



The Social Space of Sustainability Science

**A Bibliometric Study of
Leading Journals
(2001-2021)**

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Pierre Bourdieu's Social space

Field or
Champ

Agents

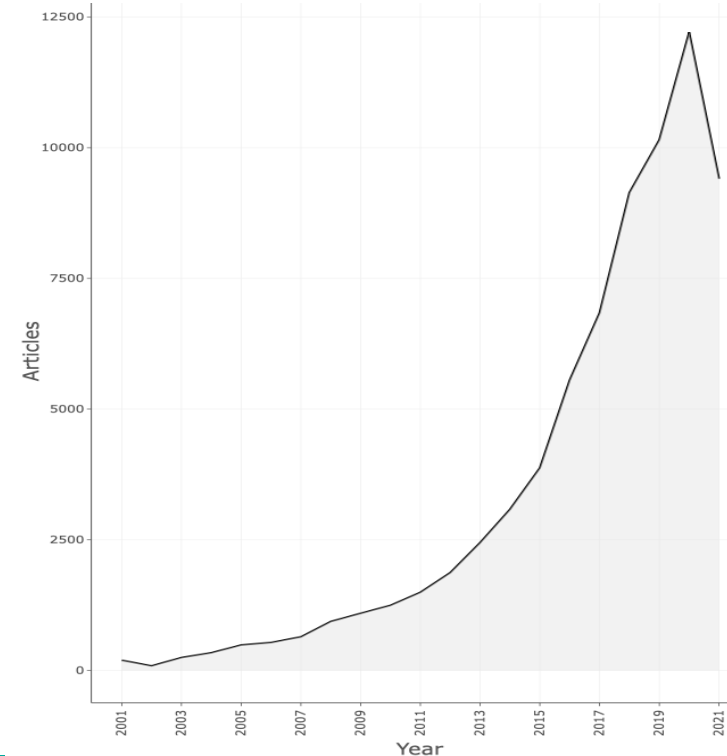
Capital

Habitus

Historical
perspective

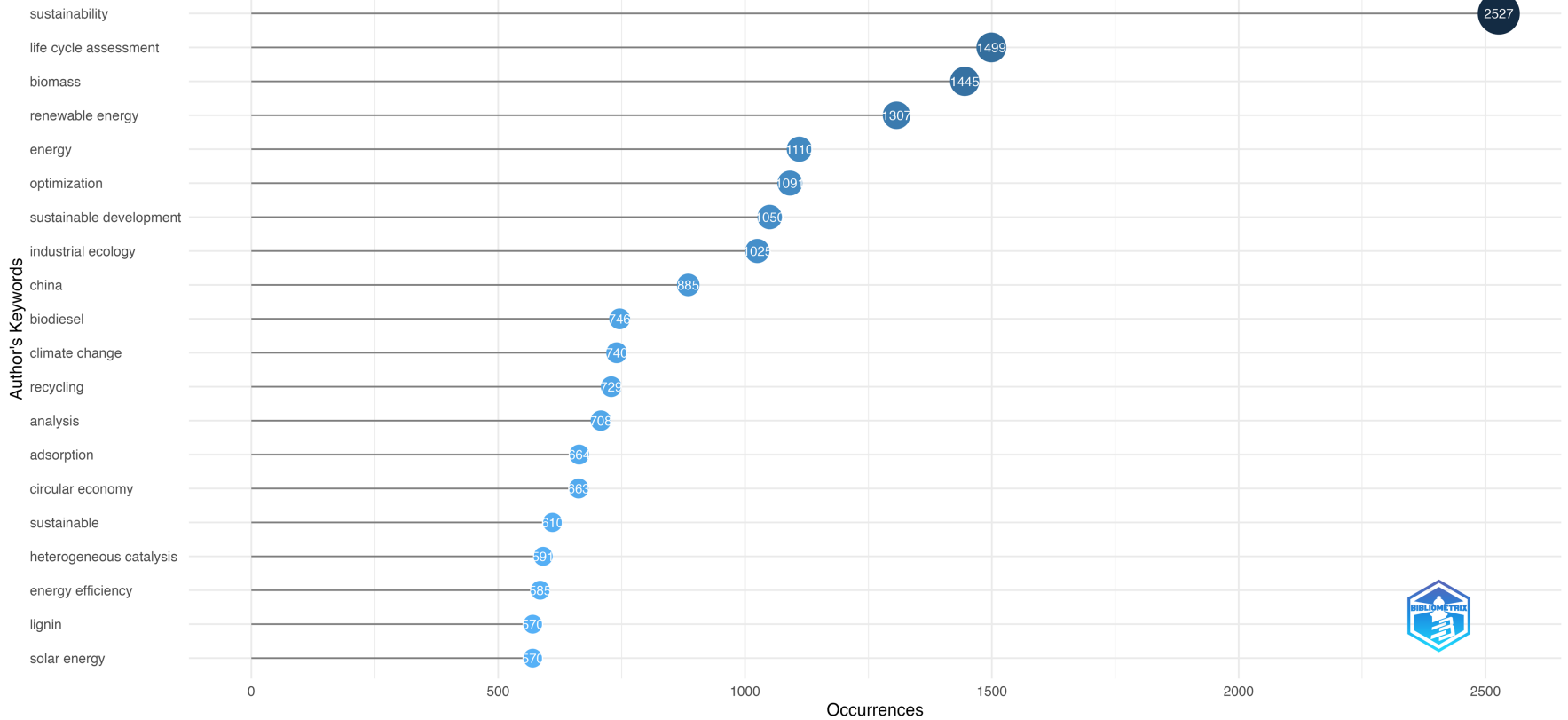
The data

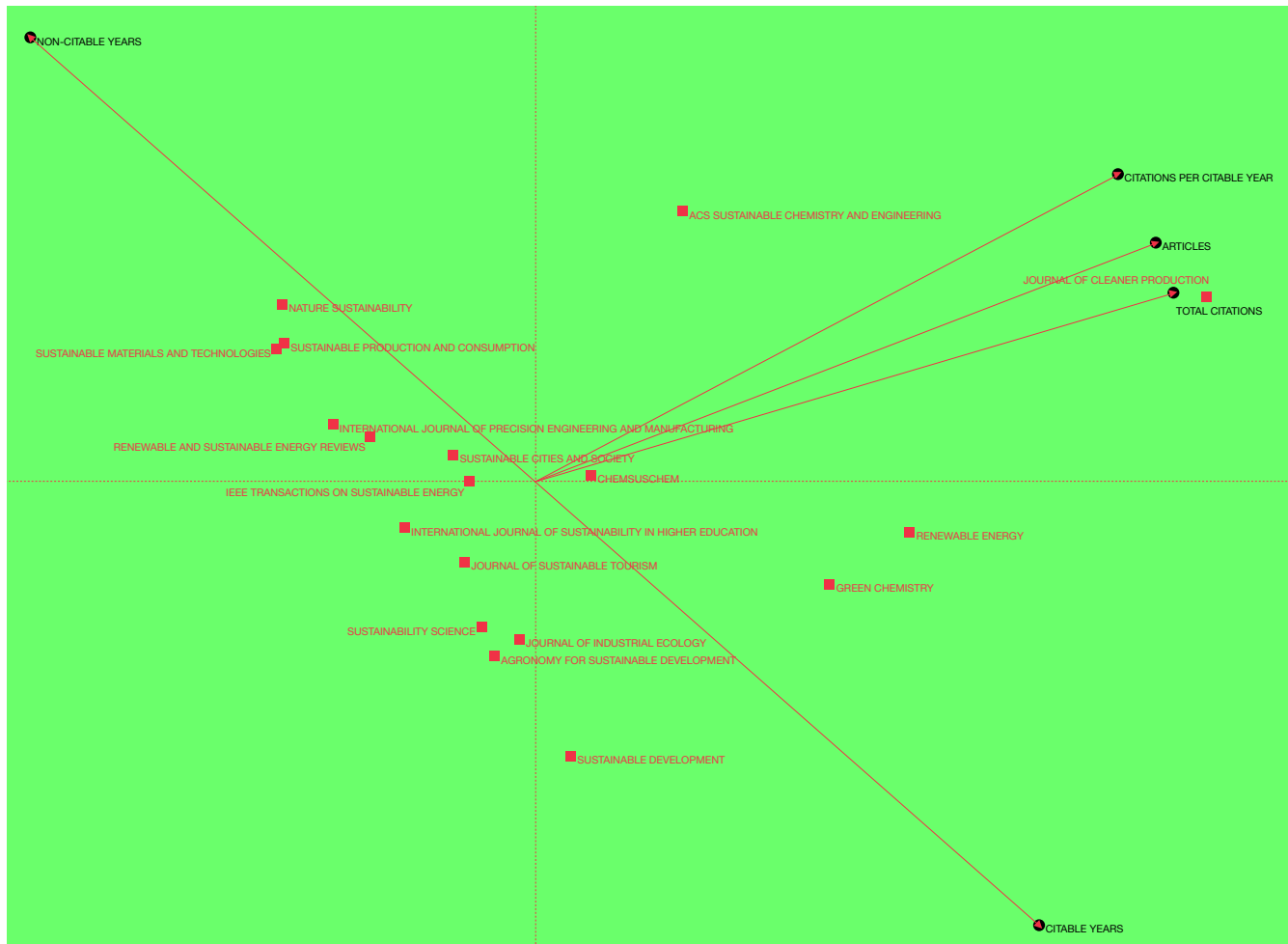
- ❖ From *Web of Science (Core Collection)*
- ❖ Category “Green & Sustainable Science & Technology” (Bautista-Puig et al. 2021)
- ❖ Number of documents: 71871 (articles only)
- ❖ Data analysis with *bibliometrix* (Aria & Cuccurullo, 2017)
 - Focus on:
 - symbolic capital through journal co-citation (see Gingras, 2008);
 - countries and affiliation co-authorship (social and symbolic capital)



