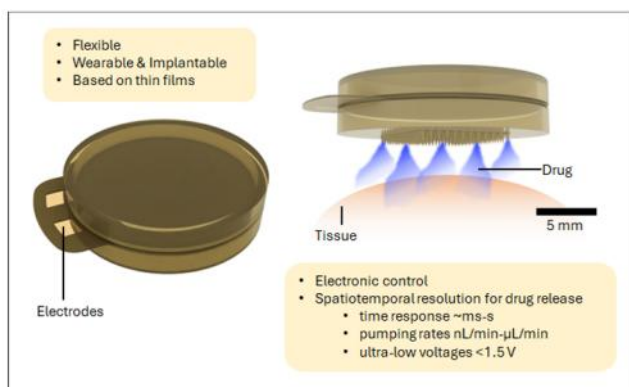


Stacked thin-film electrode electroosmotic pump

A thin, wearable or implantable electroosmotic pump driving fluid through a high-density array of via holes, offering customisable, low-profile drug delivery and diagnostic sampling with laser fabrication.

Applications: Wearable drug delivery systems, transdermal or subcutaneous therapies, continuous monitoring and diagnostic sampling, high-density microfluidic integration



Features

Laser micromachining fabrication process

A wearable or implantable electroosmotic pump based on a stacked sequence of thin-film electrodes separated by polymer interlayers

Benefits

Fabricated entirely through femtosecond laser micromachining, the device enables controlled fluid transport for drug delivery and sampling with excellent scalability

Instead of embedded microfluidics, the pump drives fluid through a high-density array of via holes exposed at the electrode surface, offering low-thickness, highly versatile, and easily customisable design

Features	Benefits
Low overall thickness and flexible materials	Ensures ease of installation and comfort for implantable or wearable use
Low flow rate operation	Allows precise dosing and sampling for sensitive medical needs

Awaiting patent and Available for

- Co-development
- Consulting
- Licensing

To find out more, contact enquiries@innovation.ox.ac.uk and quote the project number.

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