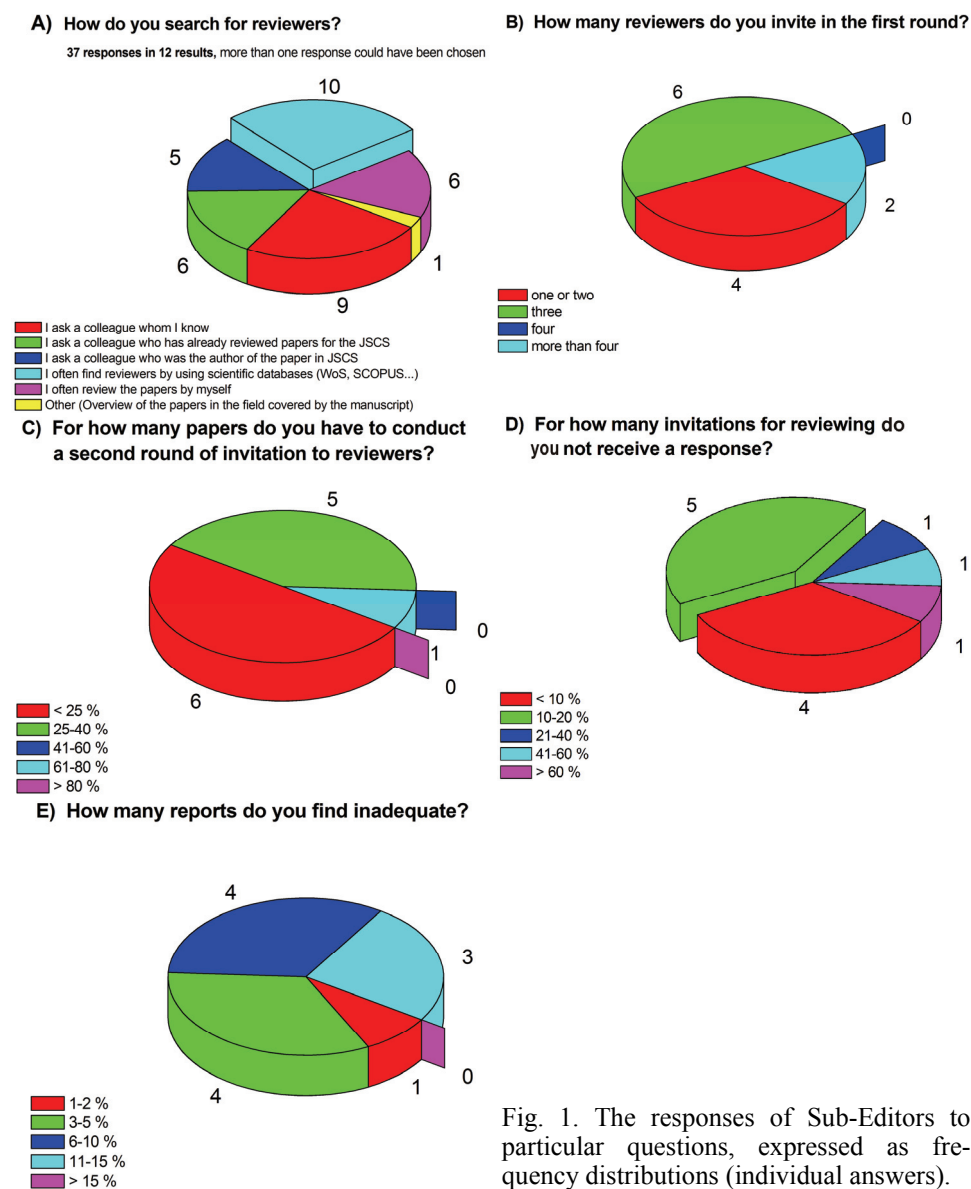


Fig. 1. The responses of Sub-Editors to particular questions, expressed as frequency distributions (individual answers).

