



## Group introduction

The aim of our research is to explore nanometrology by exploiting the novel functionality of inorganic nanomaterials. We are currently investigating nanoscale properties of biological samples and electronic devices, through optical responses of nanodiamonds and metallic nanoparticles. We seek a strong diversity in laboratories. From Oct. 2022, the number of international researchers will be 3 of 10.

## Research topics for open positions

1. Development of analytical systems combining electron spin resonance spectrometer and super-resolution optical microscope for applications in spintronics device characterization.
2. Nanodiamond quantum temperature sensor applications in biological assay or device characterization.

## The Candidates

We are looking for a highly motivated candidate who can work for the above topics. The candidate should have background in one of the related fields, incl. physical chemistry, analytical chemistry, photonics, physics, material science, and biophysics. The candidates should be open to challenges in computing skills for data analysis and programming, though we do not require it at the time of application. The candidates should be comfortable with English communication. We offer excellent working conditions and a state-of-the-art infrastructure in a highly dynamic environment at the forefront of research.

## Financial support

Our support from our research budget is ca. 120 k¥ per month. Note that our university has multiple supporting systems (fellowships up to 200 k¥ per month and other scholarships). We also ask the candidates apply to these supports for better support. Note that the living cost in Okayama is lower than Tokyo or Osaka area by a factor of 0.82-0.9. In our real feeling, PhD students will not feel financial stress with 120 k¥ per month (Room rent: 40-50 k¥, Utility: 5-10 k¥, Food: 40-50 k¥ per month, etc...).

## Contact & application procedure

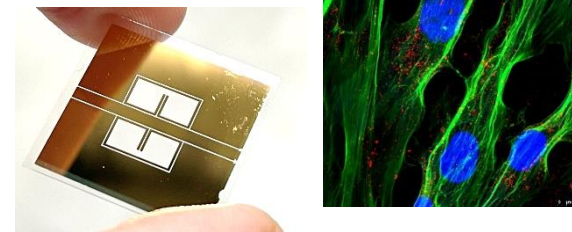
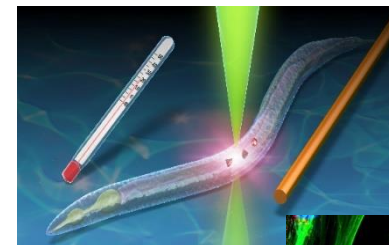
Contact to Prof. Fujiwara with a motivation letter, detailed CV. After having on-line discussion with us, you will need to build project details of your PhD study. Then, the candidates are required to take entrance examination (mainly interview) of the university (see details [here](#)). Feel free to contact us for the detail!

## Masazumi Fujiwara, PhD

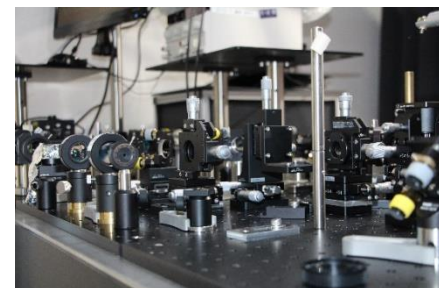
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## Nanodiamond quantum sensors for biology and electronic devices



## State-of-the-art microscopy and spin detection



## Recent key publications:

Lab Chip **22**, 2519 (2022).

Nanotechnology **32**, 482002 (2021).

Phys. Rev. Research **2**, 043415 (2020).

Sci. Adv. **6**, eaba9636 (2020).



**Okayama University** is a historical national university with diverse research programs. It is one of 22 “Research Universities” designated by Japanese government. Many international students are studying in our campus (indeed 1/3 of graduate-school students in our department come aboard). With various supports from the university and a relaxed atmosphere of Okayama, most of international students enjoy studying at Okayama University.



**Okayama**, known as the “Land of Sunshine”, is an amazing city with fine weather and wonderful scenery. Located 200 km from Osaka and easy day trip to Kobe, Osaka, Kyoto.



Okayama