

Research Assistant (Thin Film Deposition)
Nanyang Technological University

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Posted Jul. 9, 2024, set to expire May 6, 2025

Job Title	Research Assistant (Thin Film Deposition)
Department	Temasek Laboratories@NTU
Institution	Nanyang Technological University Singapore, , Singapore
Date Posted	Jul. 9, 2024
Application Deadline	Open until filled
Position Start Date	Available Immediately
Job Categories	Professional Staff
Academic Field(s)	Material/Metallurgy Electrical and/or Electronics Engineering - Other
Job Website	https://ntu.wd3.myworkdayjobs.com/en-US/Careers/details/Research-Assistant--Thin-Film-Deposition-_R00017723

Apply By Email

Job Description

At Temasek Laboratories@NTU, our mission is to undertake cutting-edge research in defence science and technology, driving new solutions and advancements across various research areas, including Microsystems Technology, Hardware Assurance, Signal Processing, Advanced Materials, Advanced Laser Technology, and Emerging Technologies.

Microsystems Technology Development Centre (MTDC) at TL@NTU is having ISO certified III-V Wafer Fabrication Line up to 100-mm diameter wafers with strong industrial/academic experienced Technical

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Specialists/ Engineers/ Scientists. We are a fast-paced research facility that designs, develops, and manufactures integrated chips, i.e. heterogeneous system in package modules, for defence and commercial applications.

We are looking for a hands-on Thin Film Research Assistant who demonstrates a positive attitude, collaborates well in a team, and possesses strong technical abilities along with sound problem-solving skills.

Key Responsibilities:

- Work with the module leader and execute the design of experiment (DOE) using advanced techniques such as sputtering, evaporation, and chemical vapor deposition (e.g. SiO₂, SiON, TaN, Au, Ti, Al, Ni, Pt and etc.).
- Develop and optimize deposition parameters to achieve precise film thickness, uniformity, and quality.
- Help to identify and troubleshoot process issues, working towards yield enhancement and performance improvement.
- Utilize a range of characterization techniques, including optical microscopes, surface profiler, SEM, Ellipsometer to analyze thin film properties.
- Maintain detailed documentation of processes such as standard operating procedure (SOP), experimental setups, and results for future reference and knowledge transfer and including training.
- Oversee the operation of laboratory equipment and ensure proper functioning. Work with the equipment vendor to conduct routine maintenance, troubleshooting, and calibration of equipment

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to minimize downtime.

- Work with the University's procurement team to source and acquire necessary equipment. Evaluate and select vendors, ensuring equipment aligns with research requirements and budget constraints.
- Adhere to laboratory safety protocols and ensure compliance with University and regulatory standards.
- Collaborate with different modules and team members.
- Communicate effectively with team members, providing updates on processes and status of equipment.

Job Requirements:

- Diploma in Engineering (e.g. Microelectronics, Electrical & Electronics Engineering, Material Engineering) with 3 years of relevant working experience or Bachelor's degree in any Engineering (e.g. Microelectronics, Electrical & Electronics Engineering, Material Engineering).
- Hands-on working experience in semiconductor fab/cleanroom environment in Thin Film area preferred (e.g. SiN, SiO₂, TaN, Al, Au, Ti, Ni, Pt and etc.).
- Ability to create and analyze DOE for Thin Film process.
- Experience in wet bench processes, especially the lift-off technique, is essential.
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Basic knowledge in semiconductor fabrication process and device physics.

- Strong understanding of thin film materials and their properties, with expertise in process optimization and troubleshooting.
- Excellent problem-solving skills and ability to work effectively in a collaborative team environment.
- Strong communication skills, with the ability to convey complex technical concepts clearly and concisely.
- Commitment to maintaining high standards of safety, quality, and professionalism in all aspects of work.

We regret to inform that 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

Temasek Laboratories@NTU
Nanyang Technological University
Singapore