

**Recruitment for Post-Doctoral Fellow  
- Quantum Beam Science Research Directorate -**

National Institutes for Quantum and Radiological  
Science and Technology (QST)

1. Available position 1 person

2. Research theme

“Development of advanced catalyst materials for next-generation batteries by quantum beam technology”

The goal of this project is to develop advanced catalyst materials for next-generation secondary batteries and fuel cells by effective use of various quantum beams (gamma-rays, electron beams and ion beams), which can lead to high-energy defect formation, active-site formation via non-equilibrium chemical reactions, and nano- to micro-fabrication. Not only using different beams and but also varying the irradiation conditions such as temperature and atmospheres makes it possible to prepare new electrocatalysts endowed with high activity and long lifetime for oxygen reduction reactions. The research also includes detailed analyses of the electrocatalyst's elemental chemical states and electronic structures by synchrotron X-ray spectroscopy to identify the reaction sites and mechanisms.

3. Division assigned to

Department of Advanced Functional Materials Research,  
Takasaki Advanced Radiation Research Institute, Quantum Beam Science Research Directorate,  
National Institutes for Quantum and Radiological Science and Technology

4. Place of employment

Takasaki Advanced Radiation Research Institute, Quantum Beam Science Research Directorate,  
National Institutes for Quantum and Radiological Science and Technology  
1233 Watanuki-machi, Takasaki, Gunma, 370-1292, Japan

5. Qualification for application

Applicants should satisfy all the following conditions.

(1) Willing to pursue the research subjects set up by QST.

(2) Having a PhD obtained within the past eight years

\*Foreign national researchers will qualify as candidates if they have, at the time of employment, a foreign licensee that is recognized by the Organization as equivalent to the one for a Japanese doctor, medical radiologist or medical physicist and was received, within the past eight years, and also if they are deemed to have the equivalent abilities as a PhD recipient

(3) Arriving at the post on effective date as referred to in Section 12.

(4) No history of employment as postdoctoral researcher in QST.

6. Terms of employment

(1) Salary	450,000 yen/month (as of April 1, 2017) inclusive social insurance and tax.
(2) Allowance	Commutation allowance, House allowance, etc.
(3) Holidays	Weekend (Saturday and Sunday), national holidays, New-Years holidays, paid holidays, etc.
(4) Working Hours	Discretionary labor system
(5) Insurance	Health insurance, Welfare pension insurance, Science and Technology Corporate Pension fund, Employment insurance, Workers compensation

- insurance  
(6) Dormitory                      Family / Single person housing

7. Necessary documents and application procedures

- (1) Application form (use the form provided by QST) ([PDF](#), [WORD](#))
- (2) List of achievements (list, original work, review articles, and conference presentations in free format in order from the latest)
- (3) Outline of key achievements outline (free format up to two A4 pages)
- (4) Description of perspective on the future research (free format, up to two A4 pages)
- (5) Reprints of up to five important scientific papers authored by the applicant
- (6) Certificate of PhD or Certification for expected completion of PhD course
  - \*If it is difficult to submit the original, send copies and attach an additional note describing the reason for not submitting the original.
  - \*Incomplete applications may not be accepted.
  - \*Type the application form.

8. Deadline for receipt of the above application of Section 7.

Thursday, 31st May 2018

The application package must be arrived by 17:00 on the closing date.

9. Address of submission of application

Personnel Department, Takasaki Advanced Radiation Research Institute,  
Quantum Beam Science Research Directorate,  
National Institutes for Quantum and Radiological Science and Technology  
1233 Watanuki-machi, Takasaki, Gunma, 370-1292, Japan  
Attn.: Mr. Toshiaki TABATA,  
(specify "Application Form for Postdoctoral Researcher" in red ink)

10. Examination

Examination will be held in order since June, 2018. The applicant will be notified of the results of the recruitment exam by email or letter.

- (1) Documentary examination
  - Applicants will be screened by the document submitted. The result of the documentary examination will be notified to each applicant in writing.
- (2) Evaluation of research achievements (oral presentation using PowerPoint file and Q&A)
- (3) Interview
  - \*Travel expenses for employment exams will not be provided by QST.
  - \*The items (2) and (3) may be carried out on the same day.

11. Place for recruitment examination

Takasaki Advanced Radiation Research Institute,  
Quantum Beam Science Research Directorate,  
National Institutes for Quantum and Radiological Science and Technology  
1233 Watanuki-machi, Takasaki, Gunma, 370-1292, Japan (to be informed later)

12. Contract terms

The period of employment is from August 1, 2018 (effective date) to March 31, 2019 (in principle).  
Employment contract can be extended up to a total duration of three years, depending upon the

annual review of your research progress.

\* If you are a fixed-term employee of QST at present, the extension of employment contract will be limited to five years in total from the original recruitment.

### 13. Inquires

(1) About Applications: Mr. Toshiaki Tabata  
Personnel Department, Takasaki Advanced Radiation Research Institute,  
Quantum Beam Science Research Directorate,  
National Institutes for Quantum and Radiological Science and Technology  
1233 Watanuki-machi, Takasaki, Gunma, 370-1292, Japan  
Tel: +81-27-346-9130  
e-mail: tabata.toshiaki=qst.go.jp  
(Please change "=" to "@" in contacting.)

(2) About Research Theme: Dr. Tetsuya Yamaki  
Department of Advanced Functional Materials Research,  
Takasaki Advanced Radiation Research Institute,  
Quantum Beam Science Research Directorate,  
National Institutes for Quantum and Radiological Science and Technology  
1233 Watanuki-machi, Takasaki, Gunma, 370-1292, Japan  
Tel: +81-273-46-9126  
Fax: +81-273-46-9687  
e-mail: yamaki.tetsuya=qst.go.jp  
(Please change "=" to "@" in contacting.)

### 14. Points to note

- (1) Foreign nationals are required to obtain a necessary visa status to work in Japan by the date of adoption.
- (2) We will use personal information only for the screening process. It will also be used for employment management for those employed. The information of the rejected applicants will be disposed a year after the submission.

### 15. Others

The Article 15-2(1)(i) of Act on Improving the Capacity, and the Efficient Promotion of Research and Development through Promotion of Research and Development System Reform is applicable to those hired for this position, as well as the Article 18 of Labor Contracts Act.