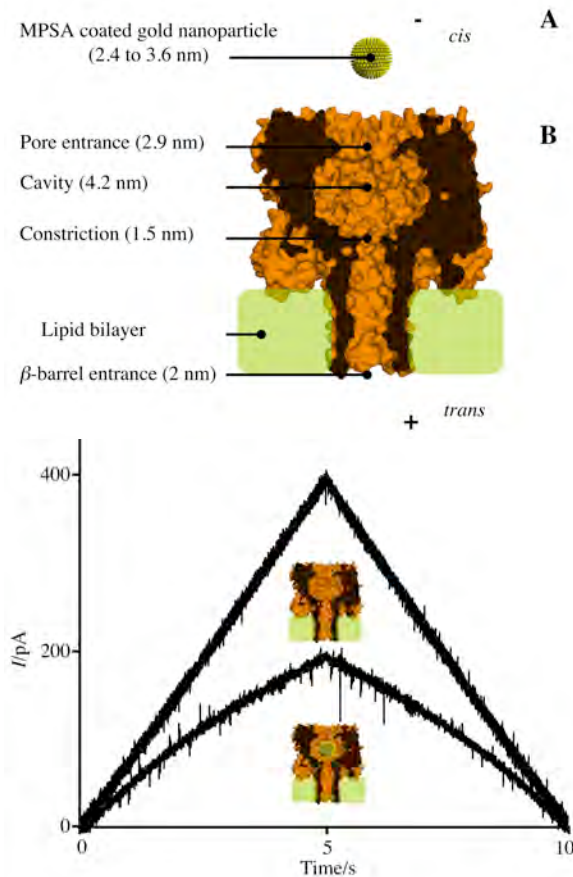


Master Student Project at the Single Molecule Processes Lab:

This laboratory is currently focussing on the interface of nanoparticle and nanopore technologies for single molecule sensing applications.

A single nanoparticle can be captured by a single nanopore and reveal:

- the nanoparticle surface properties
- the nanoparticle core physical properties



I/V curve of a single α -hemolysin pore (top trace) and, single MPSA coated gold nanoparticle containing α -hemolysin pore I/V curve (bottom trace). The potential is cycled between 0 and 200 mV at 40 mVs^{-1} , pH=8.1 (Tris-HCl 0.1M), with 2M KCl.

The nanoparticle thus captured can be used for various single molecule sensing applications.

In this lab, master students have their own project, and are expected to publish. The current projects are in collaboration with MIT, University of Oxford, UCL, and INESC.