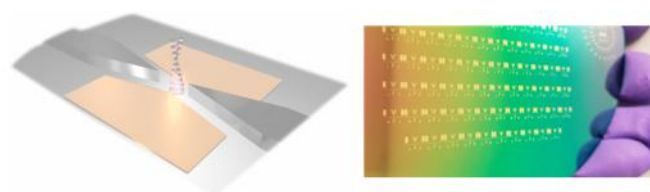


On-chip plasmonic platform for rapid DNA sequencing

Coupling on-chip photonics to nanopores creates a plasmonic platform capable of information storage and biosensing.

Optical and electronic reading and writing of a biomolecule in a plasmonic sensing region – hundreds of such sensors can be created on a wafer.

Applications: Data storage, Biosensing, Nanoscale Sensors



Features	Benefits
Coupling on-chip photonics to nanopores to create a write/erase scheme	Precise physiochemical reactions can be initiated, triggered and sensed
Capability for dielectrophoretic concentrating and trapping	Significantly enhancing sensing/storage volumes to concentrations that are clinically relevant
A completely novel data storage architecture, using polymers that are modified when exposed to photons	Permits writing without synthesis of molecules (such as DNA) requiring separate, rate limiting, processes. Also permits reading without current challenges of external noise

Awaiting patent and Available for

- Co-development
- Consulting
- Licensing

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

The above information is provided 'as is' without conditions or warranties. Oxford University Innovation makes no representation and gives no warranty that it is the owner of the intellectual property rights in the technology described. © Oxford University Innovation Ltd 2026, Buxton Court, 3 West Way, Oxford, OX2 0JB.