Optics and Photonics Thesaurus

The Numbers:
Preferred terms: 2415
Synonyms: 5219
Top terms: 12
Terms having "Related Term": 765
Terms with Synonyms: 1560
Hierarchy levels: 7
Thesaurus use cases

- Replace legacy indexing codes
- Provide search and browse by topic
- Display similar articles
- Identify reviewer candidates
- Perform trend analysis
- Perform targeted marketing

Thesaurus in simple search

OSA | The Optical Society

Search Results

808 results (filtered) of 7360 total results

New topics are available for filtering your search. See "Topics" below.

Filter the Results List

- Publications
  - All
  - Journals
  - Proceedings

Search Results

- Spectral properties of nanoengineered Ag/AgI multilayer rods fabricated by electron beam lithography
  - Wang, Li; Xiong, Wen; Nishijima, Yoshito; Yokota, Yuki; Ueno, Koie; Misawa, Hiroaki; Qiu, Jianrong; Bl, Gang
  - 2011 Applied Optics 50(28) 5600-5605
  - View: HTML | PDF
Find Reviewer candidates based on article similarity

Submitted Manuscript → Published Papers → Authors of published papers → Reviewer History (including conflicts) → Reviewers selected

Similarity driven in part by thesaurus

What do the successes have in common?
- Purely under-the-hood profiling of content by topic area.

The failures?
- Requires human users to accept or impose conceptual groupings over the thesaurus terms.
For trend analysis and targeted marketing, need concepts (high level or targeted) such as **Optical materials** or **Materials for energy applications**

OSA has several existing schemes that could be imposed on a thesaurus:

- Journal ToCs
- Technical Groups/Divisions
- Legacy indexing codes

**Challenges**

- Organizational agreement
- Multidisciplinary nature of Optics and Photonics
- Resources (staff bandwidth, training documents, SMEs)
Journal EiCs refine and recast their journal ToCs (2+ year process)

Each journal has ~30 ToC categories, with some overlap among journals; 140 total categories

Reasonable organizational buy-in for the refined ToC categories

Initial mapping of thesaurus to ToC completed; refinement in process

Revise tools for developing, managing, assessing new approach

Curated ToC categories for grouping thesaurus terms (examples)

<table>
<thead>
<tr>
<th>Atmospheric and Oceanic Optics</th>
<th>Nanophotonics, Metamaterials, and Photonic Crystals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atomic and Molecular Physics</td>
<td>Nonlinear Optics</td>
</tr>
<tr>
<td>Coherence, Statistical Optics, and Scattering</td>
<td>Optical Communications and Interconnects</td>
</tr>
<tr>
<td>Fourier Optics, Image and Signal Processing</td>
<td>Optical Design and Fabrication</td>
</tr>
<tr>
<td>Fundamental Electromagnetics and Mathematical Optics</td>
<td>Optical Devices and Detectors</td>
</tr>
<tr>
<td>Holography, Gratings, and Diffraction</td>
<td>Optical Fibers</td>
</tr>
<tr>
<td>Illumination Design</td>
<td>Optical Materials</td>
</tr>
<tr>
<td>Imaging Systems, Microscopy, and Displays</td>
<td>Optoelectronics</td>
</tr>
<tr>
<td>Instrumentation, Measurement, and Optical Sensors</td>
<td>Photovoltaics</td>
</tr>
<tr>
<td>Integrated Optics</td>
<td>Physical Optics</td>
</tr>
<tr>
<td>Lasers, Optical Amplifiers, and Laser Optics</td>
<td>Plasmonics</td>
</tr>
<tr>
<td>Light-emitting Diodes</td>
<td>Quantum Optics</td>
</tr>
<tr>
<td>Materials for Energy Applications</td>
<td>Solar Energy</td>
</tr>
<tr>
<td>Medical Optics and Biotechnology</td>
<td>Solar Fuels</td>
</tr>
</tbody>
</table>