

Assistant Professor /Associate Professor (Tenure-track) in
High-frequency III-Nitride Growth, Device
Nanyang Technological University

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Posted Apr. 2, 2024, set to expire Aug. 2, 2024

Job Title	Assistant Professor /Associate Professor (Tenure-track) in High-frequency III-Nitride Growth, Device
Department	School of Electrical and Electronic engineering
Institution	Nanyang Technological University Singapore, , Singapore
Date Posted	Apr. 2, 2024
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Assistant Professor Associate Professor
Academic Field(s)	Electrical and/or Electronics Engineering - Other
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Job Description

Nanyang Technological University (NTU) invites applications for a position of Assistant Professor/Associate Professor (Tenure-track) in “High-frequency III-Nitride Growth, Device design and Fabrication”.

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We are seeking a candidate who will develop, lead and sustain research of an international standard in “High-frequency III-Nitride Growth, Device design and Fabrication”. The candidate should possess strong experimental and theoretical expertise in III-Nitride growth and/or device design and fabrication for devices (e.g. HEMTs, MISHEMTs, FinFETs etc.) for high- frequency applications.

This position will be held at the School of Electrical and Electronic Engineering. Areas and priorities that we wish to develop and support through this appointment include:

- III-Nitride epitaxial growth on various substrates (Si, SiC, Sapphire etc.) using MOCVD.
- III-Nitride epitaxial wafer characterisation techniques (e.g. Hall, XRD, PL etc).
- Design of advanced III-Nitride device structures particularly for high-frequency (microwave and millimeter-wave) applications.
- Semiconductor wafer fabrication processes including III-V compound semiconductor and/or CMOS-compatible wafer fabrication techniques.
- Electrical characterisation of devices including DC and RF techniques (e.g. semiconductor parameter analyser, pulsed I-V, small signal and large signal RF measurements, etc.)

Responsibilities

- Develop and lead an innovative research programme of international quality.
- Publish high impact papers in reputable peer-reviewed journals.
- Secure competitive research grants.
- Give talks at international conferences and supervise research personnel.
- Contribute to teaching and course development at the undergraduate and postgraduate levels.
- Supervise undergraduate and postgraduate students undertaking research projects.
- Undertake administrative and/or leadership roles.
- Contribute to other service-related activities assigned by School and University.

Requirements

Knowledge and Qualifications

Essential:

- PhD in III-Nitrides or a related discipline
- Extensive knowledge of current research within the fields of III-Nitrides epitaxial growth, device design, fabrication and characterisation.
- Evidence of developing international reputation in this field of research, for example fellowships,

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awards, invited presentations at international conferences, journal editorships or otherwise.

- Established track record of academic publications of international quality.
- Proven track record of securing funding as Co-I or lead investigator.

Desirable:

- Membership of relevant discipline or professional body/learned society.

Skills

Essential:

- Ability and drive to develop project activities in one or more of the fields detailed above.
- Excellent communication and presentation skills, both oral and written.
- Excellent interpersonal skills, including the ability to enthuse students.
- Time/project/budget management skills.
- Self-motivation and ability to work independently and as part of a team.
- Ability to secure research grant funding and initiate new projects; lead a research team and develop an international research profile.
- Ability to work in collaboration with colleagues.

Desirable

- Ability to take on a leadership role and motivate students.
- Ability to accept collegiate responsibilities and act accordingly.
- Significant research leadership and facilitation skills.
- Demonstrable ability to provide strategic contribution at Subject or School level.

Experience

Essential:

- Strong track record of relevant research and broader academic experience.
- Experience in successful teaching, tutoring and mentoring of research students and undergraduate students.
- Experience as PI or key contributor of external research grants.
- Strong and growing reputation for research leadership in an area which will broaden and strengthen the School's research activities.
- Experience in leading successful research grant applications, collaborations and in managing

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projects.

- A strong track record of gaining research funding.
- Significant broad teaching experience at undergraduate and postgraduate level.

Desirable:

- Experience in curriculum development, marking and assessment.
- Experience of supervision of higher degrees (PhD).
- Experience in cross-disciplinary research initiatives, and international/industrial collaborations.

Application

Applicants are invited to submit their applications (cover letter, CV, research and teaching statements, and citation report, where applicable) through the NTU career portal. Review of applications and shortlisting of applicants will be carried out on an on-going basis until the position is filled. Only shortlisted candidates will be notified.

Contact Information

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

Contact

School of Electrical and Electronic Engineering
Nanyang Technological University
Singapore
Singapore

Contact E-mail EEE-Fac-Recruit@ntu.edu.sg