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UNI FR

Sensors in the Biophysics Group

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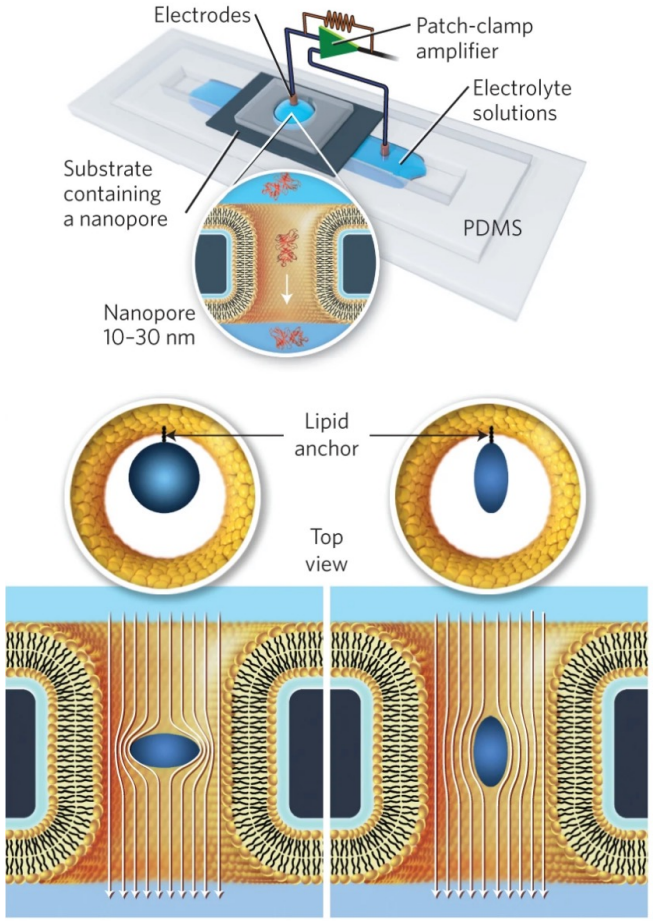
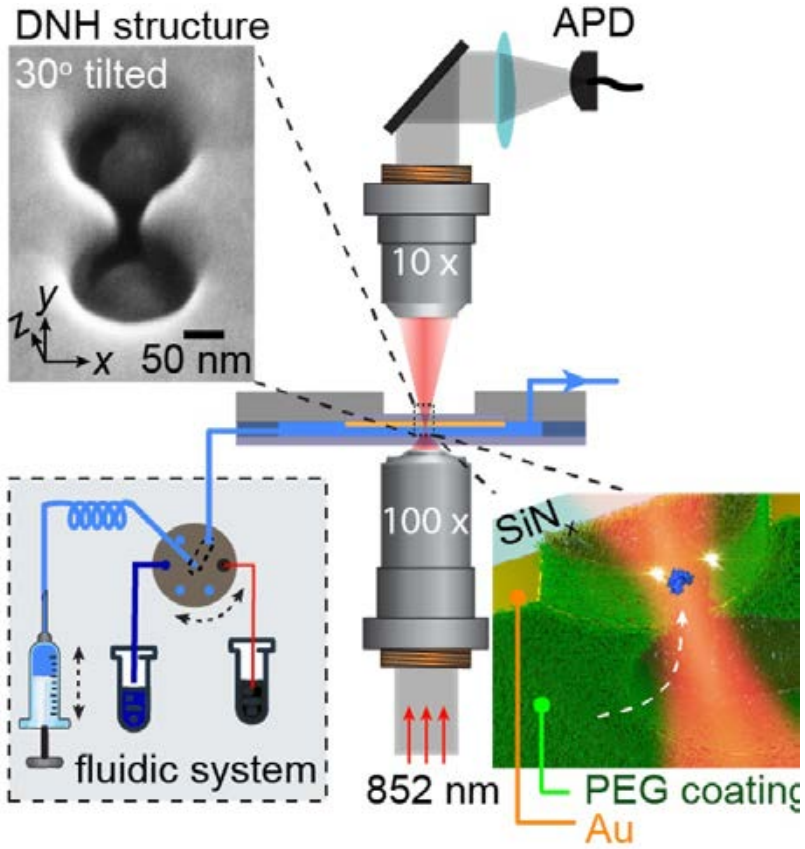
Sensor-related Research in the Biophsyics Group

