Nano

The Nature Research solution for nanotechnology

- Centralized nanotech-related articles in one space
- Insights into the content that is closely related to the search input
- Curated nanomaterial summaries from top journals worldwide

A nanomaterial summary includes


Nanostructure Type


Size


Composition


Properties


Applications


Preparation


Characterization


Toxicity

Patent Claims

User benefits from nano.nature.com

Find nanotechnology information precisely without looking into the full text

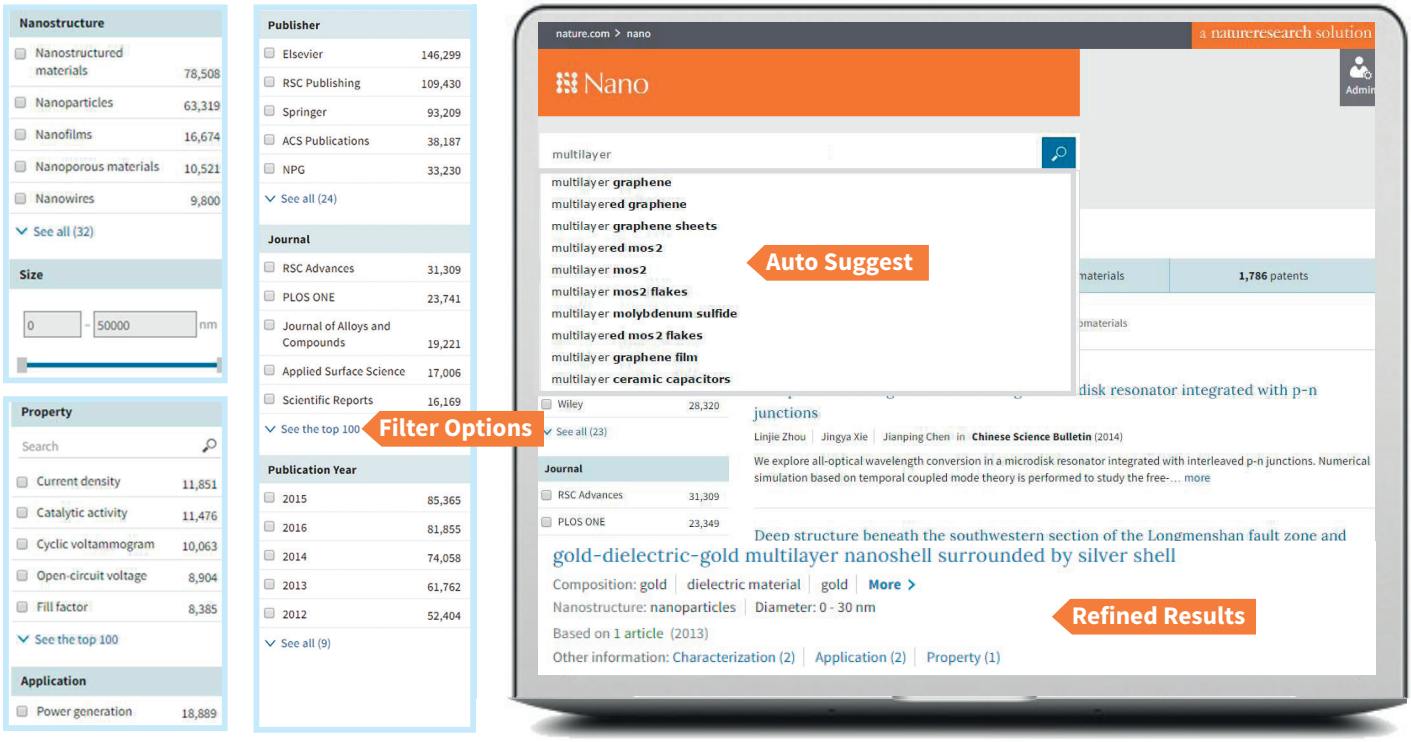
Information on similar nanomaterials is compiled into summaries from multiple sources

