

Material definition of humanity

May 19 2017, by David Bradley

We define human history through the materials we use: the stone age, the bronze age, the iron age. Perhaps we now live in the plastic age. The next epoch may well be the nanocomposite age. Art and architecture, transport and healthcare, the industrial revolution, the electronics revolution, and beyond all depend on materials and the formulation of novel materials in particular for their evolution.

Writing in the *International Journal of Nuclear Knowledge Management*, Ganesh Surwase and B.S. Kademani of the Scientific Information Resource Division, at Bhabha Atomic Research Centre, in Mumbai, India, discuss the evolution of materials chemistry through a survey of almost 70000 research papers in the Scopus database published from the years 2008 to 2012.

The researchers have looked at annual growth of papers and citations, the distribution of sources of papers and citations at the international and national levels. They have also looked at publication efficiency index and activity index, the distribution of papers by institution and by which are the preferred journals in which such papers appear.

"Materials science is an interdisciplinary field involving the properties of matter and its applications to various areas of science and engineering," the team says. "This scientific field investigates the relationship between the structure of materials at atomic or molecular scales and their macroscopic properties. It incorporates elements of applied physics and chemistry."

The team reports exponential growth of the scientific literature across [materials science](#). Almost 70000 papers were published in the field receiving almost half a million citations. Asian countries lead the way in terms of numbers of papers published followed by Europe and North America with China the most prolific nation, followed by the USA, Japan, Germany, India, and South Korea.

More information: Surwase, G. and Kademani, B.S. (2017) 'Global research trends in materials chemistry: a scientometric perspective', *Int. J. Nuclear Knowledge Management*, Vol. 7, No. 1, pp.58–71.

Provided by Inderscience

Citation: Material definition of humanity (2017, May 19) retrieved 26 June 2024 from <https://phys.org/news/2017-05-material-definition-humanity.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.