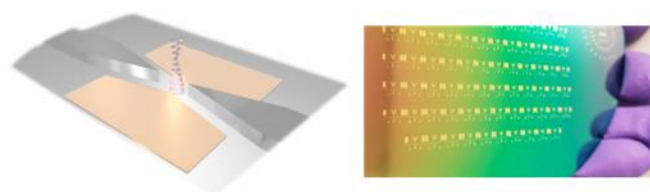


# On-chip plasmonic platform for rapid DNA sequencing

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

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To find out more, contact [enquiries@innovation.ox.ac.uk](mailto:enquiries@innovation.ox.ac.uk) and quote the project number.

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