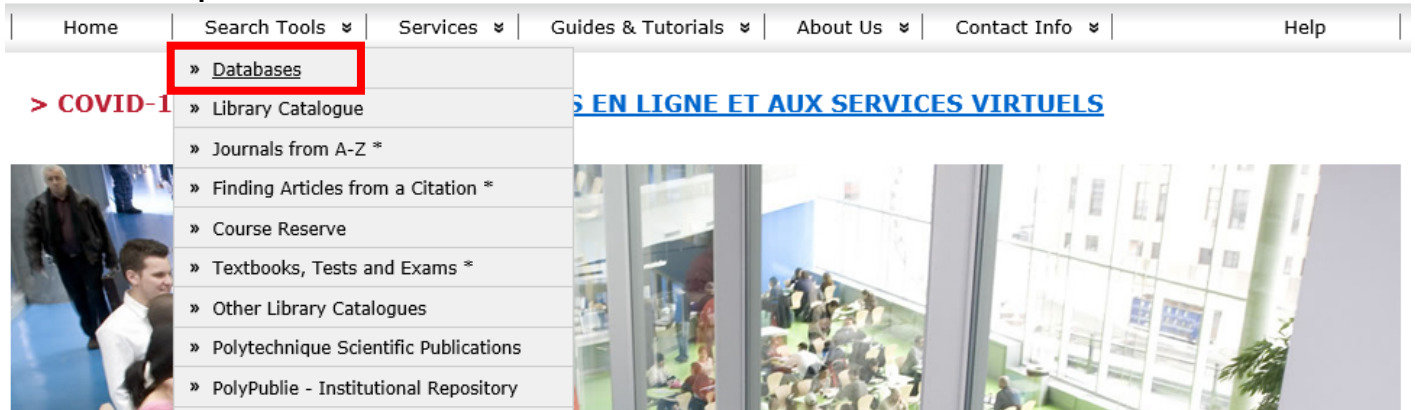
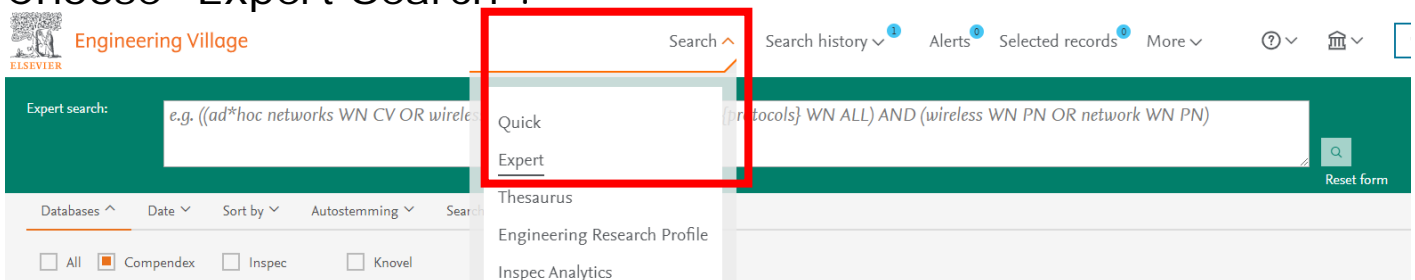


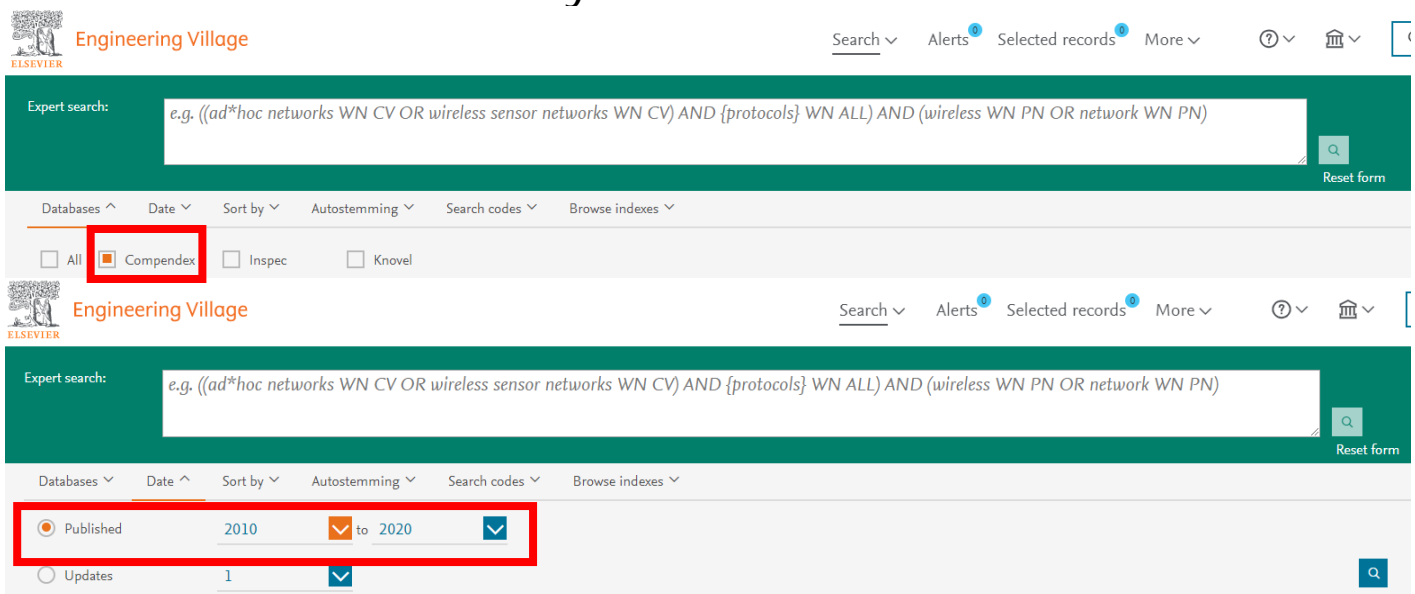
The Compendex database can be found in our Databases list.



