



EDITORIAL NOTE

Chemical Sciences at the AABC

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In order to gain some perception on how articles of different fields are contributing to the bibliometric indicators of the Annals of the Brazilian Academy of Sciences (AABC), I have started to make some very general analyses of the papers submitted to this journal, using, among others, the Impact Factor (IF) of 2018 (AABC IF-2018). I have started with Agrarian Sciences (Kellner 2020a) and gradually expanded to other areas (Kellner 2020b, c, d). Despite of the criticisms and the growing use of alternative bibliometric indices (e.g., Villaseñor-Almaraz et al. 2019), the IF is still the most applied bibliometric index regarding scientific publications and influences the production of science, including the choice of journals to which researchers tend to submit their manuscripts.

Taking the opportunity of the publication of this special volume on the disaster caused by the oil spill that has affected the Northeast coast of Brazil in 2019 (Andrade & Coutinho 2022), I am providing a brief overview of the contribution of Chemical Sciences (ChSci) to the AABC. Despite being one of the most traditional areas of the Brazilian Academy of Sciences (ABC), the number of papers received by the AABC concerning this scientific field is still low. From 2011 to 2020, a total of 402 manuscripts in ChSci were submitted to this journal, about 40 papers per year, representing 4.46% of the total number (9009) of the manuscripts received (Figure 1). In the same period, 12 to 13 were published per year (total 128), representing 6.05% of all published articles (total 2117). The year with the most publications regarding ChSci was 2018, with 41 papers, which included two special issues, making this area the greatest contributor to the 2019 Impact Factor (AABC IF-2019 - 1.280, Kellner 2020c, d).

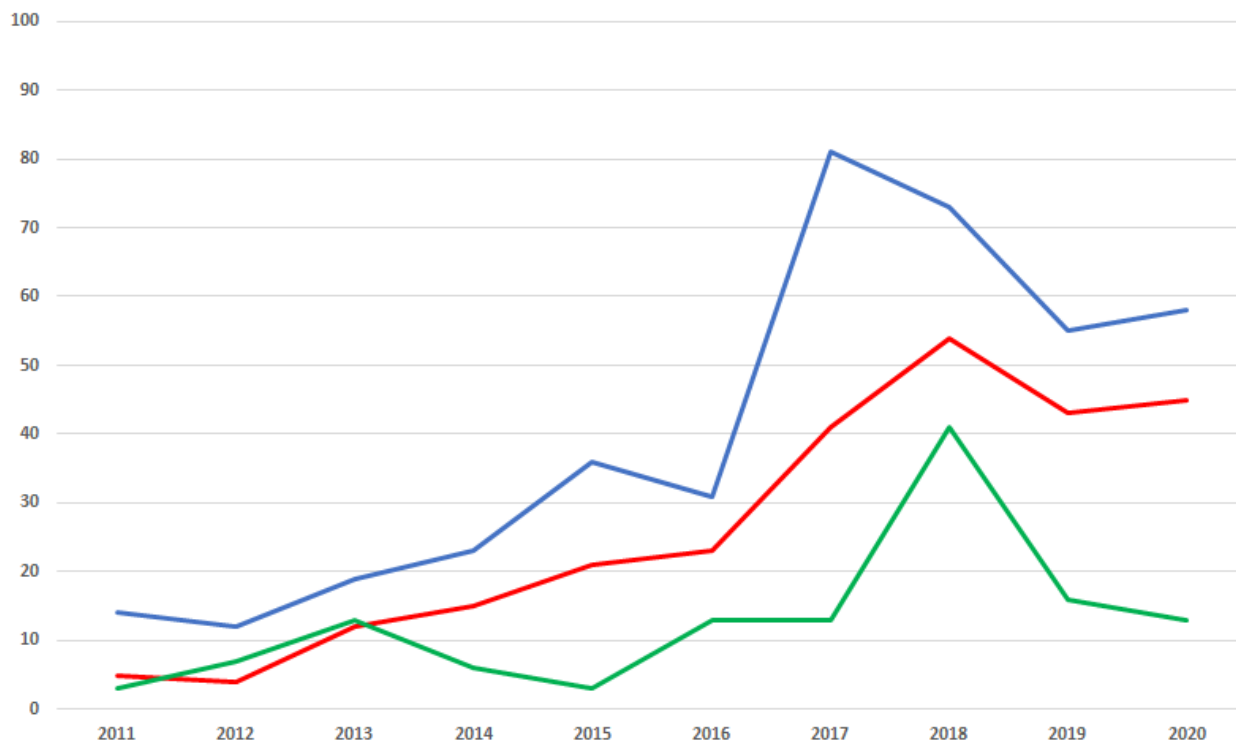
In 2019 and 2020, 29 papers were published in ChSci making up about 4.45% of the printed articles (651). In these two years, the submissions concerning this scientific field (113) represented about 3.33% of the total submissions (3392). All published articles were retrieved by the Journal Citation Reports (JCR) and therefore the Missing Article Index (MAI, see Kellner 2020b) considering this area during this time span is zero.