Nanopores



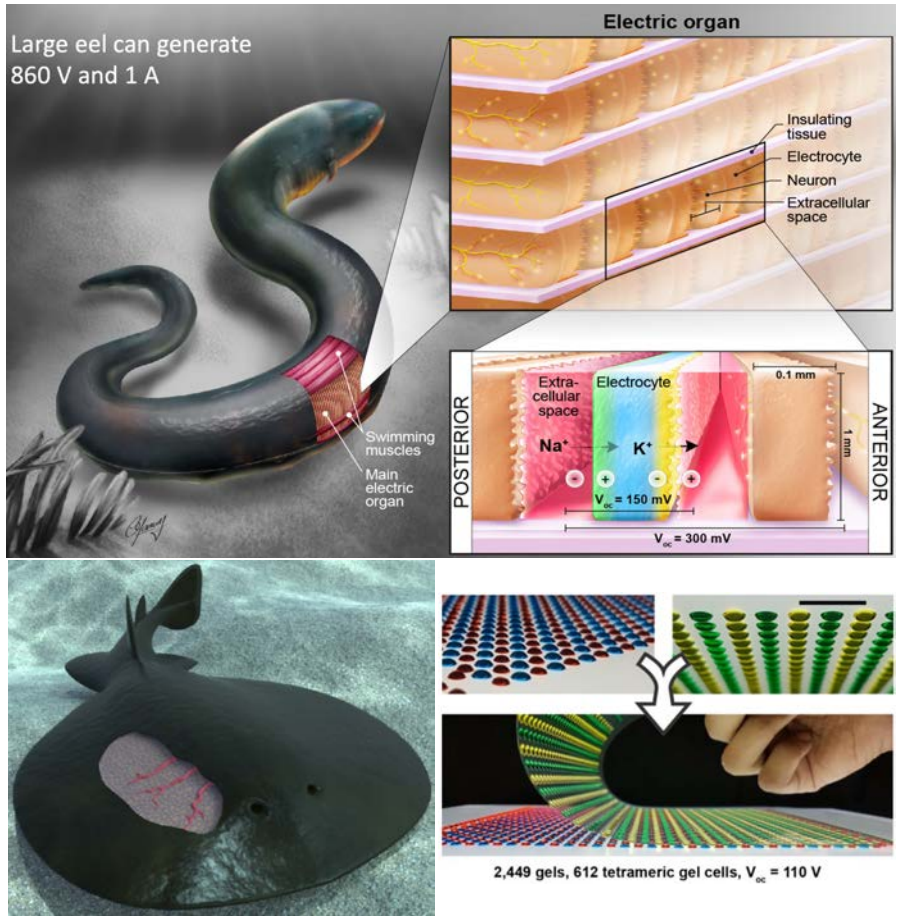
Nat. Nanotechnol. ***12***, 360, **2017**

