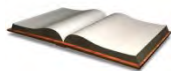


**STN User Meeting - France
October 2021**

NPL: A Hidden Treasure

What is Nonpatent Literature (NPL)



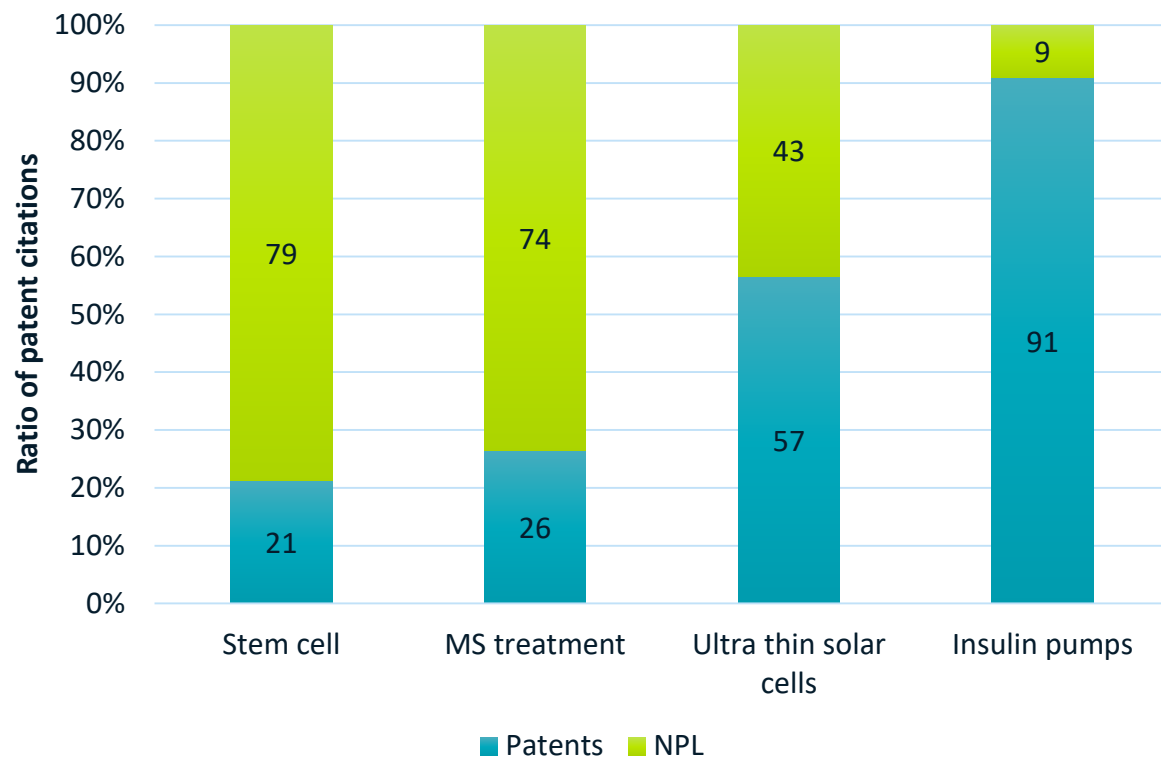
Document types included

- Journal articles
- Electronic-only journals
- Conference articles
- Reports
- Reviews
- Books
- Dissertations
- Errata
- Web pre-prints
- Letters to the editor
- News announcements
- Product reviews
- Biographies
- Book reviews
- Editorials
- Miscellaneous items
- ...

Why NPL and when to use it



NPL Citations in Patents



The portion of cited NPL is dependent on a variety of factors, e.g.

- Topicality
- Applicability
- Fundamental vs applied research
- Market establishment

Source: Patent citation search for different scientific and technological areas on STN in DWPI und DPCI for patents with a priority date after 01.01.2010.
Search: October 2020.

NPL – Subject Coverage on STN

- INSPEC, COMPENDEX, 1MOBILITY, TEMA,...
→ Controlled vocabulary, IPC

- REGISTRY/CAplus, CASREACT, RAPRA, ENCOMPLIT,...
→ Controlled vocabulary, CAS Registry numbers, chemical structures, physical properties

- MEDLINE, EMBASE, Derwent Drug File, AGRICOLA, BIOSIS,...
→ Controlled vocabulary, Derwent Drug Registry Name, physical properties, organisms

NPL search on STN – Medicine

Example: Insulin pump

To many results in EMBASE?

