Springer Nature Nano

In January 2017, Springer Nature launched a new version of Nano, a research solution for Nano-technology researchers, adding a number of novel features powered by UNSILO. The updated Nano research solution will leverage UNSILO's intelligent language processing to provide a unique collection of dedicated nanoscience data with deep linking to the most relevant papers for further research.

UNSILO worked closely with Springer Nature's product team to deliver the API services that power the final Nano research solution, and as part of this project, UNSILO developed a novel classification algorithm that outperforms the three most popular classification algorithms today. We trained our new Classification Engine on thousands of articles in nano-specific journals to learn what nano researchers are interested in, and the engine now builds and maintains the most comprehensive collection of nano-related articles in existence. Furthermore, almost every Nanomaterial known to science is linked to recent and relevant articles that discuss that specific material and the specific material properties discussed in said article..

Over the past three years, UNSILO and Springer Nature have been working closely with scientists and subject matter experts from a range of disciplines to build new and robust AI powered services for researchers. These new tools have the promise to dramatically speed up the pace at which research is disseminated and applied, but they must meet the quality standards that researchers have come to expect from any Springer Nature Research product. We are proud to contribute to a product that satisfies all these requirements.

Automatic Concept Extraction & Topic Classification

- **UNSILO identifies nano-related articles in any domain.**
  Every day, the UNSILO engine is fed hundreds of new articles published in a wide range of journals from many different publishers. The UNSILO Topic Classification Engine identifies all the articles relating to nano research, and includes them in the Nature Nano Index.

- **UNSILO allows experts to focus on curating knowledge ontologies.**
  The concept extraction and topic classification process is entirely automated, requiring no human intervention, and reduces the need for manual content selection by subject-matter experts (SMEs), thus freeing up resources for content analysis and the curation of the World's most extensive ontology of nanomaterials.

- **UNSILO analyses documents from many different sources.**
  The documents scanned and classified include articles from many sources and in multiple formats, such as Microsoft Word, Adobe PDF, Microsoft EML, Microsoft Powerpoint, and numerous XML formats and standards.

How UNSILO works

UNSILO scans your content using novel text intelligence software

UNSILO extracts the most important phrases

UNSILO analyses their meaning

UNSILO find similar things, events, and ideas, even when they have different names

UNSILO works with or without existing taxonomies

UNSILO needs no manual training. It trains itself on your corpus

UNSILO reduces the need for in-house subject-matter experts or IT specialists

Linking to Non-Journal Content

UNSILO Content Linking: The UNSILO Concept Extraction is not limited to academic articles, but can be applied to any relevant document type.

Discussing Concepts in Context

UNSILO Connected Concepts: When a user searches for a concept, UNSILO shows a set of connected concepts for each article search result. These are the related concepts, that the article describe as semantically connected. For example, one article may discus "Graphene Nano-ribbons" in the context of "Thermal Conductivity", another in the context of "Spin-Orbit Coupling".

About UNSILO

UNSILO is a Danish company founded in 2012, working with the world's largest academic publishers. UNSILO has been Springer's preferred strategic content enrichment partner since 2014, including providing related article links to every article or chapter on SpringerLink.

What our Partners say

Thomas Mager, Executive Vice President at Springer Nature, said: "We have worked closely with academia and industry throughout Nano's development. Partnering with the AI team at UNSILO has enabled us to significantly scale-up the breadth of content available to Nano users – their technology will allow us to automatically index data from leading journals, across all publishers, which should be of great value to researchers."