Plasmonic Optical Tweezers



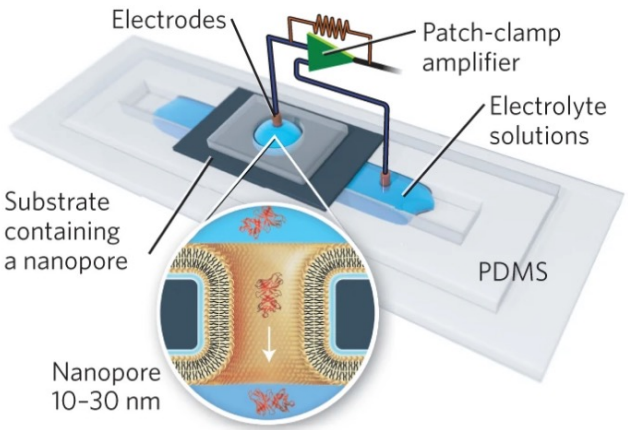
arXiv:2107.06407

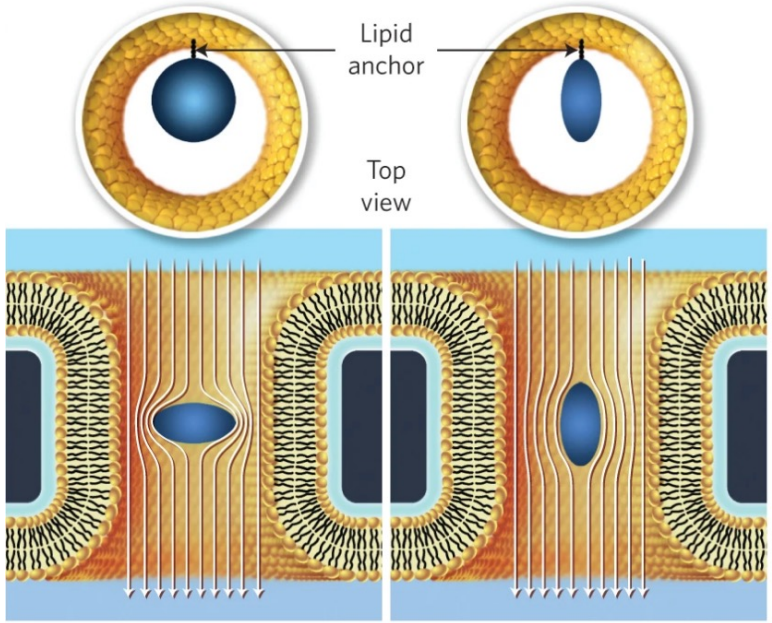
Artifical Electric Organ

