**Last data updates: 06 January 2016**

Chiu, W.T. and **Ho, Y.S.**\* (2007), Bibliometric analysis of tsunami research. *Scientometrics*, **73** (1), 3-17.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document type: Article | Language: English | Cited references: 10 | Times cited: 103 | Times self cited: 29 |

Abstract: The use of the bibilometric analytical technique for examining tsunami research does not exist in the literature. The objective of the study was to perform a bibliometric analysis of all tsunami-related publications in the Science Citation Index (SCI). Analyzed parameters included document type, language of publication, publication output, authorship, publication patterns, distribution of subject category, distribution of author keywords, country of publication, most-frequently cited article, and document distribution after the Indonesia tsunami. The US and Japan produced 53% of the total output where the seven major industrial countries accounted for the majority of the total production. English was the dominant language, comprising 95% of articles. A simulation model was applied to describe the relationship between the number of authors and the number of articles, the number of journals and the number of articles, and the percentage of total articles and the number of times a certain keyword was used. Moreover the tsunami publication patterns in the first 8 months after the Indonesia tsunami occurred on 26 December 2004 indicated a high percentage of non-article publications and more documents being published in journals with higher impact factors.

KeyWords Plus: Publication

Addresses: Ho YS (reprint author), Taipei Med Univ, Wan Fang Hosp, 111 Hsing Long, Sec 3, Taipei 116, Taiwan

Taipei Med Univ, Wan Fang Hosp, Taipei 116, Taiwan

E-mail Addresses: [ysho@tmu.edu](mailto:ysho@tmu.edu)

1. Wu, X.L., Chen, X.Y., Zhan, F.B. and Hong, S. (2015), Global research trends in landslides during 1991-2014: A bibliometric analysis. *Landslides*, **12** (6), 1215-1226.
2. Gizzi, F.T. (2015), Worldwide trends in research on the San Andreas Fault System. *Arabian Journal of Geosciences*, **8** (12), 10893-10909.
3. Chang, Y.W., Huang, M.H. and Lin, C.W. (2015), Evolution of research subjects in library and information science based on keyword, bibliographical coupling, and co-citation analyses. *Scientometrics*, **105** (3), 2071-2087.
4. Huang, Y.L., Zhou, M.Q., Deng, Q.Q., Zhang, J., Zhou, P.B. and Shang, X.G. (2015), Bibliometric analysis for the literature of traditional Chinese medicine in PubMed. *Scientometrics*, **105** (1), 557-566.
5. Mesdaghinia, A., Younesian, M., Nasseri, S., Nodehi, R.N. and Hadi, M. (2015), Analysis of the microbial risk assessment studies from 1973 to 2015: A bibliometric case study. *Scientometrics*, **105** (1), 691-707.
6. Khan, M.A. and Ho, Y.S. (2015), Impact of Brunauer Emmett Teller isotherm on research in science citation index expanded. *Environmental Engineering and Management Journal*, **14** (9), 2163-2168.
7. Lyu, P.H., Yao, Q., Mao, J. and Zhang, S.J. (2015), Emerging medical informatics research trends detection based on MeSH terms. *Informatics for Health & Social Care*, **40** (3), 210-228.
8. Wang, M.Z., Liu, D.F., Jia, J.L. and Zhang, X.Y. (2015), Global trends in soil monitoring research from 1999-2013: A bibliometric analysis. *Acta Agriculturae Scandinavica Section B-Soil and Plant Science*, **65** (6), 483-495.
9. Gall, M., Nguyen, K.H. and Cutter, S.L. (2015), Integrated research on disaster risk: Is it really integrated? *International Journal of Disaster Risk Reduction*, **12**, 255-267.
10. Hou, Q., Mao, G.Z., Zhao, L., Du, H.B. and Zuo, J. (2015), Mapping the scientific research on life cycle assessment: A bibliometric analysis. *International Journal of Life Cycle Assessment*, **20** (4), 541-555.
11. Lin, C.L. and Ho, Y.S. (2015), A bibliometric analysis of publications on pluripotent stem cell research. *Cell Journal*, **17** (1), 59-70.