Preparation steps for nanomaterials can be easily found and visualized

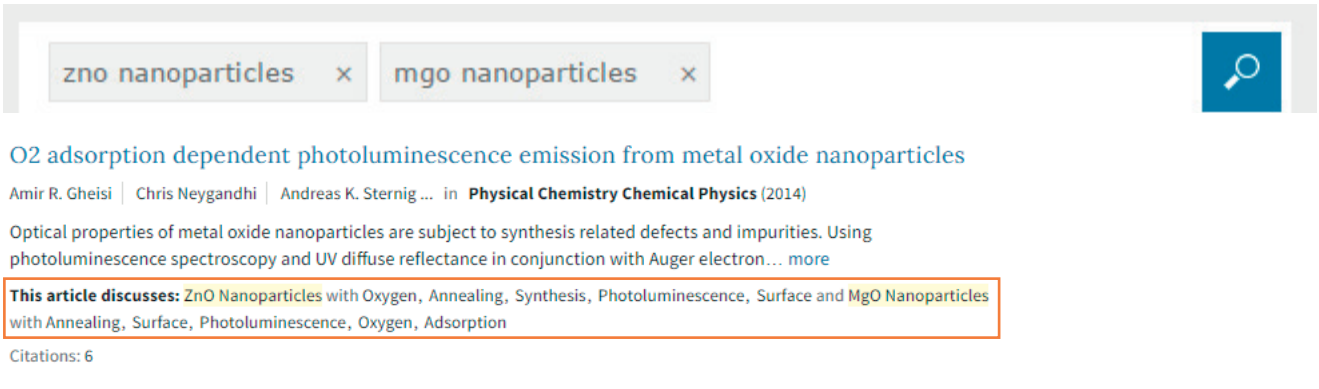
Nanomaterials with specific properties and application can be quickly enlisted

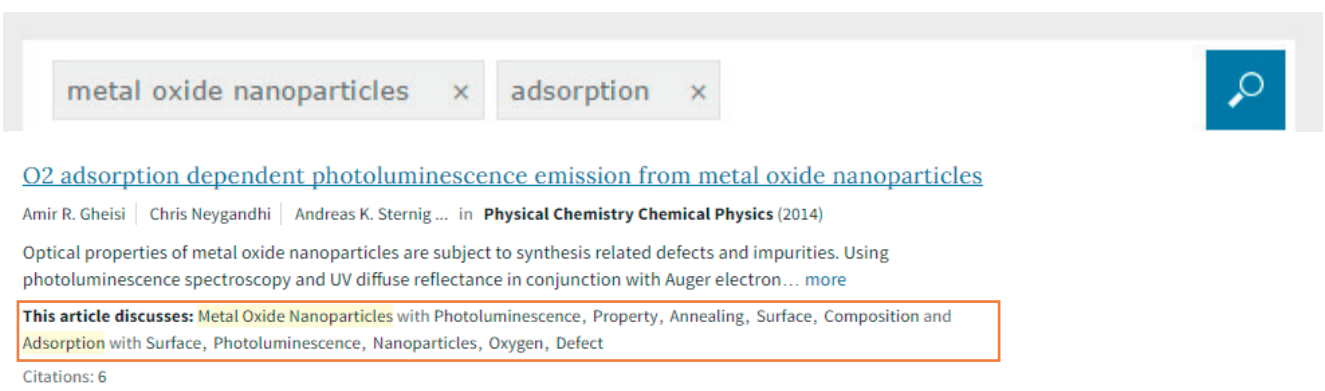
Smart Search

Nano combines the key features of a database and an Abstract & Indexing discovery tool supported by nano-specific functionality.



Gain insight into the content that is closely related to the search input. Insights from the same article could be different based on the search inputs.





Manually curated summaries of nanomaterials — continuously updated by nanotechnology experts

Data referring to similar nanomaterials is compiled from high-impact journals and patents into well structured, comprehensive summaries. For example, gold nanoparticles:

gold nanoparticles

Composition: gold
Nanostructure: nanoparticles | Diameter: 0 - 30 nm
Based on 1668 articles and 23 patents (most recent: 2017)
Other information: Characterization (1588) | Preparation (1094) | Property (684) | Toxicity (401) | Application (365)