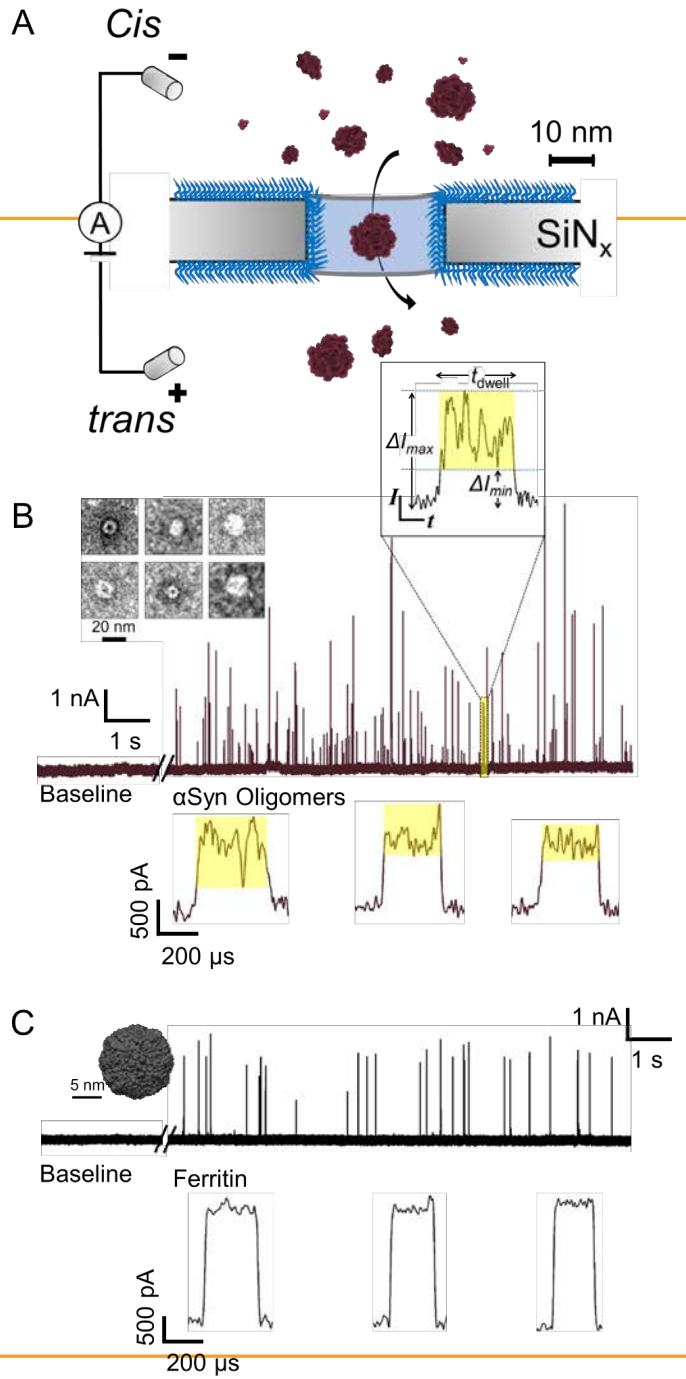


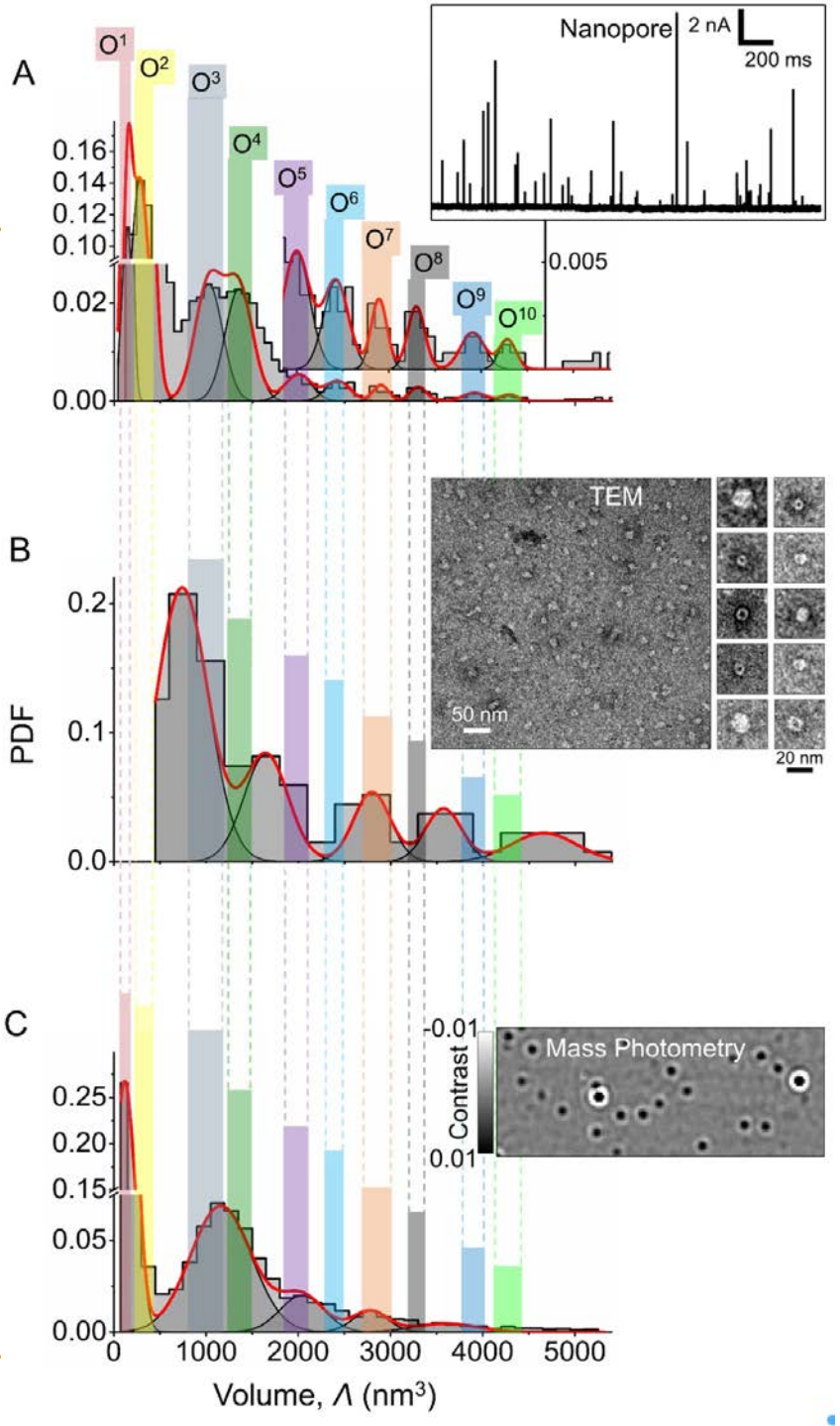
Nature **552**, 214-218, **2017**

Nanopore Sensing

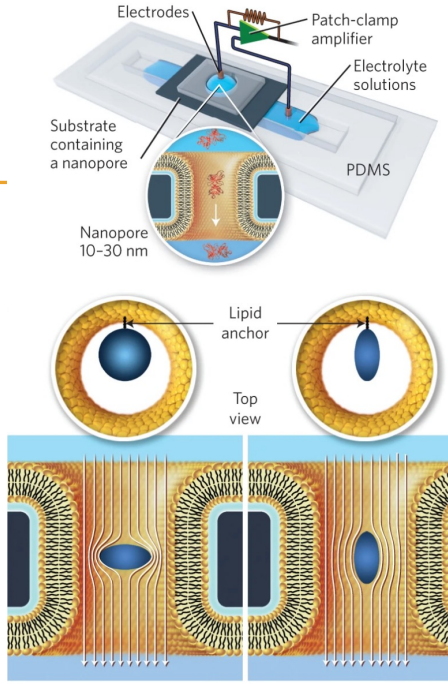