12. Fang, H. (2015), Classifying research articles in multidisciplinary sciences journals into subject categories. *Knowledge Organization*, **42** (3), 139-153.
13. Fiala, D. and Ho, Y.S. (2015), Twenty years of Czech science: A bibliometric analysis. *Malaysian Journal of Library & Information Science*, **20** (2), 85-102.
14. Zhu, Q.L., Kong, X.S., Hong, S., Li, J.L. and He, Z.Y. (2015), Global ontology research progress: A bibliometric analysis. *Aslib Journal of Information Management*, **67** (1), 27-54.
15. Li, W. and Zhao, Y. (2015), Bibliometric analysis of global environmental assessment research in a 20-year period. *Environmental Impact Assessment Review*, **50**, 158-166.
16. Ji, Q., Pang, X.P. and Zhao, X. (2014), A bibliometric analysis of research on Antarctica during 1993-2012. *Scientometrics*, **101** (3), 1925-1939.
17. Han, M.Y., Sui, X., Huang, Z.L., Wu, X.D., Xia, X.H., Hayat, T. and Alsaedi, A. (2014), Bibliometric indicators for sustainable hydropower development. *Ecological Indicators*, **47**, 231-238.
18. Ivanović, D. and Ho, Y.S. (2014), Independent publications from Serbia in the Science Citation Index Expanded: A bibliometric analysis. *Scientometrics*, **101** (1), 603-622.
19. Ye, Z.F., Zhang, B.G., Liu, Y., Zhang, J., Wang, Z.Y. and Bi, H.T. (2014), A bibliometric investigation of research trends on sulfate removal. *Desalination and Water Treatment*, **52** (31-33), 6040-6049.
20. Zhang, B.G., Liu, Y., Tian, C.X., Wang, Z.J., Cheng, M., Chen, N. and Feng, C.P. (2014), A bibliometric analysis of research on upflow anaerobic sludge blanket (UASB) from 1983 to 2012. *Scientometrics*, **100** (1), 189-202.
21. Du, H.B., Li, N., Brown, M.A., Peng, Y.N. and Shuai, Y. (2014), A bibliographic analysis of recent solar energy literatures: The expansion and evolution of a research field. *Renewable Energy*, **66**, 696-706.
22. Wang, Q., Yang, Z.G., Yang, Y., Long, C.L. and Li, H.P. (2014), A bibliometric analysis of research on the risk of engineering nanomaterials during 1999-2012. *Science of the Total Environment*, **473**, 483-489.
23. Naqvi, S.H. (2014), Polymer science research in India during 1999-2012: A scientometric study based on Science Citation Index-Expanded. *Science Technology and Society*, **19** (1), 95-108.
24. Mallik, A. and Mandal, N. (2014), Bibliometric analysis of global publication output and collaboration structure study in microRNA research. *Scientometrics*, **98** (3), 2011-2037.
25. Liao, J.Q. and Huang, Y. (2014), Global trend in aquatic ecosystem research from 1992 to 2011. *Scientometrics*, **98** (2), 1203-1219.
26. Tan, J., Fu, H.Z. and Ho, Y.S. (2014), A bibliometric analysis of research on proteomics in Science Citation Index Expanded. *Scientometrics*, **98** (2), 1473-1490.
27. Carrera-Fernandez, M.J., Guardia-Olmos, J. and Pero-Cebollero, M. (2014), Qualitative methods of data analysis in psychology: An analysis of the literature. *Qualitative Research*, **14** (1), 20-36.
28. Hsu, Y.H.E. and Ho, Y.S. (2014), Highly cited articles in health care sciences and services field in Science Citation Index Expanded: A bibliometric analysis for 1958-2012. *Methods of Information in Medicine*, **53** (6), 446-458.
29. Woon, W.L., Aung, Z. and Madnick, S. (2014), Forecasting and visualization of renewable energy technologies using keyword taxonomies in *Data Analytics for Renewable Energy Integration* (Ed. by Woon, W.L., Aung, Z. and Madnick, S.), **8817**, 122-136.
30. Qiu, J.P. and Lv, H. (2014), An overview of knowledge management research viewed through the Web of Science (1993-2012). *Aslib Journal of Information Management*, **66** (4), 424-442.