Main information on the dataset

Timespan	2001:2021	Sources	18	Documents	71871
Authors	122227	Authors of single-authored docs	2333	International Co-Authorship	29.2 %
Author's Keywords (DE)	122760	References	1819331	Document Average Age	5.05

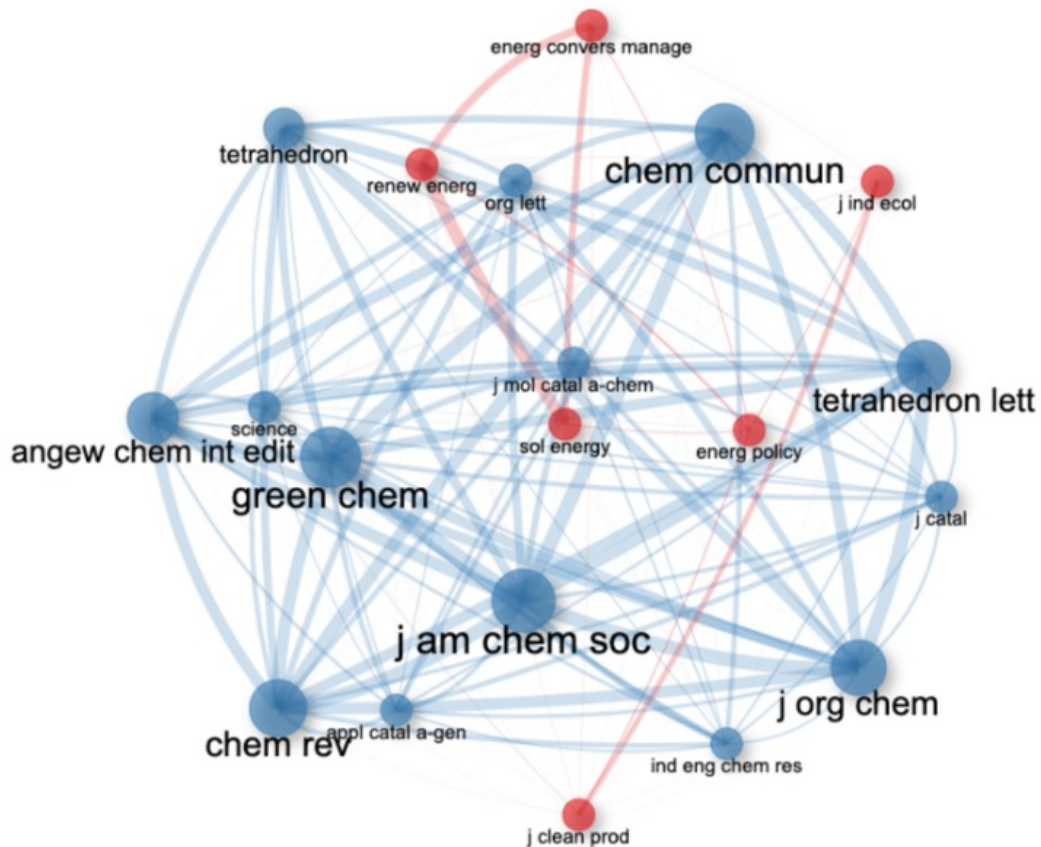






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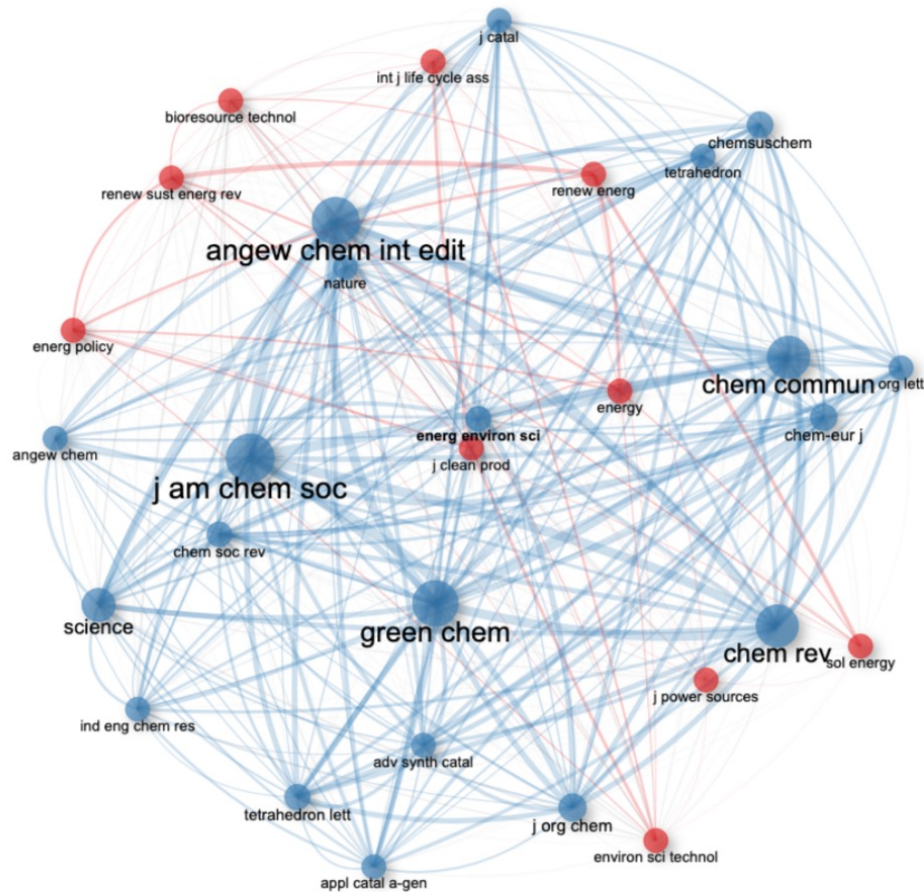
2001-2007 Journal co-citation