Of the 16 articles published in 2019 considered in the AABC IF-2021 (1.811), 12 were cited at least once in 2021, resulting in an Article Citation Factor (ACF 2019/2021, see Kellner 2020a) of 0.7500 (Table I). Of the 13 articles published in 2020 considered in the AABC IF-2021, only six were cited once in 2021, resulting in an ACF 2020/2021 index of 0.4615. The combined ACF 2019-2020/2021 is 0.6207 (Table I). This means that almost 40% of the articles published in 2019 and 2020 did not receive even one citation in 2021. Both, combined and individual ACFs have decreased compared to the values found regarding the contribution of the articles of ChSci published in 2018 to the AABC IF-2019 (Kellner

Table I. Citations and indexes concerning the articles published in Chemical Sciences by the Annals of the Brazilian Academy of Sciences in 2019 and 2020 that have been considered in the Impact Factor of 2021.

Indexes	Citations
Art Pub 2019	16
Art Pub 2020	13
Cit Art 2019/2021	12
Cit Art 2020/2021	6
Cit 2019/2021	35
Cit 2020/2021	17
Cit 2019-2020/2021	42
Cit MCAr 2019-2020/2021	7+7+6
ACF 2019/2021	0.7500
ACF 2020/2021	0.4615
ACF 2019-2020/2021	0.6207
ChSci IF-2021	1.448
RAIF 2019-2020/2021	2.333

Abbreviations: ACF 2019/2021 – Article Citation Factor concerning articles published in 2019 cited in 2021, ACF 2020/2021 – Article Citation Factor concerning articles published in 2020 cited in 2021, ACF 2019-2020/2021 – Article Citation Factor concerning articles published in 2019 and 2020 cited in 2021, Art Pub 2019 – number of articles published in 2019, Art Pub 2020 – number of articles published in 2020, ChSci IF 2021 – Impact Factor of 2021 concerning only articles published in Chemical Sciences, Cit 2019/2021- number of citations in 2021 of articles published in 2019, Cit 2020/2021- number of citations in 2021 of articles published in 2020, Cit 2019-2020/2021- number of citations in 2021 of articles published in 2019 and 2020, Cit Art 2019/2021 – number of articles published in 2019 cited in 2021, Cit Art 2020/2021 – number of articles published in 2020 cited in 2021, Cit MCAr 2019-2020/2021 – number of citations in 2021 of the three most cited articles published in 2019 and 2020, RAIF 2019-2020/2021 – Reescalated Article Impact Factor concerning articles published in 2019 and 2020 cited in 2021.

**Figure 1.** Graphs showing the manuscripts received (in blue), rejected (in red), and published (in green) by the Annals of the Academy of Sciences (AABC) in Chemical Sciences between 2011 and 2020.

2020d). If only articles in this field are considered, the IF of the AABC would be 1.448, lower than the AABC IF-2021 (1.811). The Reescalated Article Impact Factor (RAIF see Kellner 2020a) is 2.333. Of the 18 articles published in 2019 and 2020 cited at least once in 2021, 13 were cited two times or more (eight published in 2019 and five published in 2020).

Regarding the most cited papers that contributed to the AABC IF-2021, Valli & Bolzani (2019) and Varanda et al. (2019) received seven citations each and Martins et al. (2020) was cited six times. These numbers are slightly lower than the three most cited articles of 2018 considered in the AABC IF-2019 (Kellner 2020d).

The main conclusion that can be reached from this brief analysis is that strategies need to be developed in relation to ChSci to obtain a greater number of relevant papers in this field which might contribute to improve the bibliometric indexes of the AABC. As shown before (Kellner 2020d), there is room for this improvement.

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