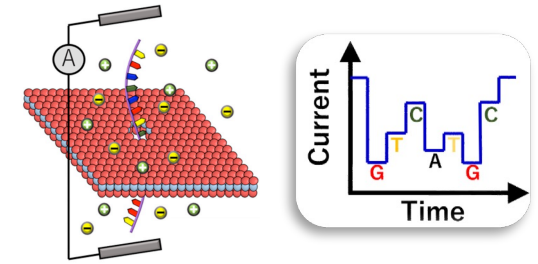


## Subject of Research Development of Molecule Sequencers Using Solid-State Nanopores

### Overview

In this project, we will (1) establish advanced techniques for fabrication of solid-state nanopores as well as their flow cells for sequencing applications and (2) apply the developed nanopore sensing technology to a variety of molecules for protein sequencing and epigenetics analysis. Finally, the invented methods will be patented as the core technology of our startup.



### Business Models(when applying)

While developing the state-of-the-art technology, we aim to take the leading position in the market. We will introduce our core concept and developed technology to the market at an early stage and receive feedback from the clients. Instead of spending massive amounts of time on the manufacturing of the devices, this will benefit us by exploring potential applications apart from DNA sequencing.

### Activity Planning(when applying)

#### ■ Fabrication of nanopores on solid-state materials

Toward commercial products, it is of crucial importance to ensure high throughput and reproducibility of the experimental results. On these points, we will synthesize large area single crystal two-dimensional materials using chemical vapor deposition methods and develop advance pore milling skills for controllable pore size and geometry.

#### ■ Molecule sequencing

We will apply our system to various biomolecules including DNAs, RNAs and proteins for not only medical diagnosis applications but disease treatment and prevention.

