

Nanopores and Nanocapillaries –Opportunities and Challenges in Single Molecule Sensing and Force Spectroscopy

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New avenues of research in the field of single molecule experiment were opened with the advent of solid state nanopores. The major advantage of solid-state nanopores over their biological counterparts is that they can be easily integrated into devices compatible with other detection schemes such as a single molecule optical detection and manipulation. Recently, we made advances in using nanopore platform for its integration with 2 D materials such as graphene or MoS₂. In the same time, glass nanocapillaries have been put forward as alternatives to nanopores since their fabrication is rapid and inexpensive. Glass nanocapillaries are fabricated using a laser pipette puller next they are placed under a scanning electron microscope beam the size and shape of nanocapillaries is adjusted to appropriate size. In this talk I will address comparative advantages of both pore types.

References

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