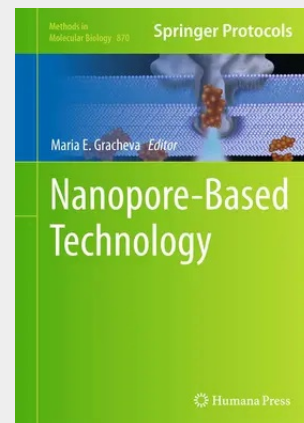


Nanopore-Based Technology

Nanopores are vital biological features, described as tiny holes in cellular membranes used for recognition and transport of ions and molecules between compartments within the cell, as well as between the extracellular environment and the cell itself. Their study, ever growing in esteem, leads toward the promise of ultra-fast sequencing of DNA molecules with the ultimate goal of building a nanoscale device that will make rapid and cheap DNA sequencing a reality. In *Nanopore-Based Technology*, expert researchers in the forefront of the field explore the cutting-edge of nanopore technology for single molecule sensing, detection, and characterization. Divided into four convenient parts, this volume covers single molecule characterization techniques utilizing biological pores, methods for biomolecule characterization with nanoporous artificial membranes, computational studies of the biomolecule confined within the nanopore environment, as well as techniques that use novel materials in conjunction with nanopore sensing. Written for the highly successful *Methods in Molecular Biology*™ series, this work provides the kind of detailed description and implementation advice that is crucial for achieving optimal results.

Authoritative and state-of-the-art, *Nanopore-Based Technology* serves as an excellent representation of the present-day available techniques for biomolecule characterization with nanoporous membranes in order to guide researchers toward developing the next generation of technologies for fast and cheap DNA sequencing with practically no limitations on the read lengths.

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