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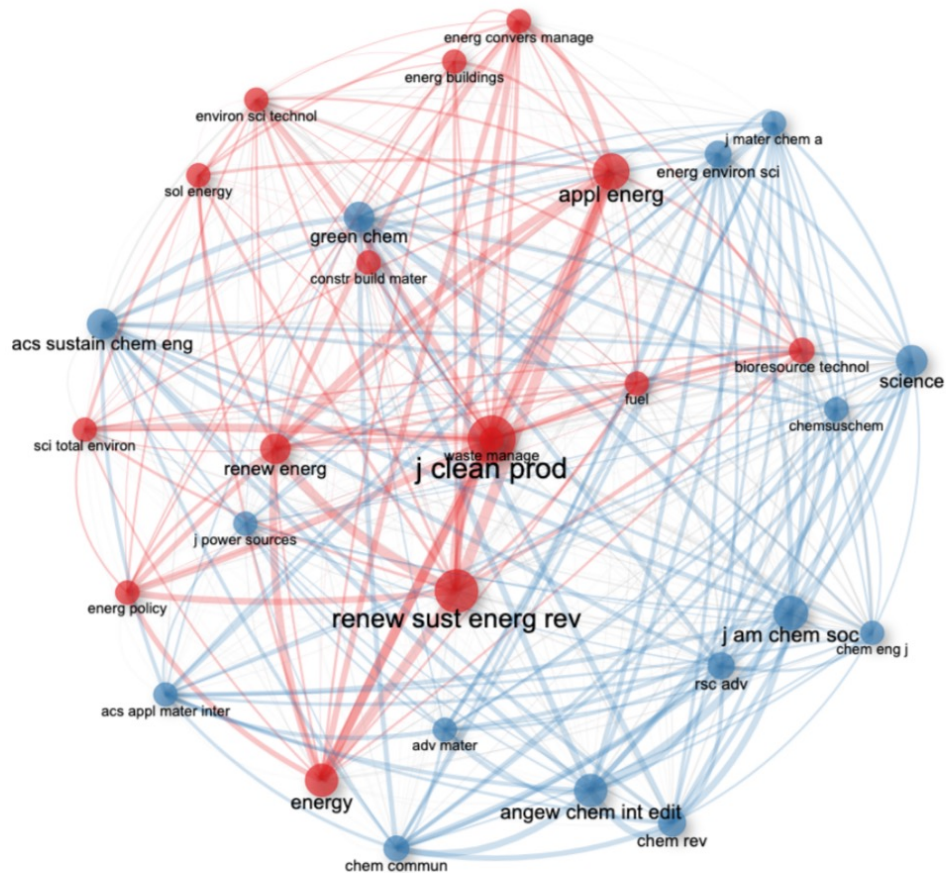
2008-2014 Journal co-citation



