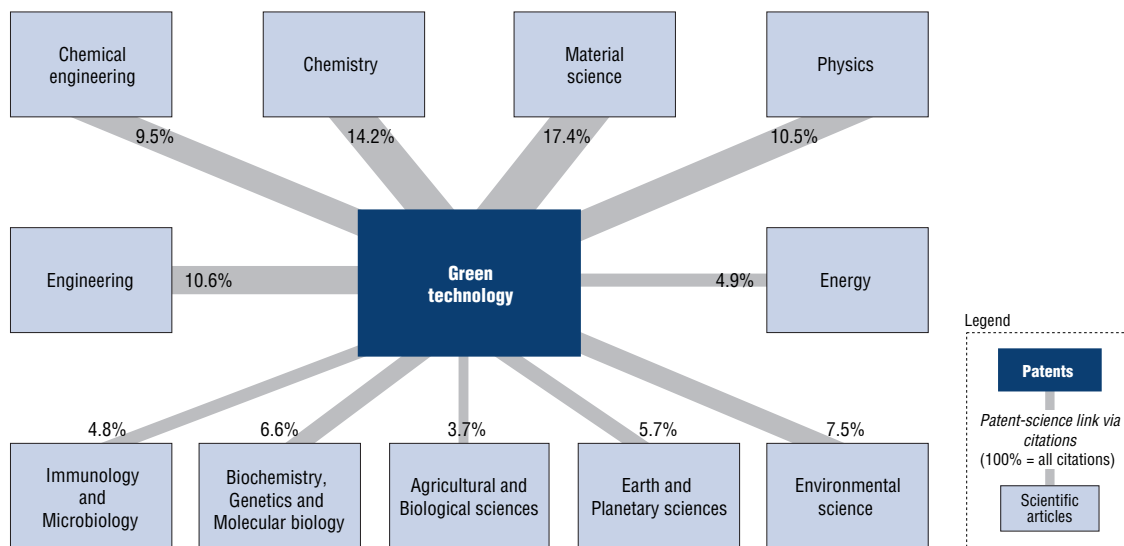


SCIENCE FOR “GREEN” INNOVATION

What are the links between innovation and the science base? A new indicator uses co-citation analysis and matches environmental patents and scientific publications. It shows that “green” innovations (patents) draw on a broad base of scientific knowledge.

The innovation-science link in “green” technologies, 2000-07



How to read this figure

Environmental technologies draw on scientific knowledge from material science (17.4%), chemistry (14.2%), physics (10.5%), etc. The co-citation links in the figure do not sum to 100% because a residual category “other fields” is not shown.

What is a “green” technology?

The list of environmental patent applications was generated through a new search algorithm developed by the OECD and the European Patent Office (EPO). Fields covered include: renewable energy; fuel cells and energy storage; alternative-fuelled vehicles; energy efficiency in the electricity, manufacturing and building sectors; and “clean” coal (including carbon capture and storage).

What is a patent-science link?

Analysis of the link between patents and scientific literature is based on the “non-patent literature” (NPL) listed as relevant references in patent documents. The NPL was matched with the scientific literature database (Scopus) which makes it possible to determine whether or not the NPL is a scientific article and to obtain bibliographical information unrecorded in the NPL.

Source: OECD calculations, based on Scopus Custom Data, Elsevier, July 2009; OECD, Patent Database, January 2010; and EPO, Worldwide Patent Statistical Database, September 2009.

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