



Principal Investigator

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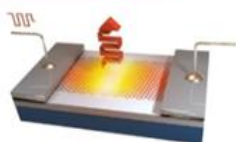
Adopted Theme

Mass-produced graphene-based healthcare devices for global expansion

Subject of Research

Mass-produced graphene-based healthcare devices for global expansion

Overview



While semiconductors play such an important role in today's digital society, functional limitations in current semiconductor devices are a major problem, for example, a bottleneck in the use of infrared technology in fields such as biotechnology and medicine. This project focuses on the opto-electronic devices based on graphene, and uses its extraordinary performance, which cannot be realized by using conventional semiconductors. In order to realise a safe, secure and healthy digital society with the world's first graphene optical devices, the project aims to build mass production technology for nanocarbon devices and to implement innovative graphene devices in the field of optical devices, mainly in sensing, at the fastest speed in society.

Business Models (when applying)

The project is considering commercialization through various business models, including licensing of Keio's graphene devices and analysis technology, joint development and technology introduction through collaboration with business companies and others, and sales of graphene-related products.

Activity Planning (when applying)

In this project, studies towards the commercialization of graphene optical device technology will be carried out through both business development and research and development. In business development, market research on graphene optical devices, marketing of business strategies, development of potential collaborators and customers will be promoted, and team building for commercialization will be promoted. In research and development, the project will build graphene mass production technology, develop graphene infrared light source devices that can be put to practical use, build and demonstrate new infrared sensing technology, and demonstrate various applied measurements using sensing with a graphene infrared light source. Through this project, a business model for the commercialization of the world's first graphene device will be established and the construction of a practical graphene optical device technology will be promoted, with the aim of ensuring commercialization and the establishment of a start-up aiming to become a unicorn. Through this, the world's first graphene device technology will be implemented in society on a global scale, and the new graphene technology will promote the solution of various social issues.