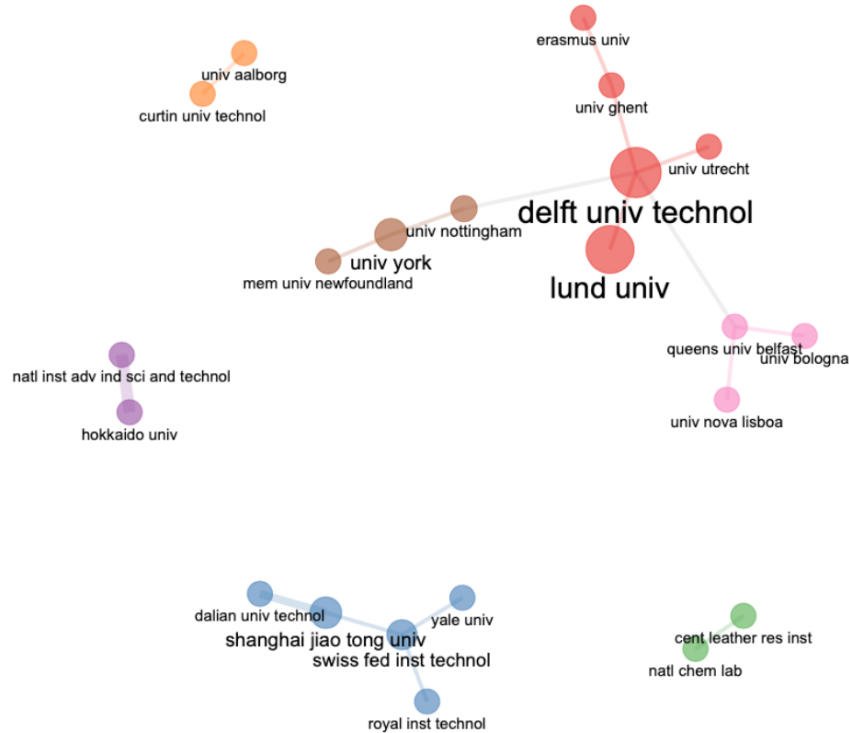


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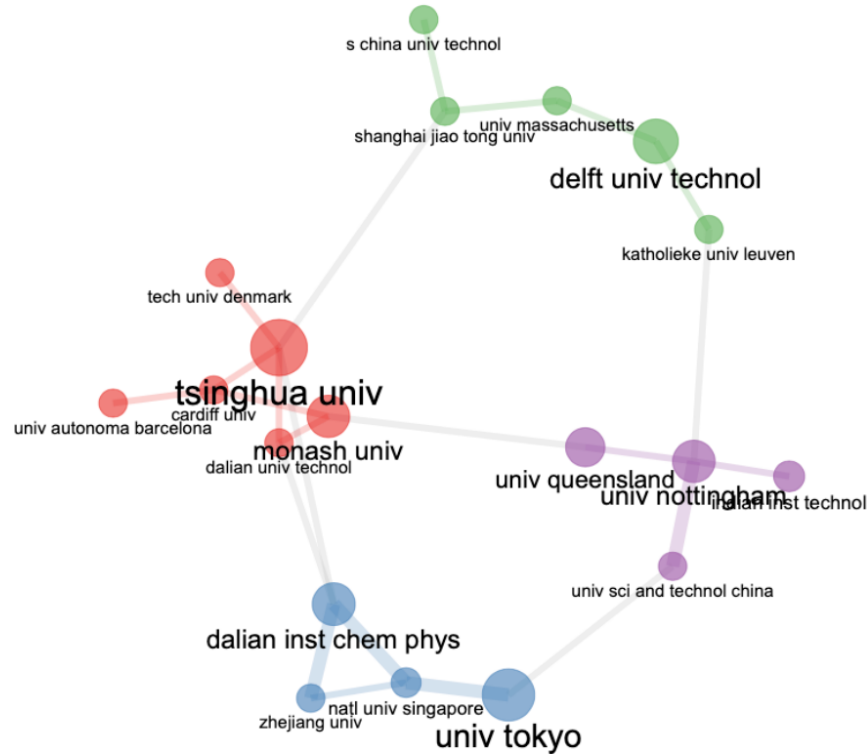
2015-2021 Journal co-citation