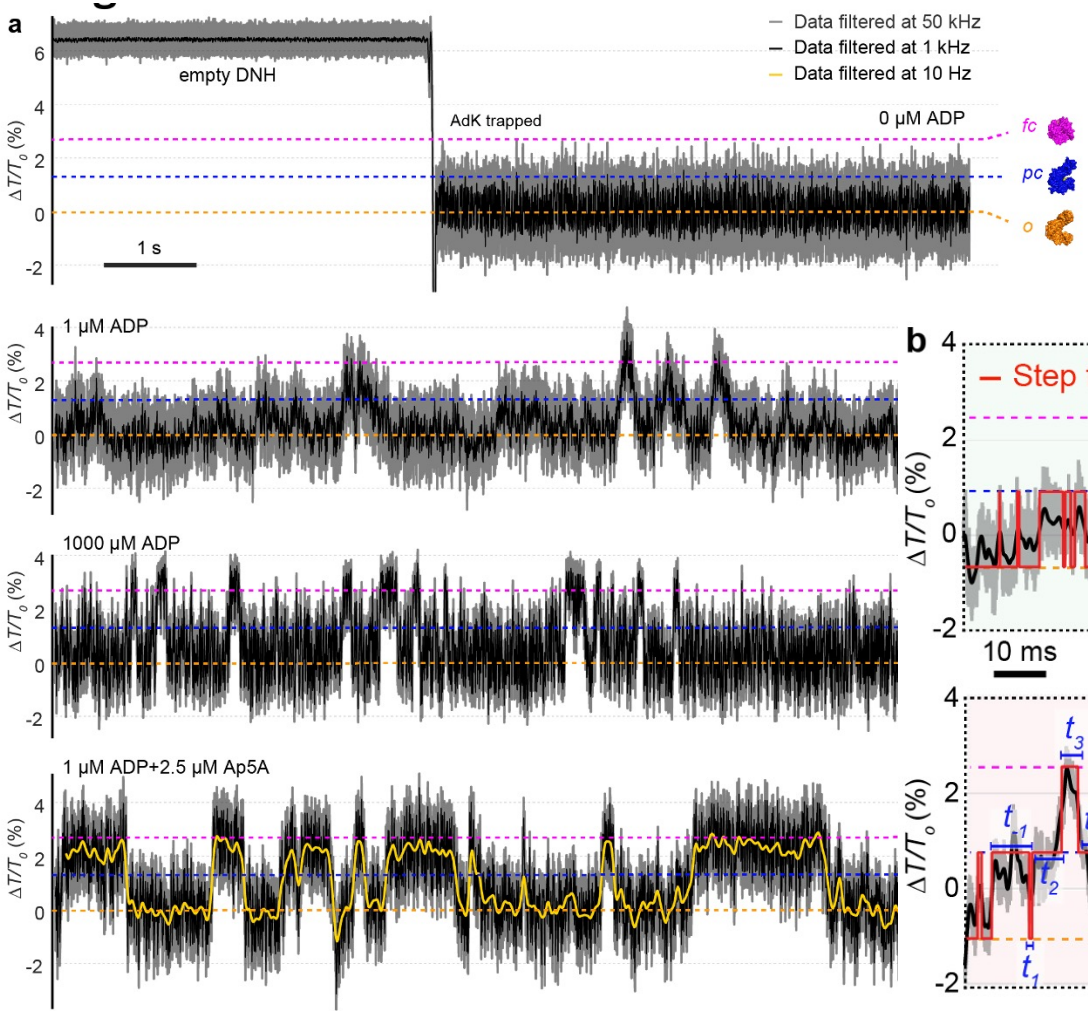


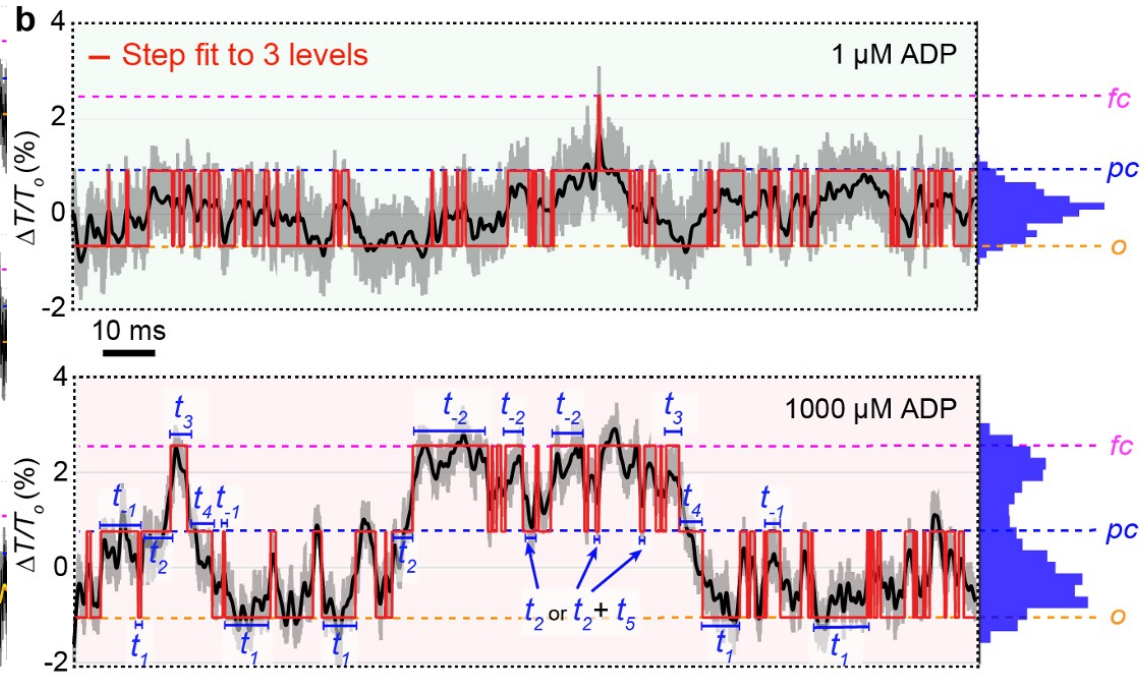
Nanopore Sensing

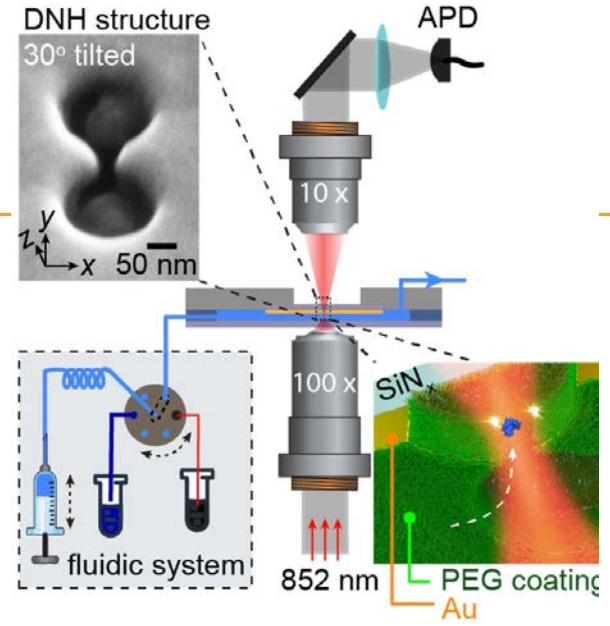


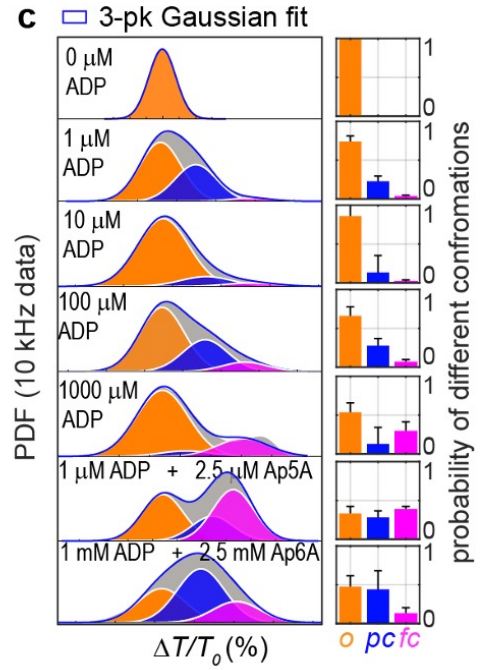
- Fingerprinting of single proteins
- Affinity assays
- Enzyme activity assays
- Monitoring protein complex formation
- Monitoring amyloid aggregation

