

Research Associate
George Washington University

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Job Title	Research Associate
Department	Electrical and Computer Engineering http://www.ece.seas.gwu.edu
Institution	George Washington University Washington, District of Columbia
Date Posted	Nov. 14, 2017
Application Deadline	Open Until Filled
Position Start Date	Available Immediately
Job Categories	Post-Doc
Academic Field(s)	Engineering - Other Electrical and/or Electronics
Job Website	http://www.gwu.edu
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Job Description

GW's Department of Electrical and Computer Engineering (ECE) provides leading edge programs in electrical and computer engineering in order to provide leadership in a rapidly evolving global information society in the service of humanity and to advance the state of knowledge in our disciplines by actively pursuing scholarly research for publication and dissemination.

ECE Research Associate works primarily in the cleanroom facilities at the US Naval Research Laboratory in Washington, DC. The focus of the research centers on developing and executing a reliable and effective process flow which enables transfer printing of microscale chiplets, and developing a separate process flow to fabricate solar cells on the subsequent microscale structures.

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The Research Associate duties include:

Designing masks for standard photolithography processes.

Standard cleanroom procedures such as wet and dry chemical etching; dielectric and metal deposition; inspection techniques such as Nomarski imaging, scanning electron microscopy and profilometry.

Developing an epitaxial lift-off process for reproducible transfer printing of microscale chiplets of III-V semiconductors.

Data analysis, including transfer length method measurements, dark current-voltage and light current-voltage measurements, in order to improve and optimize device process flows.

Participate in regular technical meetings to share and discuss recent results, challenges and successes to the technical team. Must be able to communicate complex scientific findings in a clear, concise and accurate manner.

Performs other work related duties as assigned. The omission of specific duties does not preclude the supervisor from assigning duties that are logically related to the position.

Requires a master's degree and 1 year of experience in the field or in a related area.

Extensive experience in cleanroom processing of III-V semiconductors for optoelectronic device fabrication

Ability to develop and execute a reliable and effective process flow which enables transfer printing of microscale chiplets

Ability to develop a separate process flow to fabricate solar cells on the subsequent microscale structures

Ability to design masks

Experience with standard photolithography processes

Ability to utilize wet and dry chemical etching

Ability to make dielectric and metal deposition

Knowledge of inspection techniques such as Nomarski imaging, scanning electron microscopy and profilometry

Ability to create an analysis of data including transfer length method measurements, dark current-voltage and light current-voltage measurements in order to improve and optimize device process flows

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Ability to participate in regular technical meetings to share and discuss recent results, challenges and successes to the technical team

Ability to communicate complex scientific findings in a clear, concise and accurate manner

Ability to be well organized and highly motivated, and fluent with standard presentation tool such as MS PowerPoint

EEO/AA Policy

The university is an Equal Employment Opportunity/Affirmative Action Employer that does not unlawfully discriminate in any of its programs or activities on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity or expression, or on any other basis prohibited by applicable law.

Contact Information

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

Contact