TABLE I. Sub-Editors' responses to questions that were recorded by scaling

Question	Grade					Average grade
	5	4	3	2	1	
Comprehensiveness of the Instructions to Authors	4	6	2	0	0	4.2
Choice of the questions for reviewers in the form	2	7	3	0	0	3.9
Communication with the Editorial Office	9	2	1	0	0	4.7

FRAME 1. Sub-Editors' major suggestions and remarks grouped by topics

1. Introduction of fully automatic on-line system for submission and management of manuscripts
 2. Improvement of the Instructions to Authors (considerable number of inappropriate figures)
 3. High tendency of potential reviewers to refuse the invitation to review
 4. Examination of manuscripts by use of software to detect plagiarism
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Sub-Editors were first asked about the procedure they conduct while searching for reviewers and their general opinion on this process. They responded that they most often find reviewers by using scientific databases (WoS, Scopus,...) or by asking colleagues who they know (Fig. 1A). In the first round, some Sub-Editors invited only one or two reviewers, whereas others invited more, even more than four (Fig. 1B). The responses to this question illustrate the different individual approaches of the Sub-Editors to peer review. Six Sub-Editors conduct a second round of search for reviewers in the case of less than 25 % of the manuscripts, while another six reported a greater number of papers that could not be finalized after the first call (Fig. 1C). The number of unanswered calls for peer review is rather high (expressed as the percentage of the total number of calls in Fig. 1D). Sub-Editors found between 1 and 15 % of reviewers' reports inadequate (Fig. 1E), due to a complete absence of peer review ("publish as is" in contrast to other reports that suggested major revision or even rejection) or due to unprofessional conduct of reviewers (humiliating or malicious attitudes). As for the quality of the reports in terms of their usefulness to authors to improve the manuscripts, ten Sub-Editors evaluated the reports as mostly good, while two Sub-Editors stated that they receive the same number of good and poor reports. Responses to this question probably illustrate the different individual criteria of Sub-Editors. On the grading scale, Sub-Editors valued relatively highly the technical aspects of the publishing process (Table I), giving an overall average grade of 4.3. To improve the work of the JSCS, most Sub-Editors suggested a complete on-line submission and management system (Frame 1).

Reviewers who responded to the survey were from Serbia (43 % of the total number) and from other countries (57 %, Fig. 2A). Slightly more than half reviewers defined themselves as chemists (Fig. 2B) and approximately 70 % were experienced reviewers (Fig. 2C). Reviewers accept to review manuscripts for the JSCS for many reasons, but the predominant one is the professional ethics of an expert who feels that it is part of his scientific activity (Fig. 2D). Reviewers graded technical aspects of the peer review with an average grade of 4.0 (Table II). Most reviewers (58 %) either had no additional remarks or expressed an affirmative opinion in a free form of comments and the greatest number of suggestions were focused on the introduction of a complete on-line system that would enable easier submission and communication (Frame 2).

