

Open positions for PhD students

Nanochemistry Lab. at Okayama University

www.nanochem-okayama-u.net

Exploring nanometrology with the novel functionality of inorganic nanomaterials.



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. Member's research background is diverse, from chemistry, physics, and biology.

Research topics for open positions

Exploring Microscopy-based Thermal Analysis with Nanodiamond Quantum Temperature Sensors for Investigating the Thermal Properties of Organic Materials: This project utilizes nanodiamond thermometers to detect microscale thermal events in diverse organic compounds, offering a novel approach to spatially resolved thermal analysis. The technique can be extended to biological samples in the future.

The Candidates

We are looking for a highly motivated candidate who can work for the above topic. The prospective PhD project is strongly related to photonics, analytical chemistry and physical chemistry. The candidates will work on the system development of our microscope-based electron spin spectrometer instruments, and therefore, should be open to challenges in computing skills for data analysis and programming. 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

- JSPS research fellowship (200 k¥ per month with research budget).
- Okayama University fellowship (150 k¥ per month with research budget).
- Research Assistant (RA) working contract from our research budget (130 k¥ per month).

We provide the above RA contract to support the candidates. However, the candidates need to apply for the JSPS fellowship or/and OU fellowship for better financial support and subsequent high reputation. Note that the living cost in Okayama is lower than Tokyo or Osaka area by a factor of 0.82-0.9. In reality, PhD students will not feel financial stress with 130 k¥ per month (Room rent: 40-50 k¥, Utility: 5-10 k¥, Food: 40-50 k¥, etc...).

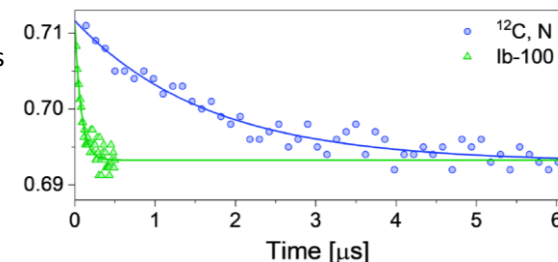
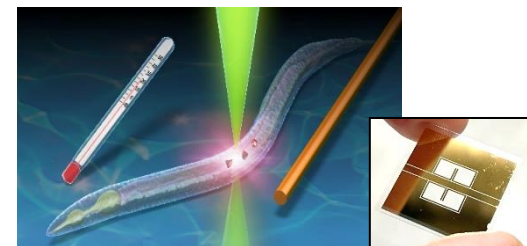
Contact & application procedure

Contact to Prof. Fujiwara with a motivation letter and detailed CV. After having on-line discussion with us, you will need to build project details for applying to JSPS fellowship by the end of April. The candidates need to take entrance examination (mainly interview) of the university (see details [here](#)).

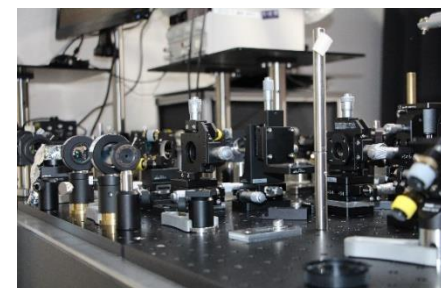
Masazumi Fujiwara, PhD

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Nanodiamond quantum sensors for biology and material science



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.