Plasmonic Optical Tweezers

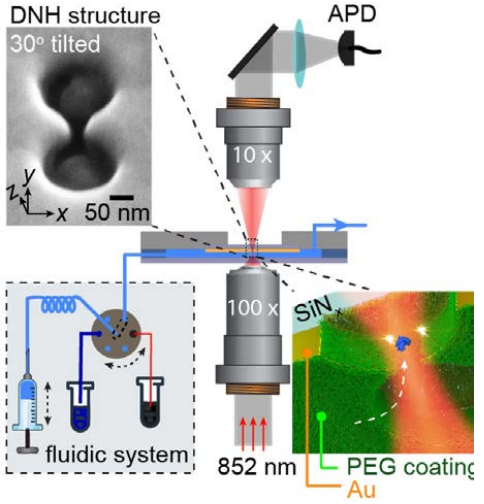








Plasmonic Optical Tweezers



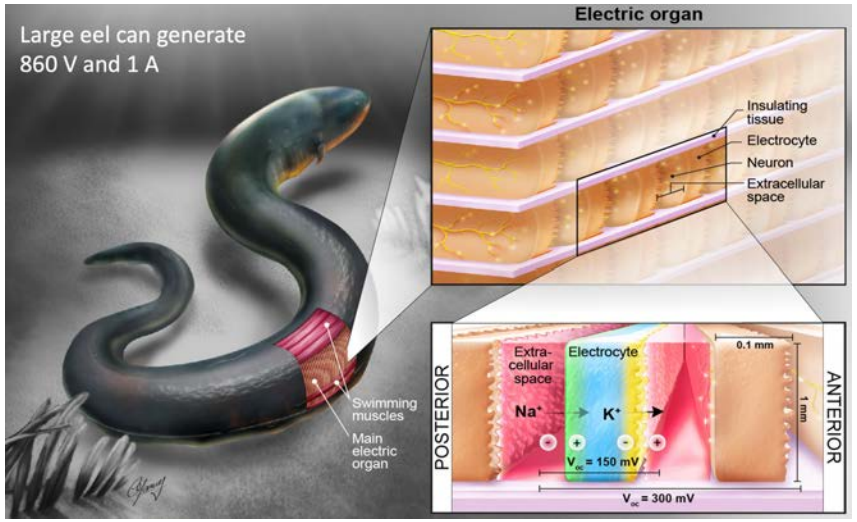
Determination of molecular weight

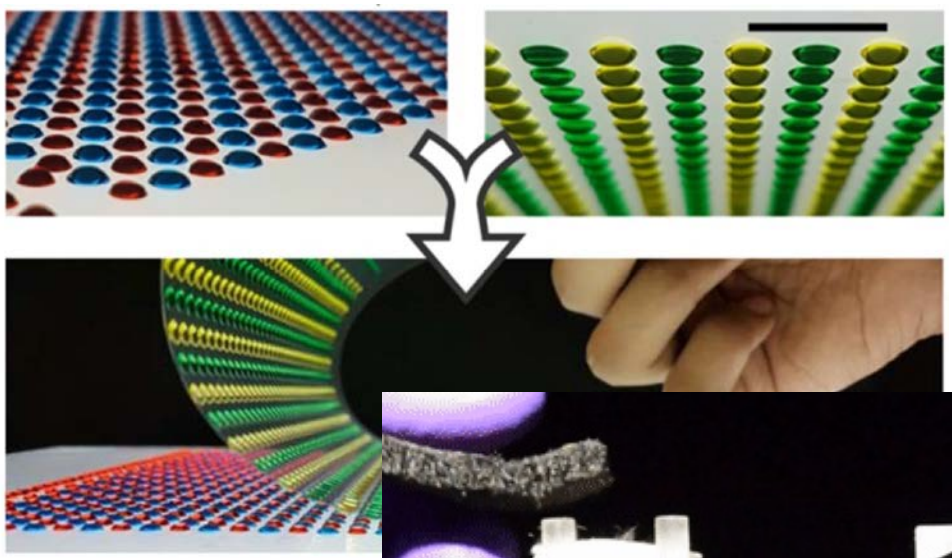
- Detection of proteins
- Protein identification
- Monitoring the formation of protein complexes
- Monitoring protein aggregation

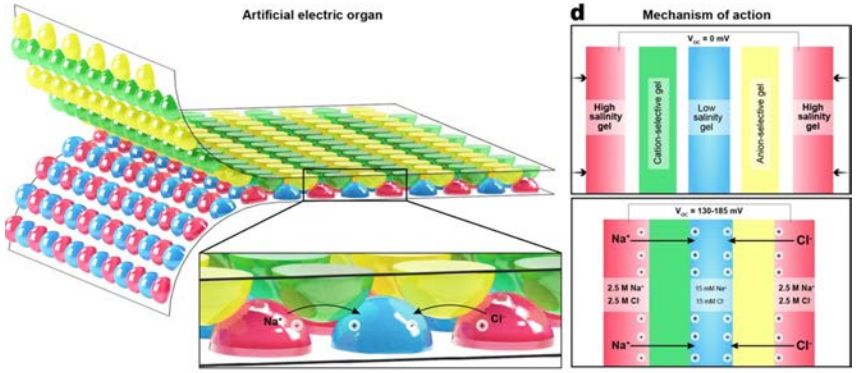
Monitoring Protein Conformational Dynamics

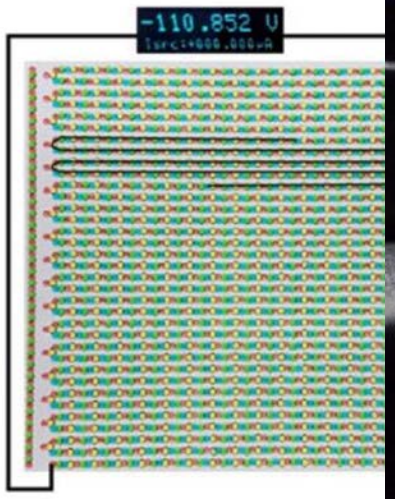
- Drug screening
- Collaboration with industrial producer of enzymes