=> **FILE EMBASE**

=> **S INSULIN PUMP**

L1 8751 INSULIN PUMP

=> **S INSULIN PUMP/CT**

L2 7458 INSULIN PUMP/CT

=> **S *INSULIN PUMP/CT**

L3 2461 *INSULIN PUMP/CT

Use major term (*) to refine your search results to a main aspect

EMBASE is extensively indexed. Controlled vocabulary can help to focus your search.

Caution: Using controlled vocabulary (/CT) restricts your search but may not be sufficient.

NPL search on STN – Medicine

Example: Insulin pump

Combine controlled terms for more precise searching: Linking terms (L-terms)

=> FILE EMBASE

=> S INSULIN PUMP+NT/CT(L) AM/CT

L4 82 INSULIN PUMP+NT/CT(L) AM/CT

AM: Adverse device effect

For L-terms the proximity operator (L) is used.



"Regular insulin and a syringe from ampoules and vials of medicines" by wuestenigel is licensed under CC BY 2.0

L4 82 ANSWERS EMBASE COPYRIGHT (c) 2020 Elsevier B.V. All rights reserved on STN

TI Review of a commercially available hybrid closed-loop insulin-delivery system in the treatment of Type 1 diabetes.

CT
 . . .
 *i n s u l i n p u m p : A M , a d v e r s e d e v i c e e f f e c t ; a p p e n d i c i t i s
 *i n s u l i n p u m p : A M , a d v e r s e d e v i c e e f f e c t ; b a c t e r i a l a r t h r i t i s
 *i n s u l i n p u m p : A M , a d v e r s e d e v i c e e f f e c t ; h y p e r g l y c e m i a
 *i n s u l i n p u m p : A M , a d v e r s e d e v i c e e f f e c t ; r a s h
 . . .

NPL search on STN – Technology

Example: Ultra-thin solar cells

International patent classifications (IPCs)

=> **FILE INSPEC**

=> **S (Ultrathin or Ultra thin) (5A) Solar cell**
L8 921 (ULTRATHIN OR ULTRA THIN) (5A) SOLAR CELL

=> **S L8 not PATENT/DT**
L9 921 L8 NOT PATENT/DT

=> **S H01L0031-04/IPC AND (Ultrathin or Ultra thin)**
L10 1741 H01L0031-04/IPC AND (ULTRATHIN OR ULTRA THIN)

=> **s L10 not PATENT/DT**
L11 1741 L10 NOT PATENT/DT

=> **S L9 or L11**
L12 1797 L9 OR L11

INSPEC: IPCs are assigned to NPL

H01L31/04:

Semiconductor devices sensitive to infra-red radiation, light, electromagnetic radiation [...]

→ adapted as photovoltaic [PV] conversion devices

876 additional, potentially relevant hits!

NPL search on STN – Numeric Property Search (NPS)

=> FILE COMPENDEX

=> S ULTRA THIN(2A) SOLAR CELL (25A) LEN<=300 NM

L1 13 ULTRA THIN(2A) SOLAR CELL (25A) LEN<=300 NM

Here the length (/LEN) field* is used to search for the thickness of ultra-thin solar cells (≤ 300 nm).

=> D KWIC

L1 ANSWER 1 OF 13 COMPENDEX COPYRIGHT 2020 EEI on STN.

AB . . . However if the solar cells absorber thickness is simply reduced, the end-of-life (EOL) performance advantage of ultra-thin cells compared to bulk counterpart will only happen at very high fluences. By combining thinner absorber with efficient light trapping structures, **ultra-thin solar cells** can have superior EOL performances (efficiency, W/kg, W/msup2) at moderate fluences. Recent advances have shown that ~ **200nm** thin GaAs cells with a nanostructured back mirror can reach ~ 20% BOL efficiency. . . .

Proximity operators can be used just like in a typical text search.

*Size (/SIZ) may also be used as a synonym for Length (/LEN).

NPL search on STN – Numeric Property Search (NPS)