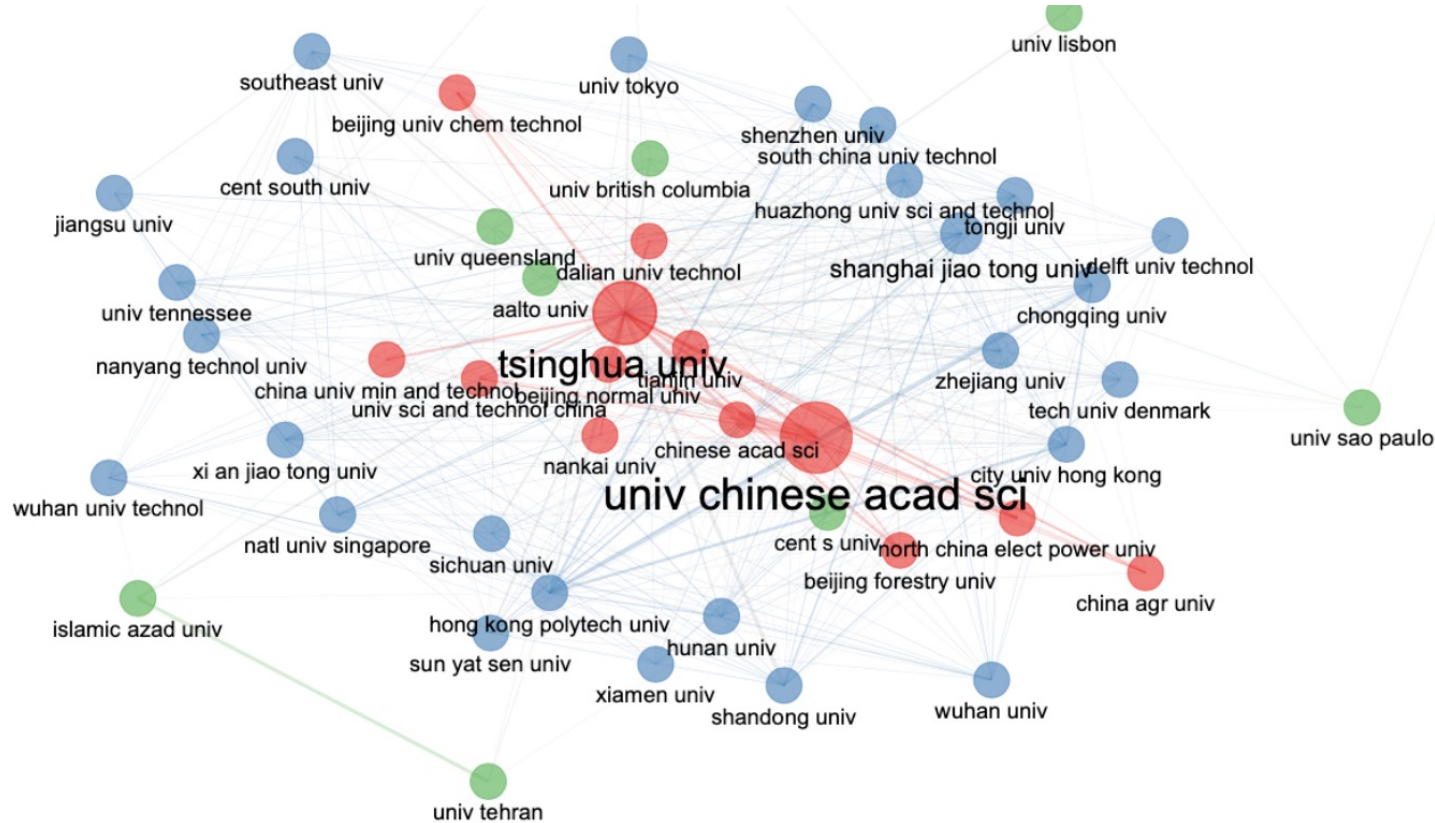
2001-2007 affiliation co-authorship



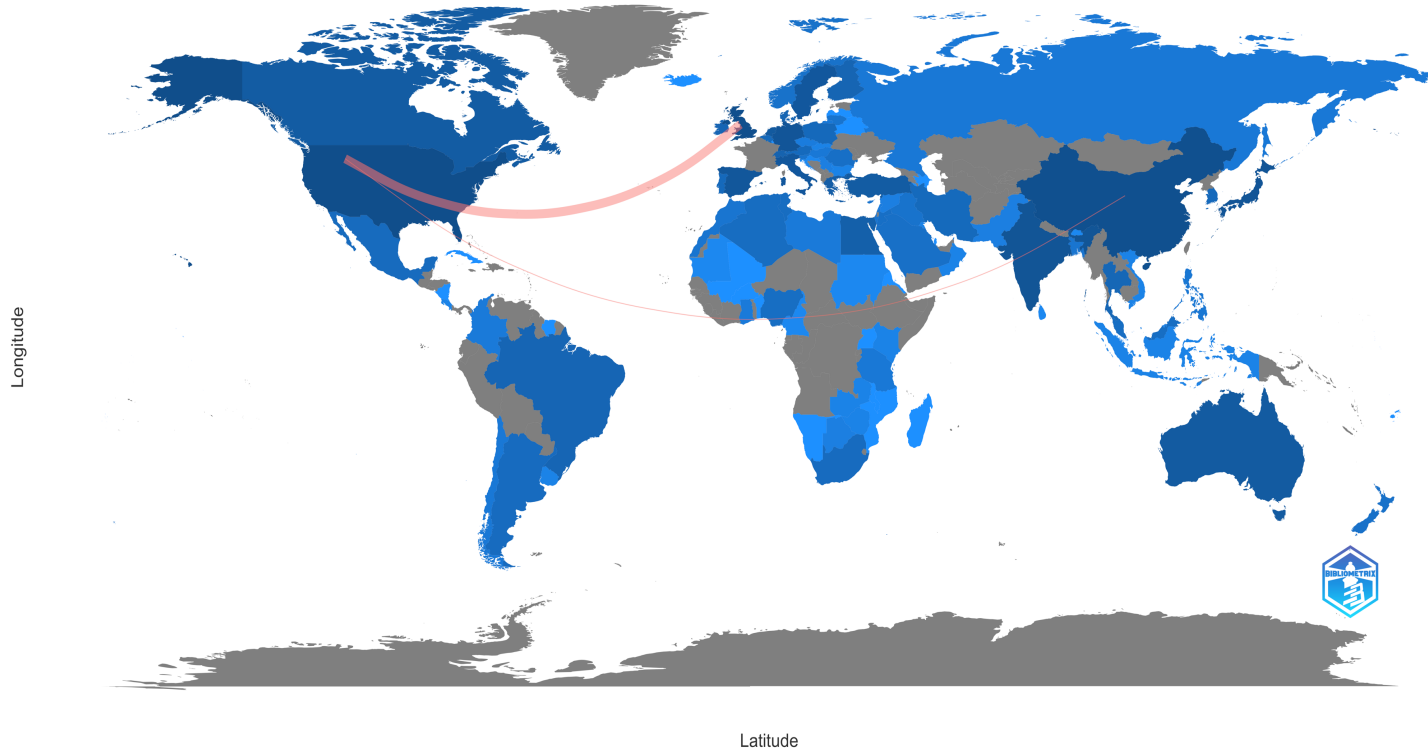
2008-2014 affiliation co-authorship



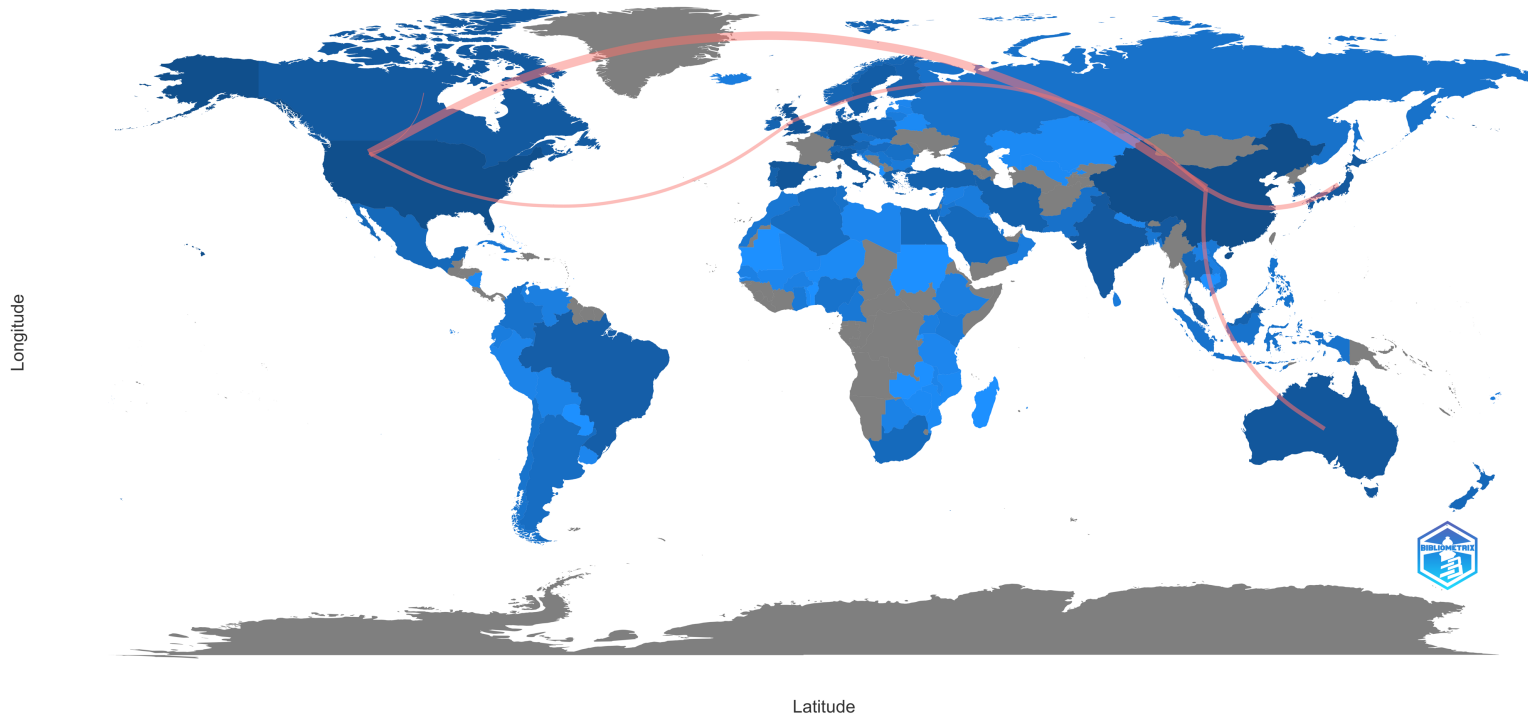
2015-2021 affiliation co-authorship



2001-2007 co-authorship map



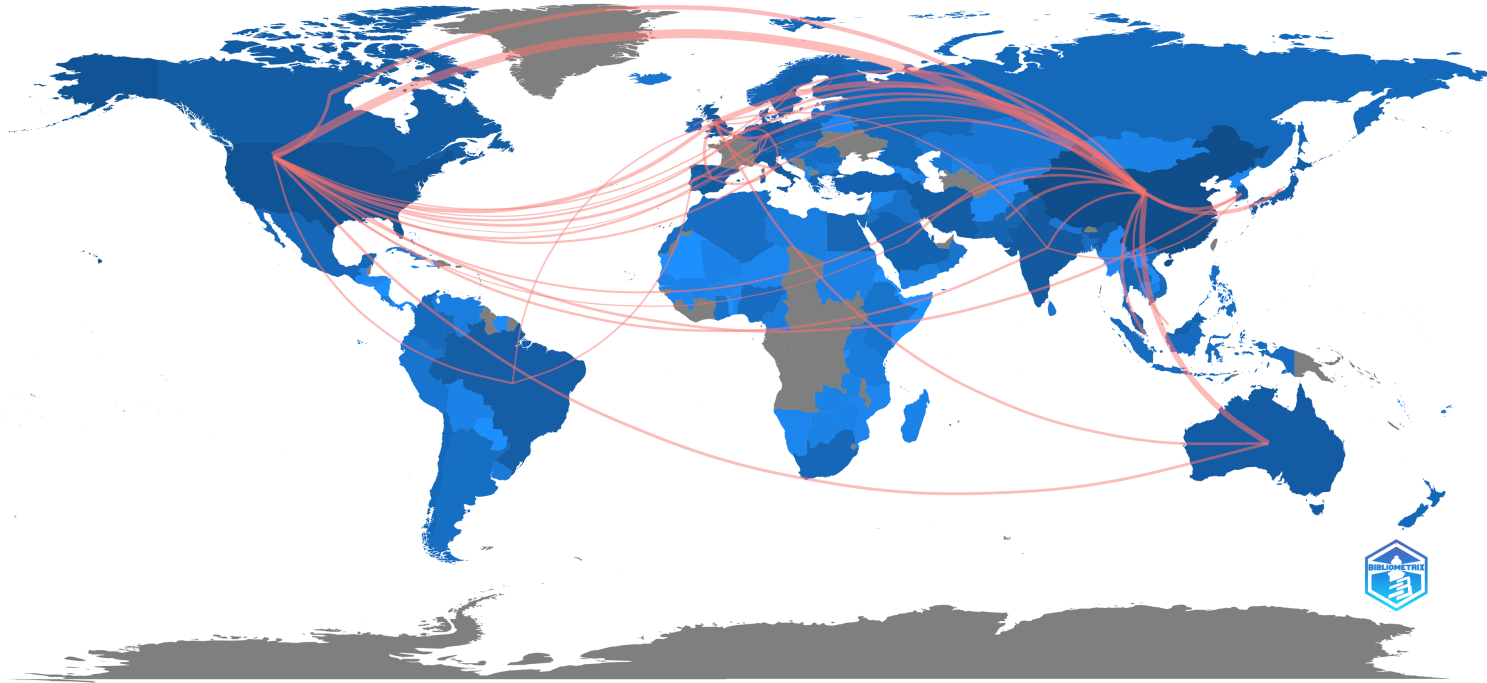
2008-2014 co-authorship map



2015-2021 co-authorship map



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Latitude

The typology of journals

- (a) The first type of journal is exemplified by *Sustainability Science*. The strategy is to promote through a journal the establishment of a transdisciplinary albeit relatively autonomous field.
- (b) The second type of journal corresponds to the strategy of creating publication venues less concerned with the foundation of a new scientific field compared with journals of type (a) but equally oriented towards the topic of sustainability in a broad meaning, *Nature Sustainability*, *Journal of Cleaner Production* and *Sustainable Development*.