Artificial Electric Organs









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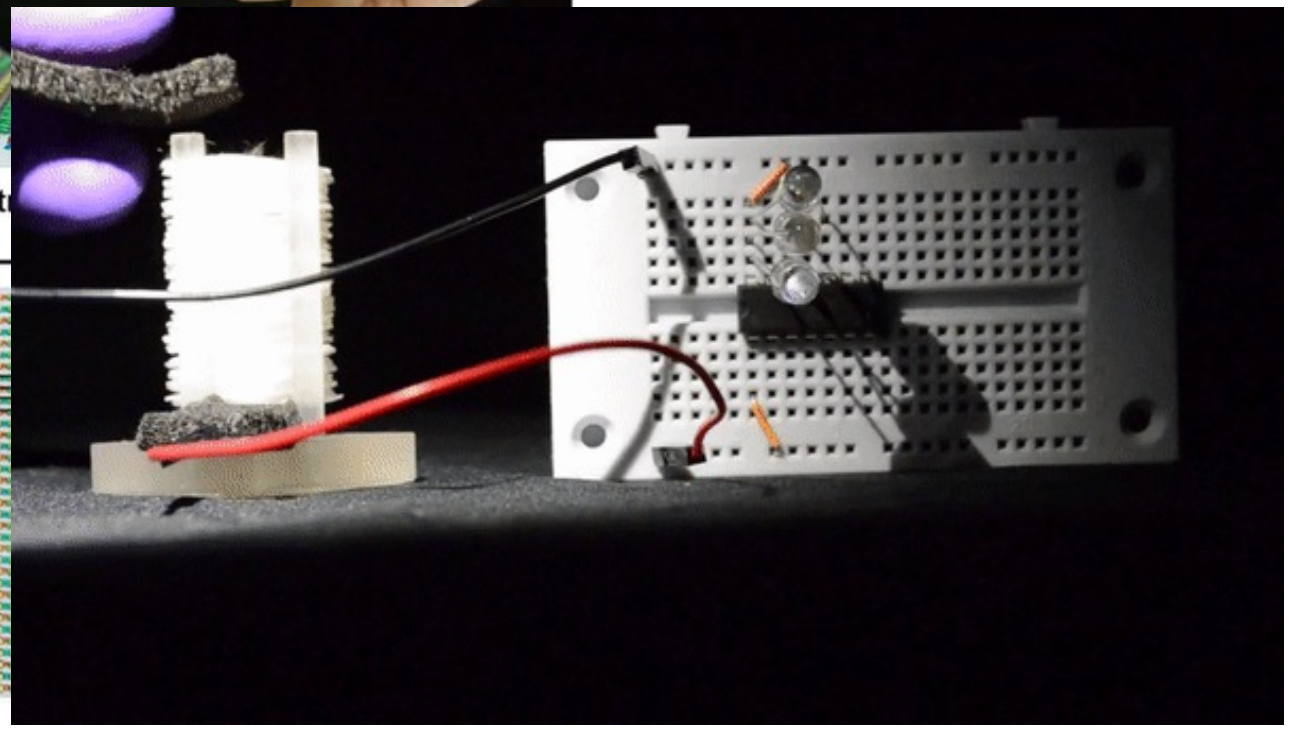
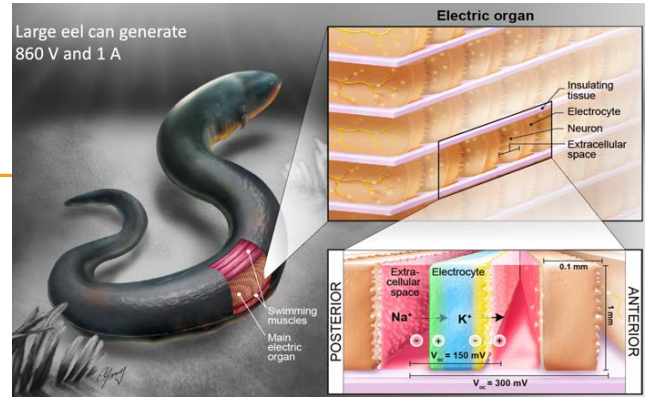


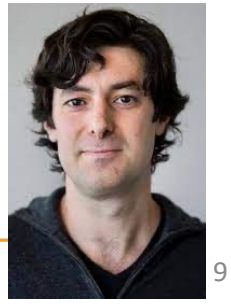
Artificial Electric Organs



- Power sources for distributed sensing and monitoring
- Implantable power sources to power sensors
- Single use power sources

The Team

Collaborating Groups



Questions? Contact: michael.mayer@unifr.ch