=> FILE COMPENDEX

=> S ULTRA THIN(2A) SOLAR CELL (25A) LEN<=300 NM

L2 13 ULTRA THIN(2A) SOLAR CELL (25A) LEN<=300 NM

Flexible search input options

=> S ULTRA THIN(2A) SOLAR CELL (25A) LEN<=0.0000003

L3 13 ULTRA THIN(2A) SOLAR CELL (25A) LEN<=0.0000003 M

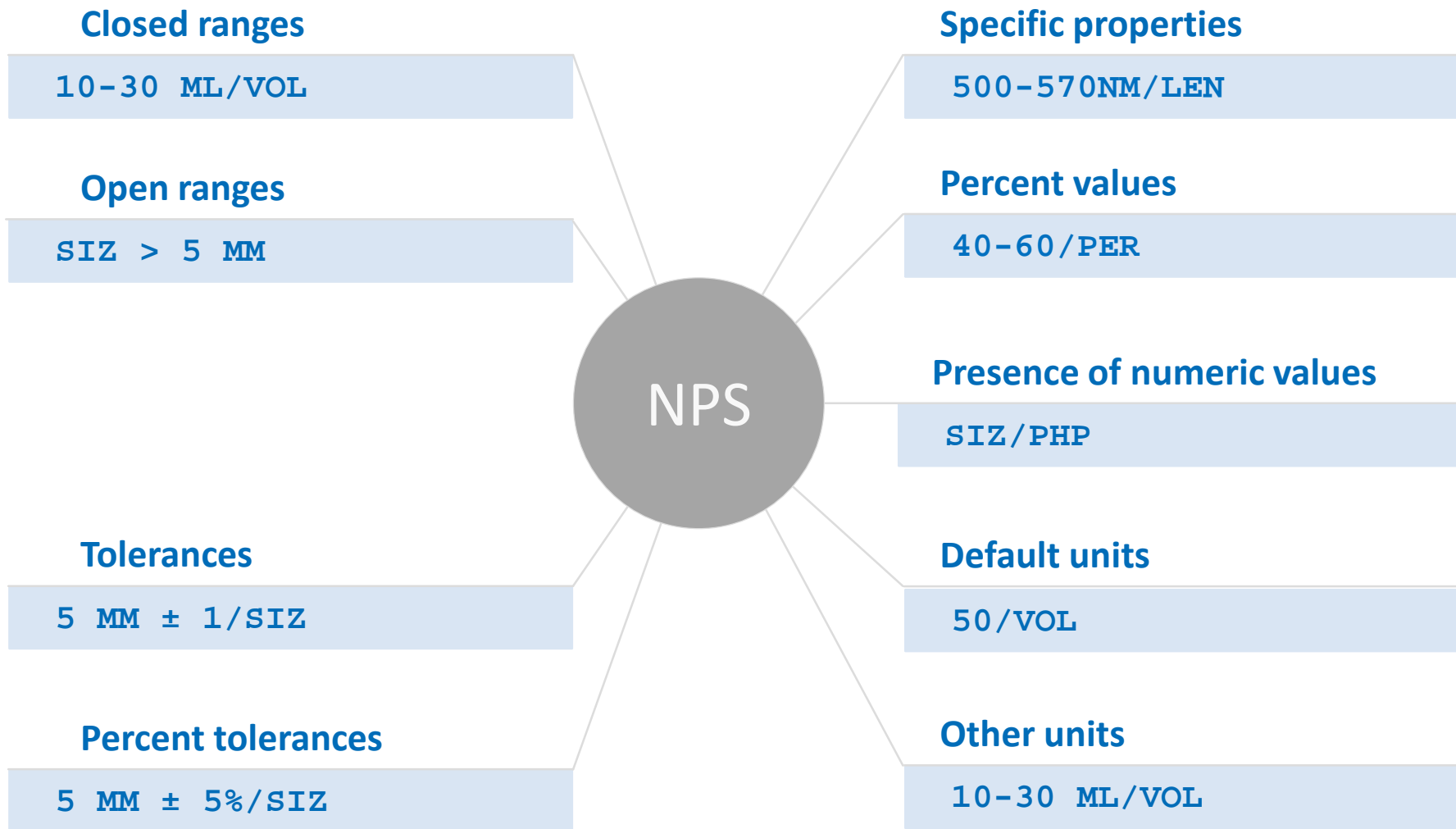
The base unit for length is meter.

=> S ULTRA THIN(2A) SOLAR CELL (25A) LEN<=3.0E-7 M

L4 13 ULTRA THIN(2A) SOLAR CELL (25A) LEN<=3.0E-7 M

Scientific notation is supported.

NPL search on STN – NPS expressions



Key takeaways

- Don't underestimate the importance of NPL!
 - Importance of NPL: relates to timeliness and applicability
 - High quality NPL databases on one platform
 - Broad and deep content coverage
 - Database-specific features for precise searching
- NPS – an awesome to have feature
 - Search for specific units, percentages or numeric values within text
 - 36 databases with NPS on STN available
 - Precise searching by combining NPS and keyword search

CONTACT

CAS

help@cas.org
cas.org

FIZ Karlsruhe

helpdesk@fiz-karlsruhe.de
stn-international.de