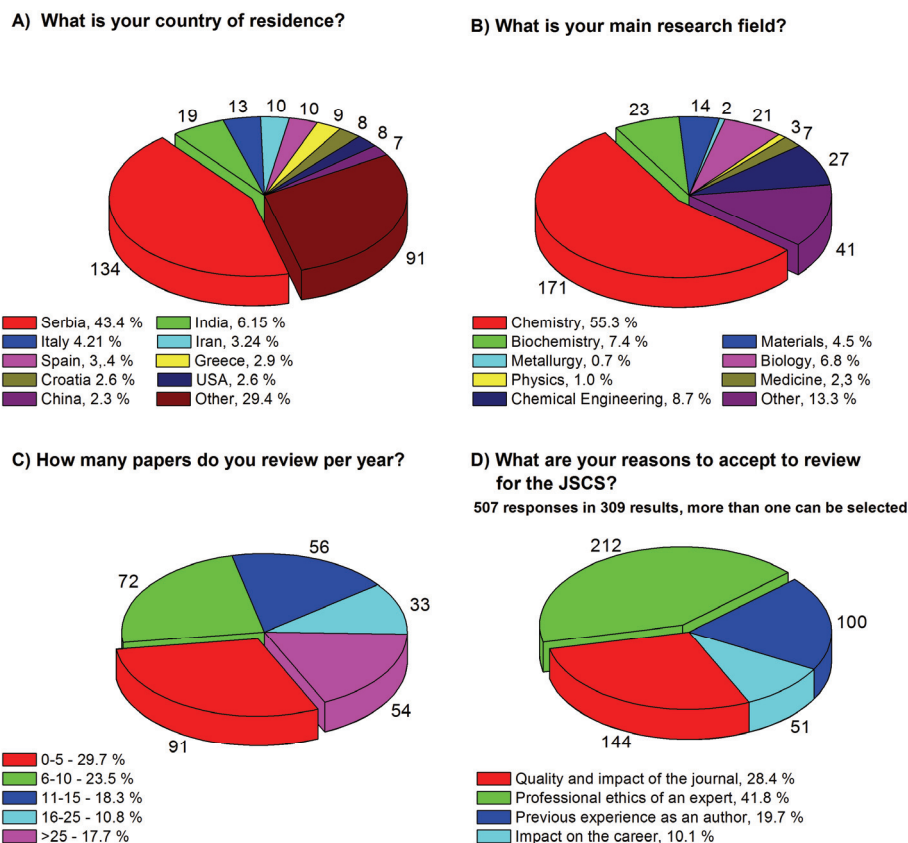


Fig. 2. Reviewers' responses to particular questions expressed as frequency distributions.

TABLE II. Reviewers' responses to questions that were recorded by scaling

Question	Grade					Average grade
	5	4	3	2	1	
	Share of the number of responses, %					
Comprehensiveness of the Reviewer's Report Form	20	57	23	1	0	4.0
Period given for reviewing	20	51	25	4	0	3.9
Communication with Sub-Editors and Editor	40	39	18	3	0	4.2

Authors who responded to the survey were from Serbia (30 % of the total number), as well as from the other countries (70 %, Fig. 3A). The affiliation of the authors illustrates the international character of the JSCS. The main research fields of the authors who submit papers to the JSCS were organic chemistry, analytical chemistry, biochemistry and biotechnology, environmental and inorganic chemistry (Fig. 3B). Early-stage researchers made up 31 % of all authors and the others were more experienced ones (Fig. 3C). The main reasons for sub-

FRAME 2. Reviewers' major suggestions and remarks grouped by topics (number of individual comments)

58 % of all comments were affirmative, +:	
1. Introduction of fully automatic on-line system for submission and management of manuscripts	26
2. Free access to Scopus or other databases for the reviewers	11
3. Prolongation of the period for reviewing	8
4. Improvement of the Instructions for Reviewers	7
5. Information to reviewers on the final decision on the manuscript	5
6. Introduction of scaling in the Reviewer's Report Form	4

mitting their manuscripts to the JSCS, authors report as: quality and the impact of the journal, no publishing fee, previous positive experience and the speed of reviewing (Fig. 3D). Grading of the technical parameters related to JSCS, including periods for reviewing and publishing, resulted in an average grade of 3.7. As for the suggestions and remarks, besides no additional comments or affirmative opinion of 50 % of the interviewed authors, many contributors stated that they would appreciate faster reviewing and publishing after manuscript acceptance (approximately 30 % of suggestions). A significant number of authors suggested improvement of the Instructions to Authors and reduction of the technical requirements for submission (especially for figures). Additionally, a few authors suggested a more careful choice of reviewers and a few recommended elevation of the criteria for article acceptance.

After collection of the surveys, the responses were summarized and analyzed. A meeting of the Editorial Board was organized on this occasion and all points were discussed individually. Certain conclusions were drawn enabling a detailed overview of the entire publishing process of the JSCS, which further led to decisions directed at improvement of the process.

All participants in the survey, in one way or another, strongly supported the idea of a fully automatic on-line system: a) Sub-Editors in order not to have to remind or thank reviewers by themselves and not to have to archive all reports and letters to authors as their own database, b) reviewers in order to have the ability to quickly review the abstract on-line, to have a direct choice to accept or decline to review and to have access to an on-line Report Form and c) authors in order to facilitate the submission step and to speed-up the reviewing process. Members of the Editorial Board agreed that a complete on-line system would improve the management of the JSCS and the decision was made to practice exclusively on-line communication from March 2015.

It was noticed that similar number of reviewers suggested longer (expected) and shorter (unexpected) period for reviewing which initiated deeper data analysis. Reviewers who were also authors could not separate these two roles and the impression of the author dominated the impression of the reviewer.