Properties

Property	Value	Source
electrical conductivity	~ 0.012 S/cm [~ 1.2 S/m]	Glen DeLoid *et al.* 2014
electrical resistance	1,470 Ω	Yilmaz, Cihan *et al.* 2014
electrical resistance	11.9 Ω	Yilmaz, Cihan *et al.* 2014
electrical resistivity	0.000006 Ω·m	Yilmaz, Cihan *et al.* 2014

Characterization methods

Method	Dependent on	Source
Raman spectroscopy	–	Zhao, Min *et al.* 2015 Marioara Avram *et al.* 2012 S. L. Smitha *et al.* 2012
UV-Vis-NIR optical spectroscopy	doping charge density	A. Manjavacas and F.J. García de Abajo 2014
UV-Vis-NIR optical spectroscopy	media aging time	A. Stojiljković *et al.* 2016

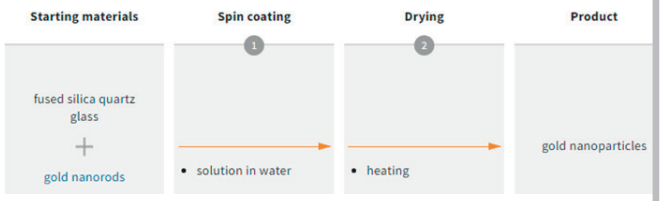
Toxicity and biological effects

Test outcome	Biological system	Source
acceleration of cell migration	Rat Glioma 2 cell	Rahman, Wan *et al.* 2011
acceleration of cell migration	bovine aortic endothelial cell	Rahman, Wan *et al.* 2011
accumulate at the plasma membrane	HeLa cells	Li Shang *et al.* 2014
accumulation in gut	Daphnia magna	Kyle D. Gilroy *et al.* 2014

Preparation

Method 16

Type: Physical formation **Source:** Collins, Sean S. E. *et al.* 2015 (*ACS Nano*)



Applications

Application	Area	Source
bisphenol A detection	sensors (excluding biosensors)	Mei, Zhanlong *et al.* 2013
blood clotting	medicine/veterinary	Hee Kyeong Kim *et al.* 2013
cancer cell detection	diagnostics	Xiangyan Zhou *et al.* 2014

Patent claims

Patent	Claims
PCT patent WO/2014/045055, 27 Mar 2014	The nanomaterial is claimed together with its method of preparation A specific method of preparation is claimed for the described nanomaterial
PCT patent WO/2014/039821, 13 Mar 2014	A specific method of preparation is claimed for the described nanomaterial
U.S. patent US20120244322, 27 Sep 2012	The nanomaterial is claimed

Please note: selected key data is displayed to fit the page width.
Full data can be found at https://nano.nature.com/nano/GR-M21079.

What our Nano advisory board members say?

Nano is an emerging and very powerful research tool. It allows researchers to obtain and compare the characteristics of the full spectrum of nanomaterials, as well as the composition and preparation methods for nano-enabled devices. It will provide nano-scientists with the clarity and deep understanding that the Mendeleev table once provided to chemists. **- Dr. Jens Kroeger, Chief Technology Officer, Raymor and NanoIntegris**

Nanotechnology research and development has been rising on a sharp slope across virtually all scientific disciplines and industries. The result has been a rapidly growing body of information in disparate places that is not readily and efficiently accessible. Researchers need a multidisciplinary database that brings this vast body of data together in an organized and usable way in one place. Working together with other scientists to develop a research solution that can meet this need, through Nano's External Advisory Board, has made me confident that this is a product that can deliver huge value to the research community. **- Dr. Omid Farokhzad, Associate Professor, Harvard Medical School**

Key Benefits

- **Unique** research solution specific to nanotechnology
- **Manually created nanomaterial summaries** from top peer-reviewed journals — evaluated by nanotechnology experts
- **Links to the original data source**
- **Gain quick insight** into the content that is closely related to the search input
- **Up-to-date content** thanks to regular additions
- **Efficient search results** due to precise search tools and filter options

Availability and Access

Springer Nature's bespoke business models offer complete flexibility. Delivered to all types of organizations whatever their size – from small departments to consortia with multiple users across locations. **Request your Nano product trial today.**

Visit **springernature.com/nano** to request a trial or get more information about Nano.

nano.nature.com

SPRINGER NATURE

A38327 | COR-24C