

Research Fellow (Perovskite Nanomaterials)  
Nanyang Technological University

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Posted Feb. 21, 2024, set to expire Jun. 21, 2024

**Job Title** Research Fellow (Perovskite Nanomaterials)  
**Department** Institute For Digital Molecular Analytics and Science (IDMxS)  
<https://www.idmxs.org/>  
**Institution** Nanyang Technological University  
Singapore, Singapore, Singapore

**Date Posted** Feb. 21, 2024

**Application Deadline** Mar. 20, 2024

**Position Start Date** Available immediately

**Job Categories** Research Professor

**Academic Field(s)** Engineering - Other  
Chemical/Petroleum

**Job Website** [https://ntu.wd3.myworkdayjobs.com/en-US/Careers/details/Research-Fellow--Perovskite-Nanomaterials-\\_R00015762?q=Research%20Fellow%20\(Perovskite%20Nanomaterials\)%C2%A0](https://ntu.wd3.myworkdayjobs.com/en-US/Careers/details/Research-Fellow--Perovskite-Nanomaterials-_R00015762?q=Research%20Fellow%20(Perovskite%20Nanomaterials)%C2%A0)

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### **Job Description**

Institute For Digital Molecular Analytics & Science (IDMxS) is a unique interdisciplinary Research Centre of Excellence (RCE), funded by National Research Foundation, Ministry of Education (Singapore), Nanyang Technological University and National University of Singapore. Hosted by NTU, IDMxS is focused on development of core science to drive a paradigm shift in molecular detection and analysis to link the biomolecular world of life with the networked world of technology.

IDMxS is looking for a highly experienced and motivated individual to join us as a Research Fellow on further develop translational potential of IDMxS technologies within the institute.

### **Key Responsibilities:**

- To prepare and process halide perovskite nanomaterials
- To operate, optimize, troubleshoot and maintain femtosecond, ns and CW laser systems
- To setup and align optical beamlines/setups for optical spectroscopy experiments
- To perform photonics and electromagnetic field distribution simulations
- To perform micro/nano fabrication using a range of techniques (electron beam lithography, laser direct-write, inject printing, vacuum deposition, and molecular self-assembly etc.)
- To fabricate perovskite devices
- To perform data analysis and data interpretation of optical spectroscopy experiments independently
- To assist the principal investigator with the writing of progress reports, research papers and research grants
- To assist the principal investigator in the supervision and mentoring of a small research team comprising of post-graduate students and undergraduate students

### **Job Requirements:**

- PhD Degree in Physics or Chemistry or Chemical Sciences or Engineering
- PhD candidates who are about to submit their thesis for examination or have submitted their thesis for defence are also welcomed to apply
- Excellent knowledge and experience in synthesis of halide perovskite nanomaterials
- Excellent knowledge and experience in optics, photophysics of semiconductors, lasers, and optical spectroscopy is essential

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- Excellent knowledge and experience in photonic and electromagnetic distribution simulations (e.g. COMSOL, FDTD, Lumerical etc)
- Excellent knowledge and experience in micro/nanofabrication techniques (such as electron beam lithography, laser direct-write, inject printing, vacuum deposition, and molecular self-assembly etc.)
- Minimum 3 Years of Research Experience in micro/nanofabrication and in the synthesis of halide perovskite nanomaterials

### EEO/AA Policy

IDMxS is a new, unique interdisciplinary Research Centre of Excellence (RCE), funded by Ministry of Education (Singapore), Nanyang Technological University and National University of Singapore. Hosted by NTU in partnership with NUS, IDMxS is the world's first organized effort focused on interfacing the biological and living world with the world of information technology and data science whilst providing fundamental scientific development, grounded in materials science, optics, and interfacial chemistry.

### Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

**Contact**      Subathra Devi  
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