The value of early research to new innovations

*Dr. Bor-Ming Jahn was an academician of Academia Sinica, Taiwan, and Distinguished Chair Professor of the Department of Geosciences, National Taiwan University. He conducted research on geochemistry and was the chief editor of Elsevier’s Journal of Asian Earth Sciences.

Renowned for his studies in the field of geochemistry, Dr. Bor-Ming Jahn independently or jointly published more than 200 peer-reviewed academic articles and has been cited over 14,800 times.

Among the articles written by Dr. Jahn, 54% are published in Elsevier’s Journals, including Lithos, Journal of Asian Earth Sciences, Precambrian Research, Chemical Geology, Tectonophysics and other high-impact journals.

Dr. Jahn’s research was in geochemistry, where he employed the principles and techniques of element and isotope geochemistry to explore important issues like the evolution of the upper mantle of the Earth, continental crust growth, genesis of magmatic rocks, geochemistry of sedimentary rocks and composition of the upper crust, evolution of Archean craton, continental crust subduction and ultrahigh pressure metamorphism, geochemistry of loess and paleoclimate change, and carbonate Pb-Pb dating. He had undoubtedly opened a new research field, inspiring numerous research articles on the subject. Published papers related to this new field have grown 20 times since 1999.

Elsevier’s Journals are pertinent to the field of Earth and planetary science

Approximately 54% of Dr. Bor-Ming Jahn’s articles and 80% of high impact articles on the research of loess geochemistry on paleoclimate change are published in Elsevier.

Articles published by Dr. Jahn between 2010–2015:

- 29% cite backfiles from before 1995
- 21% of cited backfiles come from Elsevier Journals

“Researchers should do more comprehensive reading about related and cross disciplinary subjects because earlier articles are valuable and catalysts for new areas of research.”

— Dr. Bor-Ming Jahn

Citing earlier works from ScienceDirect’s Pre–1995 Backfiles

Among the articles published by Dr. Bor-Ming Jahn between 2010 and 2015, 29% of them cited backfiles before 1995, with 21% of the cited backfiles coming from Elsevier’s Journals. His article entitled “Emplacement Ages, Geochemical and Sr-Nd-Hf Isotopic Characterization of Mesozoic to Early Cenozoic Granitoids of the Sikhote-Alin Orogenic Belt, Russian Far East: Crustal Growth and Regional Tectonic Evolution” among others, appeared in Elsevier’s Journal of Asian Earth Sciences.

Earlier papers and articles are very popular among other research fellows in the field of Earth and planetary science at National Taiwan University (NTU). Among the work published by the faculty members of NTU between 2010 and 2015, 25% of the citations are from papers published before 1995, and 20% of these citations rely on backfile papers published by Elsevier. “Researchers should do more comprehensive reading about related and cross disciplinary subjects because earlier articles are valuable and catalysts for new areas of research,” Dr. Jahn said.

Prior research continues to affect global research work after many years

According to analysis by Elsevier’s research team on the five top-10 world universities in Asia ranked by The Times, 13% of research papers contain citations from pieces published before 1995 and 14% of them are papers published by Elsevier. By understanding the importance of earlier articles—more specifically those before 1995—academics will be better able to achieve successful results.

In 2013, 21% of citations were to articles 245 years old with an increase of 30% since 1990, and 13% of citations were to articles 220 years old with an increase of 36% over the same period. Now that finding and reading relevant older articles is about as easy as finding and reading recently published articles, significant advances aren’t getting lost on the shelves and are influencing work worldwide for years after.

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*Though Dr. Jahn has passed away in 2016, we are grateful for the opportunity to highlight excerpts from a 2015 case study featuring Dr. Jahn’s impressive research work, and the ways that he has contributed to his field.