- (c) Specialized journals make the third group, and the strategy is to treat "sustainability issues" within distinctive established disciplines. However, not all sciences appear to share this group, although sustainability issues ought to be relevant for all sciences (Nolin, 2021; White, 2013): *ACS Sustainable Chemistry and Engineering*, *Agronomy for Sustainable Development* and the more recent *IEEE Transactions on Sustainable Energy*.

References

- Abbasi, A., Wigand, R. T., & Hossain, L. (2014). Measuring social capital through network analysis and its influence on individual performance. *Library & Information Science Research*, 36(1), 66-73. <https://doi.org/https://doi.org/10.1016/j.lisr.2013.08.001>
- Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959-975. <https://doi.org/https://doi.org/10.1016/j.joi.2017.08.007>
- Bautista-Puig, N., Manana-Rodriguez, J., & Serrano-Lopez, A. E. (2021). Role taxonomy of green and sustainable science and technology journals: exportation, importation, specialization and interdisciplinarity. *Scientometrics*, 126(5), 3871-3892. <https://doi.org/10.1007/s11192-021-03939-6>
- Cronin, B. (2005). *The hand of science: Academic writing and its rewards*. Scarecrow Press.
- Gingras, Y. (1991). *Physics and the rise of scientific research in Canada*. McGill-Queen's University Press.
- Gingras, Y. (2008). The Collective Construction of Scientific Memory: The Einstein-Poincaré Connection and its Discontents, 1905–2005. *History of Science*, 46(1), 75-114. <https://doi.org/10.1177/007327530804600103>
- Nolin, J. (2021). The Challenge of Challenges and Information Science. In O.-L. Madge (Ed.), *New Trends and Challenges in Information Science and Information Seeking Behaviour* (pp. 9-19). Springer International Publishing.
- Ruggerio, C. A. (2021). Sustainability and sustainable development: A review of principles and definitions. *Sci Total Environ*, 786, 147481.
- White, R. M. (2013). Sustainability research: a novel mode of knowledge generation to explore alternative ways for people and planet. In *The Sustainable University* (pp. 194-217). Routledge.

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Questions & Comments