31. Guo, K., Liu, Y.F., Zeng, C., Chen, Y.Y. and Wei, X.J. (2014), Global research on soil contamination from 1999 to 2012: A bibliometric analysis. *Acta Agriculturae Scandinavica Section B-Soil and Plant Science*, **64** (5), 377-391.
32. Fu, H.Z., Long, X. and Ho, Y.S. (2014), China’s research in chemical engineering journals in Science Citation Index Expanded: A bibliometric analysis. *Scientometrics*, **98** (1), 119-136.
33. Niu, B.B., Hong, S., Yuan, J.F., Peng, S., Wang, Z. and Zhang, X. (2014), Global trends in sediment-related research in earth science during 1992-2011: A bibliometric analysis. *Scientometrics*, **98** (1), 511-529.
34. Aleixandre, J.L., Aleixandre-Tudo, J.L., Bolanos-Pizzaro, M. and Aleixandre-Benavent, R. (2013), Mapping the scientific research on wine and health (2001-2011). *Journal of Agricultural and Food Chemistry*, **61** (49), 11871-11880.
35. Elango, B., Rajendran, P. and Bornmann, L. (2013), Global nanotribology research output (1996-2010): A scientometric analysis. *PLoS One*, **8** (12), Article Number: e81094.
36. Liu, X.Y., Guo, Z.L., Lin, Z.J. and Ma, J. (2013), A local social network approach for research management. *Decision Support Systems*, **56**, 427-438.
37. Xu, Y.Y. and Boeing, W.J. (2013), Mapping biofuel field: A bibliometric evaluation of research output. *Renewable & Sustainable Energy Reviews*, **28**, 82-91.
38. Ma, J.P., Fu, H.Z. and Ho, Y.S. (2013), The top-cited wetland articles in Science Citation Index Expanded: Characteristics and hotspots. *Environmental Earth Sciences*, **70** (3), 1039-1046.
39. Cao, Y., Zhou, S.X. and Wang, G.B. (2013), A bibliometric analysis of global laparoscopy research trends during 1997-2011. *Scientometrics*, **96** (3), 717-730.
40. Liu, X.J., Zhan, F.B., Hong, S., Niu, B.B. and Liu, Y.L. (2013), Replies to comments on “a bibliometric study of earthquake research: 1900-2010”. *Scientometrics*, **96** (3), 933-936.
41. Zhuang, Y.H., Liu, X.J., Nguyen, T., He, Q.Q. and Hong, S. (2013), Global remote sensing research trends during 1991-2010: A bibliometric analysis. *Scientometrics*, **96** (1), 203-219.
42. Li, J.F., Zhang, Y.H., Veber, M., Wine, P.H. and Klasinc, L. (2013), Bibliometric analysis of research on secondary organic aerosols: A Science Citation Index Expanded-based analysis (IUPAC Technical Report). *Pure and Applied Chemistry*, **85** (6), 1241-1255.
43. Leng, Z.K., He, X.J., Li, H.P., Wang, D. and Cao, K. (2013), Olfactory ensheathing cell transplantation for spinal cord injury: An 18-year bibliometric analysis based on the Web of Science. *Neural Regeneration Research*, **8** (14), 1286-1296.
44. Kinshuk, Huang, H.W., Sampson, D. and Chen, N.S. (2013), Trends in educational technology through the lens of the highly cited articles published in the journal of *Educational Technology and Society*. *Educational Technology & Society*, **16** (2), 3-20.
45. Wang, H.J., Liu, M.Y., Hong, S. and Zhuang, Y.H. (2013), A historical review and bibliometric analysis of GPS research from 1991-2010. *Scientometrics*, **95** (1), 35-44.
46. Gau, L.S. (2013), Trends and topics in sports research in the Social Science Citation Index from 1993 to 2008. *Perceptual and Motor Skills*, **116** (1), 305-314.
47. Du, H.B., Wei, L.X., Brown, M.A., Wang, Y.Y. and Shi, Z. (2013), A bibliometric analysis of recent energy efficiency literatures: An expanding and shifting focus. *Energy Efficiency*, **6** (1), 177-190.
48. Fu, H.Z., Wang, M.H. and Ho, Y.S. (2013), Mapping of drinking water research: A bibliometric analysis of research output during 1992-2011. *Science of the Total Environment*, **443**, 757-765.
49. Fu, H.Z. and Ho, Y.S. (2013), Independent research of China in Science Citation Index Expanded during 1980-2011. *Journal of Informetrics*, **7** (1), 210-222.
50. Zhi, W. and Ji, G.D. (2012), Constructed wetlands, 1991-2011: A review of research development, current trends, and future directions. *Science of the Total Environment*, **441**, 19-27.
51. Liu, X.J., Zhan, F.B., Hong, S., Niu, B.B. and Liu, Y.L. (2012), A bibliometric study of earthquake research: 1900-2010. *Scientometrics*, **92** (3), 747-765.
52. Woon, W.L. and Madnick, S. (2012), Semantic distances for technology landscape visualization. *Journal of Intelligent Information Systems*, **39** (1), 29-58.
53. Ho, Y.S. (2012), Top-cited articles in chemical engineering in Science Citation Index Expanded: A bibliometric analysis. *Chinese Journal of Chemical Engineering*, **20** (3), 478-488.
54. Xu, Y.L., Li, M.J., Liu, Z.J., Xi, A.P., Zhao, C.X. and Zhang, J.Z. (2012), Scientific literature addressing detection of monosialoganglioside A 10-year bibliometric analysis. *Neural Regeneration Research*, **7** (10), 792-799.
55. Hung, K.C., Lan, S.J. and Liu, J.T. (2012), Global trend in articles related to stereotactic published in science citation index-expanded. *British Journal of Neurosurgery*, **26** (2), 258-264.
56. Su, H.N. and Lee, P.C. (2012), Framing the structure of global open innovation research. *Journal of Informetrics*, **6** (2), 202-216.
57. Magnone, E. (2012), An analysis for estimating the short-term effects of Japan’s triple disaster on progress in materials science. *Journal of Informetrics*, **6** (2), 289-297.
58. Wang, H.J., He, Q.Q., Liu, X.J., Zhuang, Y.H. and Hong, S. (2012), Global urbanization research from 1991 to 2009: A systematic research review. *Landscape and Urban Planning*, **104** (3-4), 299-309.
59. Yu, J.J., Wang, M.H., Xu, M. and Ho, Y.S. (2012), A bibliometric analysis of research papers published on photosynthesis: 1992-2009. *Photosynthetica*, **51** (1), 5-14.
60. Lou, Y.C. and Lin, H.F. (2012), Estimate of global research trends and performance in family therapy in Social Science Citation Index. *Scientometrics*, **90** (3), 807-823.
61. Su, H.N. (2012), Visualization of global science and technology policy research structure. *Journal of the American Society for Information Science and Technology*, **63** (2), 242-255.
62. Lee, P.C. and Su, H.N. (2012), Knowledge map of service innovation. in *PICMET’12: Proceedings - Technology Management for Emerging Technologies*, (Edited by Kocaoglu, D.F., Anderson, T.R., and Daim, T.U.), 3100-3112.
63. Zhuang, Y.H., Thuminh, N., Niu, B.B., Shao, W. and Hong, S. (2012), Research trends in non point source during 1975-2010. *Physics Procedia*, **33**, 138-143.
64. Huang, W.L., Zhang, B.G., Feng, C.P., Li, M. and Zhang, J. (2012), Research trends on nitrate removal: A bibliometric analysis. *Desalination and Water Treatment*, **50** (1-3), 67-77.
65. Chuang, K.Y., Olaiya, M.U. and Ho, Y.S. (2012), A bibliometric analysis of the *Polish Journal of Environmental Studies* (2000-2011). *Polish Journal of Environmental Studies*, **21** (5), 1175-1183.
66. Hamadicharef, B. (2012), Scientometric study of the *IEEE Transactions on Software Engineering* 1980-2010. *Proceedings of the 2011 2nd International Congress on Computer Applications and Computational Science Advances in Intelligent and Soft Computing*, **144**, 101-106.
