

# Non-Patent Literature

Subjects: [Information Science & Library Science](#) | [Others](#)

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Non-patent literature is defined as scientific publications, technical standards, conference proceedings, clinical trials, books, manuals, technical or research reports, or any other technical scientific material which is cited in patents to show what has already been published and disseminated about the invention to be patented, in order to justify its novelty. These documents are considered technically relevant to the patent granting procedure and are cited along with other patents related to the same subject matter.

[Patents](#)[Citations](#)[References](#)[Impact](#)[Non patent literature](#)[Scholarly publications](#)[NPL](#)

Patents, as the main exponent of technological development, contain very valuable information that is used by researchers and analysts to obtain data such as the evolution of a technology over time, the inference of institutions and companies in the development of a technological sector, the relationships between technologies, or possible future trends. However, the importance of patents is also projected in the academic–scientific field, because these documents are important indicators of scientific productivity in universities and research centres; they are mechanisms that measure the performance of scientific activity from technology transfer [\[1\]](#). In the same way, the presence of scientific references in patents, and their quantification and analysis, are excellent indicators to describe this science–technology link, being key to analyse this process of technology transfer.

In this respect, numerous studies have focused on measuring the impact of these scientific references on patents, considering them to be an indicator of value. Pioneering authors in this field [\[2\]](#)[\[3\]](#)[\[4\]](#)[\[5\]](#)[\[6\]](#) have already used bibliometric procedures to quantify these data and value the transmission of knowledge from science to industry. In this way, parameters related to the degree of scientific intensity or dependence of technological sectors (by average NPL citations) were identified, as well as indicators of scientific concentration and diversification for each sector.

However, the importance of these citations also lies in aspects related to the evaluation of scientific production; according to Plaza [\[7\]](#), from the analysis of these citations, information is obtained about the authors/researchers, scientific institutions, and journals cited in the patents, etc. Moreover, the fact that they have been cited in these documents would add value to the influence of that publication in the technological field.

In this sense, the format and standardization of these references will become important for the establishment of metrics that allow their quantification and analysis, in order to evaluate this “technological” factor. In this way, the policies and guidelines established by each organization regarding how patent applications should be presented

will be important, because it is through their procedure manuals that they establish the recommended formats for citing these documents.

On the other hand, the use of metadata and persistent identifiers associated with these references, such as DOI and ORCID, among others, will be fundamental to improve bibliographic control, because they allow the unequivocal localization of the references, with standardised formats that can be identified by any source, in order to carry out later bibliometric analysis.

To find out more about the characteristics of these citations in the patents, it is necessary to explore the initial phase of the process of granting the patents where they are presented after the Prior Art search.

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## References

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