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Posted Apr. 24, 2024, set to expire Aug. 24, 2024

Job Title PhD and Postdoc Fellow positions in Optoelectronics

Department Photonics Initiative

https://asrc.gc.cuny.edu/photonics/

CUNY Advanced Science Research Center Institution

New York, New York

Apr. 24, 2024 **Date Posted**

Application Deadline Open Until Filled

Available immediately **Position Start Date**

Graduate Student Job Categories

Post-Doc

Academic Field(s) Optics & Optical Engineering

Engineering Physics

Electrical and/or Electronics

https://www.guo-lab.net/openings Job Website

qquo@gc.cuny.edu Apply By Email

Job Description



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The Guo lab (https://www.guo-lab.net/), part of the CUNY Advanced Science Research Center Photonics Initiative, has openings for 2 fully-funded Ph.D. students and 1 postdoctoral research associate in 2024. Guo lab seeks to uncover new physical principles underlying the interaction between light and emerging active photonic material platforms, and harness the resulting unprecedented optoelectronic properties in a scalable way to tackle the grand challenges of sensing, imaging, communication, and computing. We will be actively working on three major thrusts, including (1) integrated ultrafast photonics and nonlinear photonic computing architectures; (2) next-generation thermal vision technologies, and (3) quantum light-matter interactions.

Application requirements:

- 1) For postdoc applicants, we welcome applicants with a solid research background in semiconductor devices and optoelectronic device fabrication. Typical applicants would have a doctoral degree in engineering, physics, or related fields. Candidates with prior research experience in silicon, III-V and 2D material-based photodetectors or light-emitting diodes would be ideal. To apply, please email Prof. Guo (qguo@gc.cuny.edu) with a CV, one or two representative publications, and a brief discussion of research skills and interests.
- 2) For Ph.D. applicants, an undergraduate degree in electrical engineering, physics, applied physics, or related fields is required. Research experience in nonlinear optics, quantum optics, fiber optics, nanophononics, and 2-D materials device fabrications is highly desirable but not necessary a willingness to learn and get your hands dirty in the lab is important. The deadline for applying is Jan 10, 2024. To apply, please email Prof. Guo (qguo@gc.cuny.edu) with a CV, and a brief discussion of research skills and interests.

About the PI: Qiushi Guo is an assistant professor at CUNY Advanced Science Research Center. He received his Ph.D. in Electrical Engineering from Yale University in Dec. 2019. Dr. Guo is one of the finalists of the 2022 Rising Star of Light and the winner of the 2021 Henry Prentiss Becton Graduate Prize for his exceptional research achievements at Yale University. He has published 45 peer-reviewed research papers in leading scientific journals including *Science*, *Nature Photonics*, *Nature Materials*, *Physical Review Letters*, *Nature Communications*, *Science Advances*, *Nano Letters*, *Optica*, etc. with citations more than 4200 times (google scholar) Dr. Guo has given 15 invited talks, written 3 invited reviewer articles, and held 2 US patents. He is a reviewer of more than 30 international journals, and he is serving on the editorial board of the journal Micromachines.

About the research group: Guo research group offers students and postdocs a very competitive compensation and benefits package. In our lab, students and postdocs will get solid training in



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theory/numerical simulation, optical/electrical measurements, and device fabrication, etc. Guo research group will closely collaborate with Prof. Andrea Alù's group and other research groups from top institutions in the US, including Caltech, Yale University, and Columbia University. Dr. Guo also has good cooperative relations with many tech companies in the United States, such as Google (diffractive optics group), Meta (integrated photonics group), ASML, Apple (display and optical sensors group), NTT Phi lab and Lumentum.

Group website: https://www.guo-lab.net/

About CUNY ASRC: Founded in 1847, CUNY counts 14 Nobel Prize and 26 MacArthur ("Genius") grant winners among its alumni. The CUNY ASRC, which opened its doors in September 2014 is an outgrowth of CUNY's "Decade of Science" initiative, a 10-year-long, multi-billion-dollar commitment to elevating science research and education. It is located in a state-of-the-art, 200,000-square-foot building in Upper Manhattan. The center integrates five diverse research fields to encourage collaboration among established scientists, early-career researchers, and students in areas that shape 21st-century global science, including Photonics, Nanoscience, Structural Biology, