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Should we publish in Chinese? –answers exemplified by articles on OSH and electromagnetism indexed in selected databases

Streszczenie. Artykuł dotyczy zagadnień komunikacji naukowej, w tym indeksowania artykułów w bazach międzynarodowych (Web of Science CC, Scopus) i chińskich instytucji, w tym uczelni technicznych. Jednym z istotnych zagadnień dla oceny jakości pracy naukowca jest możliwość dzielenia się wynikami swoich prac badawczych z innymi naukowcami. Z uwagi na zwiększającą się liczbę publikacji autorów afiliowanych w chińskich instytucjach autorzy analizują dostępność i ilość informacji występujących w bazach dostarczanych przez Clarivate Analytics, Elsevier, a także w bazach i katalogach bibliotecznych udostępnianych przez chińskie instytucje. Prowadzono wyszukiwania na przykładach zagadnień elektromagnetyzmu i bhp, a także dla czasopisma Przegląd Elektrotechniczny. Jedno z pytań w artykule dotyczy dostępności polskich publikacji naukowych w chińskich bazach danych, w pierwszej kolejności dedykowanym osobom, dla których język chiński językiem natywnym. (Czy warto publikować po chińsku? – odpowiedzi na przykładach artykułów z zakresu BHP i elektromagnetyzmu indeksowanych w wybranych bazach)

Abstract. The article addresses the issues of scientific communication, including the indexing of articles in international databases (Web of Science CC, Scopus) and Chinese institutions, including technical universities. One of the important issues in assessing the quality of a scientist's work is the opportunity to share the results of their research with other scientists. Due to the increasing number of publications of authors affiliated with Chinese institutions, the authors analyze the availability and amount of information found in databases provided by Clarivate Analytics, Elsevier, as well as in library databases and catalogues provided by Chinese institutions. Searches were carried out on the examples of electromagnetism and occupational health and safety, as well as for the journal Przegląd Elektrotechniczny. One of the questions in the article concerns the availability of Polish scientific publications in Chinese databases, primarily dedicated to people for whom Chinese is a native language.

文章涉及科学传播问题·包括在国际数据库 (Web of Science CC、Scopus) 和包括技术大学在内的中国机构中对文章进行索引。评估科学家工作质量的重要问题之一是有机会与其他科学家分享他的研究成果。由于隶属于中国机构的作者的出版物越来越多,作者分析了 Clarivate Analytics、Elsevier 提供的数据库以及中国机构提供的图书馆数据库和目录中的信息的可用性和数量。对电磁学和职业健康与安全的例子以及 Przegląd Elektrotechniczny 杂志进行了搜索。文章中的一个问题涉及波兰科学出版物在中文数据库中的可用性·主要针对以中文为母语的人 (我們應該用中文出版嗎? ——以關於職業安全與衛生的文章為例的答案和在選定數據庫中索引的電磁學)

(Automatic translation of an abstract / title of an article from English into Chinese using the Google Translator: 30.01.2022.)

Słowa kluczowe: komunikacja naukowa, Scopus, Web of Science CC, publikowanie, Polska, Chiny, alerty Google Scholar

Keywords: science communication, Scopus, Web of Science CC, publishing, Poland, China, Google Scholar Alert

Introduction

Registering/indexing publishing activity in the scientific world is related to information and scientific communication. The scope of publishing currently extends beyond the standard collection and sharing of data on articles indexed in such resources as the Web of Science Core Collection_WoS (Clarivate Analytics), Scopus (Elsevier) bibliographic and abstract databases. Communication also means informing about the scientific achievements of institutions, research teams and searching for scientists to collaborate with. The analyzes conducted so far indicate some correlations, i.e. that publications or even articles sent

to journals with larger authors' teams (with different affiliations) were more often accepted for publication and had more citations [1]. Looking through the content of journals from many disciplines, including engineering sciences, an increase in the number of articles with authors affiliated in China over the last decade (afiliation_address: China) can be noticed. To verify and illustrate this, information on articles in the field of occupational health and safety and electromagnetism indexed in the above-mentioned WoS CC and Scopus bases was used, assuming the decade as the time horizon, i.e. 2010, 2021 and the range of years 2010-2021, respectively.

Table 1. Numerical indicators for articles indexed in the WoS CC, Scopus databases (year/years), respectively for the affiliations of China, Poland, China AND Poland, electromagnetics, occupational safety (data available on 30.01.2022.)

base	Affiliation China	Affiliation Poland	Affiliation Poland AND China	electromagnetics affiliation China	electromagnetics affiliation Poland	electromagnetics affiliation Poland AND China	occupational safety affiliation China	occupational safety affiliation Poland	occupational safety affiliation Poland AND China
Scopus	(2010) 225 519	(2010) 22 337	(2010) 267	(2010) 101	(2010) 9	(2010) 0	(2010) 58	(2010) 12	(2010) 0
	(2021) 691 580	(2021) 47 485	(2021) 1899	(2021) 576	(2021) 32	(2021) 1	(2021) 219	(2021) 63	(2021) 1
	(2010-21) 4 956626	(2010-21) 395 615	(2010-21) 11 161	(2010-21) 1935	(2010-21) 148	(2010-21) 3	(2010-21) 1 163	(2010-21) 346	(2010-21) 8
WoS CC	(2010) 145 276	(2010) 22 222	(2010) 293	(2010) 22	(2010) 7	(2010) 0	(2010) 10	(2010) 13	(2010) 0
	(2021) 593 711	(2021) 43 068	(2021) 1965	(2021) 208	(2021) 3	(2021) 0	(2021) 140	(2021) 52	(2021) 1
	(2010-21) 4 044234	(2010-21) 390 790	(2010-21) 12 282	(2010-21) 816	(2010-21) 71	(2010-21) 3	(2010-21) 685	(2010-21) 270	(2010-21) 3

In the case of authors from China, the language of indexed publications is English, in the case of authors from Poland, both Polish and English, with a predominance of the latter [2]. The analytical material was collected in August 2021 and then updated in January 2022. It should be remembered that indexing of publications from 2021 in databases will not be completed until after the first quarter of 2022.

Table 1 presents data that show an increase in the number of articles written by authors from China over the decade. This increase occurs both in the results obtained for the question about all articles for these affiliations, as well as for questions about electromagnetics, and about occupational safety. A small number of articles was obtained when asking about co-authorship, as a result of cooperation between researchers from Poland and China, i.e. for affiliations: China and Poland.

Taking into account the increasing activity of authors from China in the last decade, the authors raise the following questions..

- What is the number/representation of publications of authors with affiliations: Poland and China in the WoS CC, Scopus databases including occupational safety and electromagnetics?

- What is the visibility of publications with Polish affiliation in Chinese databases / library catalogues?
- Do the publications in the databases have biblio and altmetric indicators?
- Should we take care of indexing the publications in databases maintained by Chinese academic and scientific institutions in order to increase the number of recipients of research outcomes generated in Poland?
- Is stronger scientific cooperation between Polish and Chinese researchers possible?

The increasing number of publications by authors from China, indexed in WoS CC, Scopus databases may provoke a question whether it is worthwhile to index the publications of Polish authors in Chinese bibliographic and abstract databases? Should we translate the metadata of Polish publications into Chinese? And affiliate this data, for example, in a database affiliated by the Chinese Academy of Sciences - Wanfang Data (A Leading Provider of Electronic Resources) [3]. Or perhaps it is enough to use on the English-language metadata available, e.g. in the aforementioned WoS CC and Scopus databases, where all publications, even in Polish, have English-language metadata.

The screenshot shows the CNKI search interface. The search term is "przeglad elektrotechniczny". The results are filtered to "Academic Journals" and show 21,700 articles. Two results are visible:

Title	Author	Journal Title	Publication Date	Cites	Downloads	Options
1. Nine-phase transmission line design: Implementation using matlab/simulink 【MT】九相传输线设计: 利用matlab / simulink实现	Pouabe Eboule P.S.; Pretorius J.H.C.; Mbull N.	Przeglad Elektrotechniczny	2020-01-01			[Full-text in English]
2. Impact of the receiving transformer on the measurements of long-term load capability of the innovative LV switchgear 【MT】接收变压器对创新型低压开关设备长期负荷能力测量的影响	Daszczyński T.; Pochanke Z.; Szewczyk M.; Stoczko S.; Kaźmierczak P.	Przeglad Elektrotechniczny	2020-01-01			[Full-text in English]

Fig. 1. Screenshot of a fragment of the page with the results obtained in the Copernicus Science Center, for the question about Przeglad Elektrotechniczny (access date: 5.02.2022).

The screenshot shows the article page for "Numerical simulations and experimental results for Magnetic Induction Tomography system". The article is from "Przeglad Elektrotechniczny", Issue 4, 2009. The author is Krzysztof STAWICKI, Stanislaw GRATKOWSKI, Mieczyslaw KOMOROWSKI, and Tomasz PIETRUSEWICZ. The article is published by SIGMA-NOT Publishing House. The abstract is in Polish, and there is an option to view the original or translation.

Abstract / 摘要

In this paper we present effective numerical method of the electromagnetic field analysis by applying finite element method in 3-D problem related to Magnetic Induction Tomography system developed and constructed at the West Pomeranian University of Technology, Szczecin. We compare results of simulations with measurements for low conductive objects. Streszczenie. W pracy przedstawiamy metodę numerycznej analizy pola elektromagnetycznego wykorzystującą elementy skończone do rozwiązywania trójwymiarowych zagadnień związanych z układem magnetycznej tomografii indukcyjnej, zaprojektowanym i zbudowanym w Zachodniopomorskim Uniwersytecie Technologicznym w Szczecinie. Porównujemy wyniki symulacji i pomiarów wykonanych dla słaboprzewodzących obiektów. (Symulacje numeryczne i wyniki pomiarów [...])

Indexed by / 核心评价
ESCI, INSPEC, Scopus;

Fig. 2. Screenshot of a fragment of the page with an article from 2009, from Przeglad Elektrotechniczny, indexed in CNKI. (access date: 5 February 2022).

The authors have attempted to search for information about articles by Chinese authors published in *Przegląd Elektrotechniczny* and in catalogues of technical universities, including Shanghai Tech University's Library and Beijing University of Technology's Library, which have an English interface [4]. Unfortunately, no results were obtained. (search date: February 5, 2022). Another search was conducted in the CNKI - China National Knowledge Infrastructure - database established in 1996 by Tsinghua University and Tsinghua Tongfang Company [5]. Although we can find in the description of this database that CNKI provides full-text articles from over 2000 Chinese journals on economics and management, it turns out that not only in this field [6]. The CNKI database was asked about publications from the Polish journal *Przegląd*

Elektrotechniczny. Access to 6000 articles from 2004-2020 was obtained. Some of them include information about access to the full text in English and ESCI; INSPEC; Scopus databases are visible as the sources of access. There are 21,700 articles on CNKI website (Total: 27,700 articles). [7]

Fig. 2. presents a view of the record of the article from 2009 indexed in CNKI database. Information about other publications is provided under the article information. [8].

Looking at the publication activity of the authors from China, Figure 3 presents the results from WoS CC database to the question about electromagnetics (Topics) and the articles from the years 2010-21 for the China affiliation. The 4 most cited articles by Chinese authors obtained citation rates > 100.

816 Publications		Citations						Average per year	Total
		2018	2019	2020	2021	2022			
1	Experimental Demonstration of a Bilayer Thermal Cloak Han, T.C.; Bai, X.; (-); Qiu, C.W. Feb 3 2014 PHYSICAL REVIEW LETTERS 112 (5)	45	43	47	44	4	35.44	319	
2	Homogeneous Thermal Cloak with Constant Conductivity and Tunable Heat Localization Han, T.C.; Yuan, T.; (-); Qiu, C.W. Apr 3 2013 SCIENTIFIC REPORTS 3	22	20	17	12	0	17.1	171	
3	Temperature-Dependent Transformation Thermotics: From Switchable Thermal Cloaks to Macroscopic Thermal Diodes Li, Y.; Shen, X.Y.; (-); Huang, J.P. Nov 5 2015 PHYSICAL REVIEW LETTERS 115 (19)	31	20	23	27	1	16.63	133	
4	Illusion Thermotics Hou, B.; Zhou, S.L.; (-); Qiu, C.W. May 29 2018 ADVANCED MATERIALS 30 (22)	9	34	38	39	8	25.6	128	

Fig. 3. Screenshot of a fragment of the page with the results obtained in WoS CC on request, TOPICS: electromagnetics, AFFILIATION China, publication date 2010-2021, 4 with the highest citations (total of citations 816 articles = 5984) (access date: 30.01.2022).

As the result for a question in WoS CC about electromagnetics (Topics), for affiliation Poland, it is possible to find the paper by Augustine M Urbas et al. (2016) Roadmap on optical metamaterials *J. Opt.* 18 093005 [DOI: 10.1088 / 2040-8978 / 18/9/093005] - with the result of 81 citations among the 5 most cited articles. (WoS CC, access date: 30.01.2022)

When searching for Polish publications indexed in Chinese library catalogues the authors found, among

others, English-language versions of papers available on the website of the Chinese University of Hong Kong Library . There, when searching in any field (e.g. title, abstract, keywords) for the following entry: electromagnetics (publication from 2010-2021), 64,411 articles published in any language were indicated. After filtering all results for the publication in Polish, 141 articles were obtained. including a publication from *Medycyna Pracy* (2020) in first place [9].

Fig. 4. The results received for the question about: electromagnetics (articles, 2010-2021, filter: language of publication: Polish) in the catalogue of the Chinese University of Hong Kong Library (access date: 30.01.2022.)

Authors from China have been one of the most active in the last decade which can be seen when browsing the tables of contents and affiliations of publishing authors and which is additionally presented in figures obtained from WoS CC and Scopus databases. The thematic range of articles from 2010-2021, for the affiliation Poland AND China, represents a cross-section of technical and social sciences, including engineering sciences, which constitute 9.6% of the 11,161 articles in the Scopus database. In the

Scopus, The following indications were obtained for subject area representation in the Scopus database for over 1000 articles classified in a given category: Physics and Astronomy = 5 704 articles, Engineering = 1 717, Medicine = 1 343, Materials Science = 1 058, Chemistry = 1 015 (access date: 30.01.2022).

One of the questions that arose was how to get information about citations in Chinese publications, Chinese journals. It is possible to use Google Scholar for this



purpose - where it is possible to set and receive alerts in any configuration, including, for example, asking about citation from a particular journal. Figure 5 presents the view of an alert from Google Scholar received in August 2021 and it concerns a citation of an English-language article from Applied Ergonomics from 2017 in a Chinese journal in 2021.



Fig. 5. Screenshot of an alert from Google Scholar. The alert received automatically in response to a request for Google Scholar indexed information for the journal "Applied Ergonomics". Google Scholar informed about an article published in Applied Ergonomics in 2017, which was quoted in 2021 (alert received on 13.08.2021).

Summary

The ongoing work and the attempts to answer the questions raise further questions. During the searches carried out and in the results obtained in Chinese sources, no information on citations or altmetric indicators connected to Polish papers was found. It seems worthwhile to translate metadata of publications into Chinese and to index the publications by Polish authors in Chinese bibliographic and abstract databases, e.g. Wanfang Data (A Leading Provider of Electronic Resources) or CNKI. The authors found examples of publications from Polish journals: Przegląd Elektrotechniczny indexed in CNKI and Medycyna Pracy indexed in library catalogue. It may be enough, as it has been so far, to rely on the English-language metadata available in the aforementioned databases, where all publications, even in Polish, have publication data in English, which is a necessary condition for indexing in WoS CC, Scopus. There are many publications by authors affiliated with China, which, based on the example of the last decade, are presented by the digital data obtained in the databases (Tab. 1). Similar information can be provided by reading the lists of authors of printed journals published e.g. by Elsevier, Springer or other publishers. The answer to the question whether to publish in Chinese - even only the metadata (e.g. title, abstract, keywords) - is not clear-cut. Perhaps it is worth making use of many different forms of informing about the publications by Polish authors and reaching scientists from China. Another issue concerns encouraging Chinese scientists to publish in Polish scientific journals. Even if they publish in English, their publications will be indexed in local Chinese databases/library catalogues. Thus, Polish scientific journals can be indexed there. As to the visibility of English-language publications in Chinese databases, we can raise the question about the visibility of Chinese publications in national and international databases, outside of China [10]. The visibility of information about publications is increasing thanks to the English-language metadata available in international databases. However, the linguistic exclusion, access to publications written in other language than English, including the possibility of using increasingly better tools for machine translation, as well as international cooperation, are still recurring questions [11]. Attempts to inform specific recipients of information should always take into account the specificity of researchers in different countries. The analysis of the presented data does not give a clear answer

that can be expected after several years of publication of articles with data in Chinese. Regardless, this article is intended to start a discussion on the topic given in the title.

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