

Why was Nanopore sequencing used in the SARS-CoV-2 pandemic?

Alt-text Figure 6 - Professor David Deamer's notebook from 1989 depicts his first ideas for how to sequence nucleic acids

Picture of the 2-page handwritten nanopore technology original design. The first page shows written notes and the second page shows and schematic illustration of the technology.

Alt-text Figure 7 - Diagram of nanopore sequencing

Schematic illustration of the nanopore sequencing. The nanopore resembles a tube composed of two overlaid subunits - the helicase enzyme and the protein pore - and is positioned in a lipid bilayer membrane. In the top part of the membrane, one of the strands of a DNA molecule is introduced through the nanopore. Underneath there is a schematic of nucleotides producing disturbance in the electrical current that is then interpreted as base-calling data

Alt-text Figure 8 - Image showing sensor array of flow cell saturated with nanopores

Illustration of a MinION and its flow cell. On the right are the details of the sensor array which is composed of millions of nanopores. The sensor array is located in the flow cell. On the left, the flow cell is positioned on top of the MinION device, which is a hand-sized rectangular metal box.