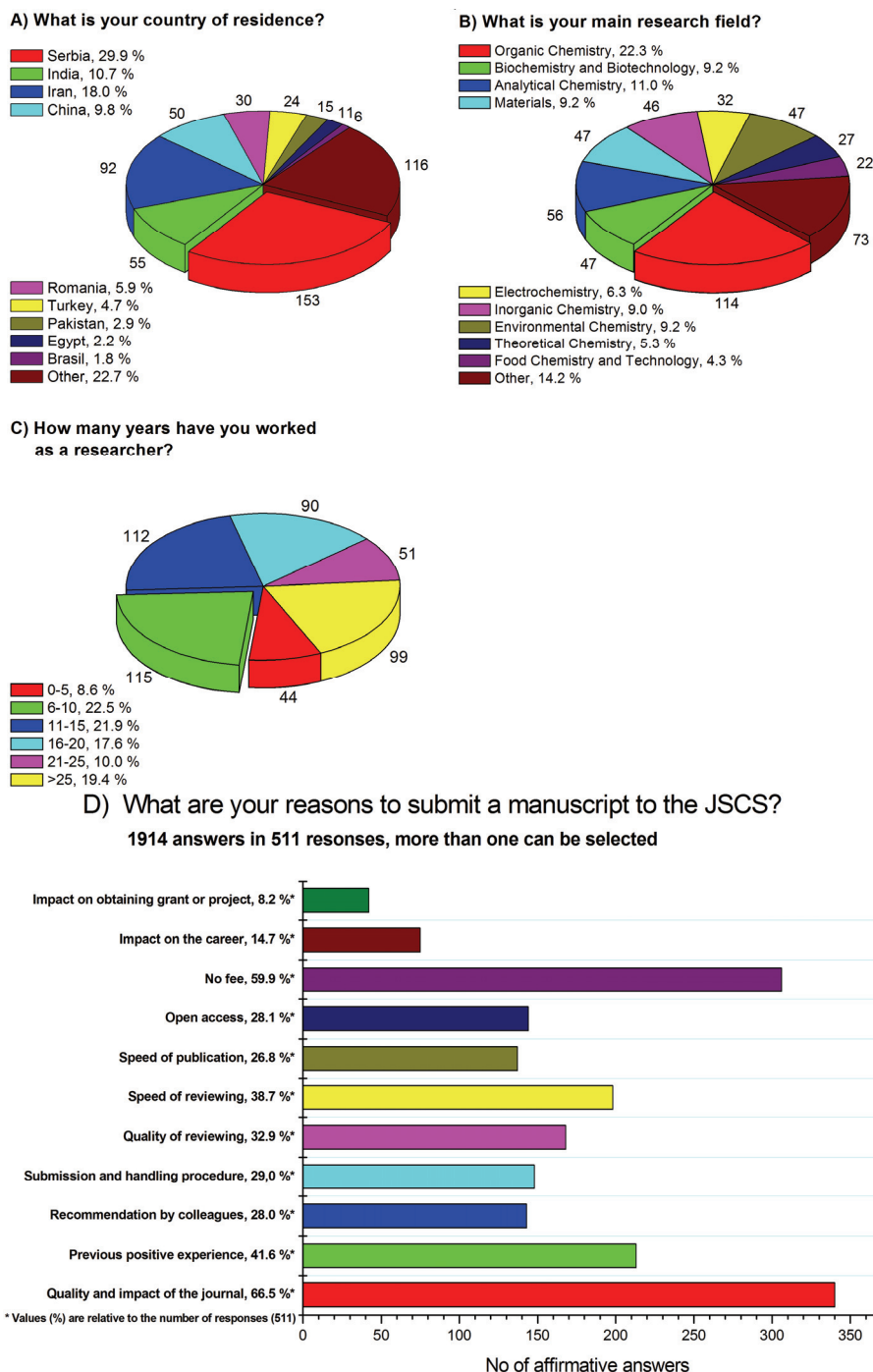


Fig. 3. Authors' responses to particular questions expressed as frequency distributions.

TABLE III. Authors' responses to questions that were recorded by scaling

Question	Grade					Average grade
	5	4	3	2	1	
Comprehensiveness of the Instructions to Authors	22	41	27	5	5	3.7
Usefulness of the Reviewers' Reports	19	46	27	5	3	3.7
Period for reviewing	22	36	30	9	3	3.6
Period for publishing	19	38	31	7	5	3.6
Communication with Sub-Editors and Editor	35	37	23	3	2	4.0

FRAME 3. Major suggestions and remarks of authors, grouped by topics (number of individual comments)

50 % of all comments were affirmative, +:	
1. Speeding-up reviewing and publishing process	150
2. Improvement of the Instructions to authors and reduction of technical requirements for manuscript submission	88
3. Better choice of reviewers and "blind" review	30
4. Promotion and advertising of the JSCS	15
5. Increasing the number of published articles per year	12
6. Periodical special issues	5
7. Invitation of respectable scientists to write review articles	5
8. Addition of new research fields (chemical education, nano-chemistry, chemistry in agriculture)	5

