

Si Nanoneedles with Flexible Bio-Substrates for Efficient Bio-Integrations

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- Biomedical Engineering
- Micro & Nanotechnologies

Keywords:

- Biomechanical Engineering
- Biomedical Engineering
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- Molecular Imaging
- Molecular Probes
- Silicon
- Substrate

Researchers at Purdue University have developed Si nanoneedles fabricated with various kinds of mechanically flexible bio-related substrates, providing flexibility, stretchability, and biodegradability. The transparent, ultrathin nanoneedles serve as an ideal platform for minimally invasive penetration into biological cells. This technology would help researchers or instructors who want to image, probe, and/or deliver molecules into/from biological systems for measuring important electrical and/or mechanical properties.

Advantages:

- Flexible/stretchable
- Minimally invasive
- Biodegradable

Potential Applications:

- Imaging
- Probing
- Molecule transfer

People:

- Lee, Chi Hwan (Project leader)
- Kim, Dong Rip

Intellectual Property:

Application Date: March 18, 2021

Type: NATL-Patent

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