67. Liu, X.J., Hong, S. and Liu, Y.L. (2012), A bibliometric analysis of 20 years of globalization research: 1990-2009. *Globalizations*, **9** (2), 195-210.
68. Sun, J.S., Wang, M.H. and Ho, Y.S. (2012), A historical review and bibliometric analysis of research on estuary pollution. *Marine Pollution Bulletin*, **64** (1), 13-21.
69. Xu, Z.H., Tang, T., Pan, D.S., Fan, D., Song, Z.Q. and Xue, H.L. (2011), Scientific literature addressing brain glioma in the Web of Science A 10-year bibliometric analysis. *Neural Regeneration Research*, **6** (32), 2537-2544.
70. Lv, P.H., Wang, G.F., Wan, Y., Liu, J., Liu, Q. and Ma, F.C. (2011), Bibliometric trend analysis on global graphene research. *Scientometrics*, **88** (2), 399-419.
71. Pei, R.M. and Porter, A.L. (2011), Profiling leading scientists in nanobiomedical science: Interdisciplinarity and potential leading indicators of research directions. *R & D Management*, **41** (3), 288-306.
72. Li, J.F., Wang, M.H. and Ho, Y.S. (2011), Trends in research on global climate change: A Science Citation Index Expanded-based analysis. *Global and Planetary Change*, **77** (1-2), 13-20.
73. Khan, M.A. and Ho, Y.S. (2011), Arsenic in drinking water: A review on toxicological effects, mechanism of accumulation and remediation. *Asian Journal of Chemistry*, **23** (5), 1889-1901.
74. Wang, M.H., Li, J.F. and Ho, Y.S. (2011), Research articles published in water resources journals: A bibliometric analysis. *Desalination and Water Treatment*, **28** (1-3), 353-365.
75. Liu, X.J., Zhang, L.A. and Hong, S. (2011), Global biodiversity research during 1900-2009: A bibliometric analysis. *Biodiversity and Conservation*, **20** (4), 807-826.
76. Woon, W.L., Zeineldin, H. and Madnick, S. (2011), Bibliometric analysis of distributed generation. *Technological Forecasting and Social Change*, **78** (3), 408-420.
77. Lin, H.W., Yu, T.C. and Ho, Y.S. (2011), A systemic review of the human papillomavirus studies: Global publication comparison and research trend analyses from 1993 to 2008. *European Journal of Gynaecological Oncology*, **32** (2), 133-140.
78. Han, J.S. and Ho, Y.S. (2011), Global trends and performances of acupuncture research. *Neuroscience and Biobehavioral Reviews*, **35** (3), 680-687.
79. Lee, P.C. and Su, H.N. (2011), Quantitative mapping of scientific research: The case of electrical conducting polymer nanocomposite. *Technological Forecasting and Social Change*, **78** (1), 132-151.
80. Zhuang, Y.H., Hong, S., Lin, H.Y. and Niu, B.B. (2011), Global environmental impact assessment research trends (1973-2009). *Procedia Environmental Sciences*, **11**, 1499-1507.
81. Chen, J.K.C., Ho, Y.S., Wang, M.H. and Wu, Y.R. (2011), Perspective research entrepreneurship output performance in 1992-2009. in *2011 Proceedings of PICMET 11: Technology Management in the Energy-Smart World* (*PICMET*), (Edited by Kocaoglu, D.F., Anderson, T.R., and Daim, T.U.).
82. Chang, C.C. and Ho, Y.S. (2010), Bibliometric analysis of financial crisis research. *African Journal of Business Management*, **4** (18), 3898-3910.
83. Sanni, S.A. and Zainab, A.N. (2010), Google Scholar as a source for citation and impact analysis for a non-ISI indexed medical journal. *Malaysian Journal of Library & Information Science*, **15** (3), 35-51.
84. Fu, H.Z., Ho, Y.S., Sui, Y.M. and Li, Z.S. (2010), A bibliometric analysis of solid waste research during the period 1993-2008. *Waste Management*, **30** (12), 2410-2417.
85. Su, H.N. and Lee, P.C. (2010), Mapping knowledge structure by keyword co-occurrence: A first look at journal papers in Technology Foresight. *Scientometrics*, **85** (1), 65-79.