Authors who suggested faster publishing do not seem to differentiate clearly between peer review and publishing. Members of the Editorial Board agreed to contribute personally to speed-up the reviewing part by faster communication with (potential) reviewers and/or by increasing the number of initially invited reviewers. It is, however, difficult to stimulate researchers to review for the JSCS. Many invited persons do not respond at all, many refuse, some accept but never send the report and a considerable number of reviewers send inappropriate reports. The reasons for such a situation may be seen as a lack of professionalism, not very good opinion on the JSCS based on the journal's ranking and/or prejudices. Potential reviewers from West Europe and North America are among those who most frequently do not respond or decline to review. A similar attitude towards the journal is also valid for the (potential) authors. When nationalities of the JSCS authors were analyzed, it became obvious that contributors from West Europe and North America are rare.

The second part of the publishing process, which includes the actual printing, can hardly be faster, as there are many accepted papers and the JSCS is already publishing more articles per year than similar non-profitable journals run by scientific societies. Since accepted papers receive DOI numbers and are available in an on-line version of the journal few days after their acceptance, the print-

ing step is not crucial from the point of article visibility by the scientific community. Steps will be taken to see how this part of the process could also be improved.

It was interesting to notice that certain number of authors suggested the application of more rigorous criteria for the evaluation of manuscripts. In their opinion, some of the published articles should not have been accepted. Thus, a considerable number of our authors have the potential to produce high quality papers and they will certainly be engaged as reviewers if they agree.

Instructions to Authors and Reviewer's Report form were revised and new versions up-loaded. Moreover, the Editorial board decided to reduce the technical requirements for figures and to make small alterations if necessary without asking authors to do so.

For the moment, the comments and suggestions that raised the greatest concerns were dealt with and some new approaches applied. Other conclusions that could be drawn from the responses in the questionnaires and members of the Editorial board will continue to analyze the data, both at the level of the entire journal and at the level of sections run by particular Sub-Editors.

The Editorial Board thanks all participants of the survey who have helped to evaluate the publishing process in the Journal of the Serbian Chemical Society and to become aware of the imperfections. It is also hoped that the actions undertaken after the survey will be welcomed by past, present and future contributors.

SUPPLEMENTARY MATERIAL

The questionnaires that the Sub-Editors, Reviewers and Authors were requested to fill out on-line are available electronically from <http://www.shd.org.rs/JSCS/>, or from the corresponding authors on request, as portable document format (pdf) files.

Acknowledgment. This survey and article resulted as part of scientific activity in the COST Action TD1306 "New Frontiers of Peer Review (PEERE)".

ИЗВОД

АНКЕТА О ЧАСОПИСУ „*JOURNAL OF THE SERBIAN CHEMICAL SOCIETY*“ –
ОБЕЛЕЖАВАЊЕ ШТАМПАЊА 80. ГОДИШТА

ОЛГИЦА НЕДИЋ¹ и АЛЕКСАНДАР ДЕКАНСКИ²

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Часопис Journal of the Serbian Chemical Society (JSCS) је научни часопис Српског хемијског друштва и ове године се обележава 85 година његовог излажења и излазак 80. годишта. После толико година објављивања научних радова, жеља Уредништва је била да утврди шта аутори, рецензенти и подручни уредници мисле о часопису и уређивачкој политици, и могу ли њихове процене и предлози помоћи да се делатност часописа побољша. Упитници анкете су послати е-поштом испитаницима. Добијени одговори су анализирани и овде су приказани само најопштији и најзначајнији подаци. Оцене, комен-

тари и предloзи су показали да је већина учесника у поступку објављивања задовољна постојећим начином рада и уређивачком политиком, али мисли и да би се одређени технички детаљи поступка могли побољшати. Након сагледавања добијених одговора, Уредништво је донело одлуку да уведе високо-аутоматизовани кориснички сервис за пријаву и обраду радова и тако убрза поступак рецензирања и објављивања, и да поједностави и додатно појасни Упутство за ауторе и Рецензентски формулар. Све наведене новине су уведене 1. марта 2015.

(Примљено 6. марта, прихваћено 6. априла 2015)

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