Choose "Expert Search".

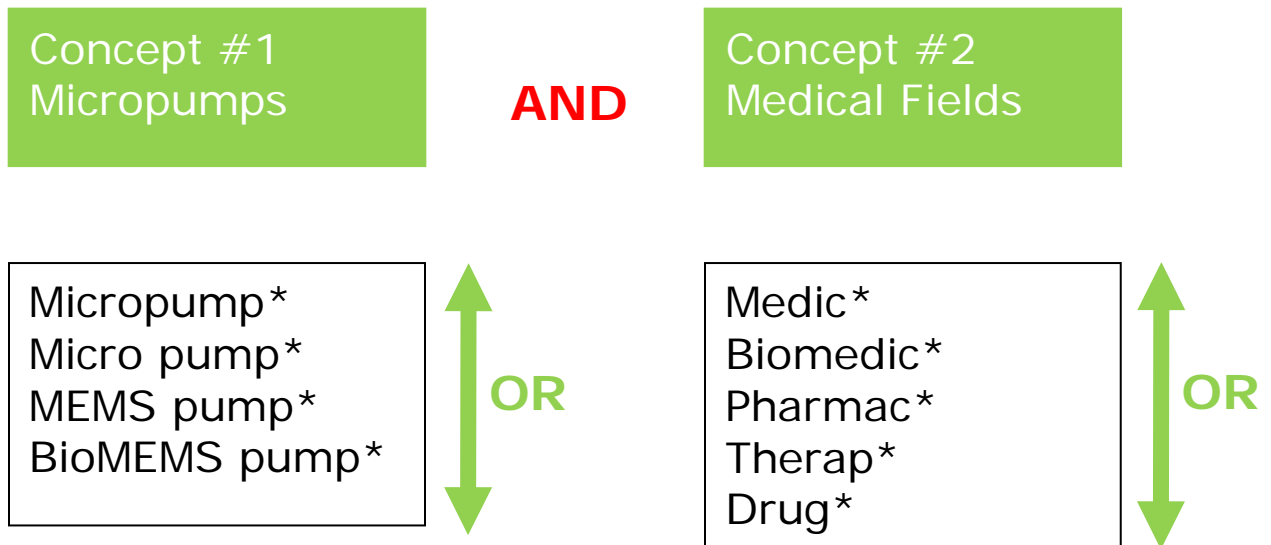


Ensure that only the Compendex database is selected and limit the search for the last 10 years.



For a literature review search in Compendex, limit the search to **1 or 2 concepts**.

Example of Subject:
Prototype of a micropump [implanted] for the purpose of anti-epileptic drug delivery.



Use OR to combine the words within the same concept. Write each concept in parentheses.

Engineering Village

Search Search history Alerts Selected records More

Expert search: (micropump* OR "micro pump*" OR "micro pumps*" OR MEMS pump* OR BioMEMS pump*)wn KY AND (medic* OR biomedic* OR pharmac* OR therap* OR drug*)wn KY AND (review* OR survey* OR "state of the art")

Reset form

Combine the concepts using AND. Add wn KY after each concept to search in the Subject/Title/Abstract fields.

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Search Search history Alerts Selected records More

Expert search: (micropump* OR "micro pump*" OR "micro pumps*" OR MEMS pump* OR BioMEMS pump*)wn KY AND (medic* OR biomedic* OR pharmac* OR therap* OR drug*)wn KY AND (review* OR survey* OR "state of the art")

Reset form

End the search by adding: **AND (review* OR survey* OR "state of the art")** to retrieve the literature reviews.

The search gave 48 results. Click on Detailed to evaluate the relevance of each result.

This literature review, containing 286 references, seems interesting.

BioMEMS in drug delivery

Nuxoll, Eric ¹ ✉

Source: *Advanced Drug Delivery Reviews*, v 65, n 11-12, p 1611-1625, November 15, 2013; ISSN: 0169409X, E-ISSN: 18728294; DOI: 10.1016/j.addr.2013.07.003; Publisher: Elsevier B.V.

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Abstract: The drive to design micro-scale **medical** devices which can be reliably and uniformly mass produced has prompted many researchers to adapt processing technologies from the semiconductor industry. By operating at a much smaller length scale, the resulting biologically-oriented microelectromechanical systems (**BioMEMS**) provide many opportunities for improved **drug** delivery: Low-dose vaccinations and painless transdermal **drug** delivery are possible through precisely engineered microneedles which pierce the skin's barrier layer without reaching the nerves. Low-power, low-volume **BioMEMS pumps** and reservoirs can be implanted where conventional **pumping** systems cannot. **Drug** formulations with geometrically complex, extremely uniform micro- and nano-particles are formed through micromolding or with microfluidic devices. This **review** describes these **BioMEMS** technologies and discusses their current state of implementation. As these technologies continue to develop and capitalize on their simpler integration with other **MEMS**-based systems such as computer controls and telemetry, **BioMEMS** impact on the field of **drug** delivery will continue to increase. © 2013 Elsevier B.V.

(286 refs)

Main heading: **Controlled drug delivery**