86. Zhang, L.A., Wang, M.H., Hu, J. and Ho, Y.S. (2010), A review of published wetland research, 1991-2008: Ecological engineering and ecosystem restoration. *Ecological Engineering*, **36** (8), 973-980.
87. Zhang, G.F., Xie, S.D. and Ho, Y.S. (2010), A bibliometric analysis of world volatile organic compounds research trends. *Scientometrics*, **83** (2), 477-492.
88. Sagar, A., Kademani, B.S., Garg, R.G. and Kumar, V. (2010), Scientometric mapping of Tsunami publications: A citation based study. *Malaysian Journal of Library & Information Science*, **15** (1), 23-40.
89. Hu, J., Ma, Y.W., Zhang, L., Gan, F.X. and Ho, Y.S. (2010), A historical review and bibliometric analysis of research on lead in drinking water field from 1991 to 2007. *Science of the Total Environment*, **408** (7), 1738-1744.
90. Lee, P.C., Su, H.N. and Wu, F.S. (2010), Quantitative mapping of patented technology: The case of electrical conducting polymer nanocomposite. *Technological Forecasting and Social Change*, **77** (3), 466-478.
91. Mao, N., Wang, M.H. and Ho, Y.S. (2010), A bibliometric study of the trend in articles related to risk assessment published in Science Citation Index. *Human and Ecological Risk Assessment*, **16** (4), 801-824.
92. Lee, P.C. and Su, H.N. (2010), Investigating the structure of regional innovation system research through keyword co-occurrence and social network analysis. *Innovation-Management Policy & Practice*, **12** (1), 26-40.
93. Chen, J.K.C., Ho, Y.S., Wang, M.H. and Chen, Y.Y. (2010), Evaluation innovation research performance and trend of the worldwide. *PICMET 2010: Technology Management for Global Economic Growth*.
94. Su, H.N. and Lee, P.C. (2010), Network perspective of science and technology policy research community in Taiwan. *PICMET 2010: Technology Management for Global Economic Growth*.
95. Li, J.F., Zhang, Y.H., Wang, X.S. and Ho, Y.S. (2009), Bibliometric Analysis of Atmospheric Simulation Trends in Meteorology and Atmospheric Science Journals. *Croatica Chemica Acta*, **82** (3), 695-705.
96. Woon, W.L. and Madnick, S. (2009), Asymmetric information distances for automated taxonomy construction. *Knowledge and Information Systems*, **21** (1), 91-111.
97. Chen, R.C., Chu, D.C., Chiang, C.H. and Chou, C.T. (2009), Bibliometric analysis of ultrasound research trends over the period of 1991 to 2006. *Journal of Clinical Ultrasound*, **37** (6), 319-323.
98. Li, L.L., Ding, G.H., Feng, N., Wang, M.H. and Ho, Y.S. (2009), Global stem cell research trend: Bibliometric analysis as a tool for mapping of trends from 1991 to 2006. *Scientometrics*, **80** (1), 39-58.
99. Andres, A. (2009), Measuring academic research: How to undertake a bibliometric study. *Measuring Academic Research: How to Undertake a Bibliometric Study*, 1-169.
100. Su, H.N. and Lee, P.C. (2009), Dynamic and quantitative exploration on technology evolution mechanism: The case of electrical conducting polymer nanocomposite. *Proceedings of Picmet 09 - Technology Management in the Age of Fundamental Change, Vols 1-5*, 2372-2379.
101. Su, H.N. and Lee, P.C. (2009), Knowledge Map of Publications in Research Policy. *Proceedings of Picmet 09 - Technology Management in the Age of Fundamental Change, Vols 1-5*, 2423-2432.
102. Woon, W.L., Henschel, A. and Madnick, S. (2009), A framework for technology forecasting and visualization. *2009 International Conference on Innovations in Information Technology*, 201-205.
103. Li, T., Ho, Y.S. and Li, C.Y. (2008), Bibliometric analysis on global Parkinson's disease research trends during 1991-2006. *Neuroscience Letters*, **441** (3), 248-252.