The bibliometric analysis of the journal *Uspekhi Khimii* over 75 years (1932–2006) was based on the authoritative global DBs Chemical Abstracts (CA) and Science Citation Index (SCI, a variant of SciSearch) of the international science and technology network STN International [15] and the main informetric laws (Lotka’s, Zipf’s, and Bradford’s [16]).

The findings were verified with the statistical package SPSS 12.0 to comply with Lotka’s, Zipf’s, and Bradford’s laws.

The online search for the *Uspekhi Khimii* publications and their citations in the CA (a retrospect until 1907 [18]) and SCI (a retrospect until 1974 [19]) DBs was conducted in February–March 2007. Both DBs refer *Uspekhi Khimii* to core journals.

**BIBLIOMETRIC INDICATORS**

The journal *Uspekhi Khimii* (USP) has been published since 1932, and its English version *Russian Chemical Reviews* (RCR), since 1960. During the CA DB search time, 4281 publications were registered: the 1932–1998 publications were registered by the original Russian edition USP, and the 1999–2006 publications, by the translated version RCR. The SCI DB revealed 2324 articles published from 1973 through 2006.

Overall, the simultaneous use of the CA and SCI DBs retrieved 4403 nonidentical journal publications for the period 1932–2006. Furthermore, the original and translated versions of articles were regarded as one publication. All this constituted about 90% of the total publications (the remaining 10% includes primarily articles from *Uspekhi khimii* that were first published in foreign languages.

Note that the CA DB has no publications for the year 1942, and the SCI DB, no publications for the year 1986. In addition, when the citation of *Uspekhi Khimii* was investigated, we found articles that did not show up during the primary search of the journal publications in the DB, which may be related to DB information input errors.
periodicals and therefore were not reviewed in the DBs, as well as informational and biographical materials, obituaries, and editorials). A detailed distribution of the journal publications by year is given in [20].

The excess of journal publications, revealed over the past decade in the SCI DB compared to the CA DB, is due to the fact that the latter does not review publications such as biographical articles, obituaries, editorials, letters to the editor, etc. (they have been accounted for only in the expanded version of the CAPlus DB since October 1994). Types of journal publications according to the SCI DB classification are presented in Table 1.

The team of contributors to the journal Uspekhi Khimii is rather large (4766 nonidentical authors), which is not surprising if we take into account the long life of the journal. The average number of authors per review is about two, and the average number of reviews per author is less than two (for journals that publish original articles, these numbers are much higher). At the same time, about 75% of the authors have only one publication in Uspekhi Khimii; 17.1%, two; 6.6%, three; 3%, four; 1.7%, five; 1.2%, six; and 0.8%, seven.

According to Lotka’s law [16, 21], The \( A(n) \) number of authors that wrote \( n \) articles is inversely proportional to the \( n \) power, exponent \( \alpha \) being close to 2:

\[
A(n) = \frac{1}{n^\alpha}, \quad \text{where} \quad \alpha = 2.
\]

In the log–log grid, Lotka’s law is expressed by a straight line with a slope of about –2. The corresponding dependence built for Uspekhi Khimii on the basis of the CA data is given in Fig. 1. We see that Lotka’s law is observed very well here. The slope of the regressive line is –2.56, which is less than the classical value of –2. We know that for different data sets this coefficient can vary noticeably [16]; therefore, the obtained difference is not unexpected. In the case of Uspekhi Khimii, it may be partially explained by the fact that writing a review is a task more labor and time consuming than a regular research article. Moreover, writing another review on the same topic requires the accumulation of new original material, which usually takes about ten years, and over this time this subject may lose its topicality. Therefore, the number of authors who published two or more reviews in the journal diminishes more rapidly (Fig. 1) than Lotka’s law in its classical form predicts.

Authors’ addresses stored in the DB allow us to learn about their geographic and departmental distribution, the CA DB indicating the address of only the first author, and the SCI DB from 1978 gives the addresses of all authors with the note reprint for the so-called leading author (in the case of Uspekhi Khimii, the term reprint refers to the first author of the publication). Tables 2 and 3 show organizations and departments whose scientists published the largest number of articles in the journal. The above data show that the Academy of Sciences prevails among the departments and that Moscow State University and Moscow academic research institutes are among the organizations.

Comparing data from the editorial database about the authors of articles over the last two to three years with the data from Table 2, we can see from which organizations scientists continue to contribute actively to the journal and which organizations have stopped sending articles of their research fellows to the journal. This information can be useful when forming the editorial portfolio.

The thematic rubrics and sections, as well as the CA DB’s control terminology, allow us, although some-

### Table 1. Types of journal publications by the SCI DB classification

<table>
<thead>
<tr>
<th>Publication type</th>
<th>Number of publications</th>
<th>% of total publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review</td>
<td>2111</td>
<td>90.8</td>
</tr>
<tr>
<td>Article</td>
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<td>7.7</td>
</tr>
<tr>
<td>Editorial</td>
<td>14</td>
<td>0.6</td>
</tr>
<tr>
<td>Paragraph</td>
<td>14</td>
<td>0.6</td>
</tr>
<tr>
<td>Biography</td>
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<td>0.2</td>
</tr>
<tr>
<td>Corrigenda</td>
<td>2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Fig. 1. Distribution of the journal Uspekhi Khimii’s contributors by the number of their reviews (according to the CA DB). \((n)\) The number of articles and \((A(n))\) the number of authors who prepared \(n\) articles.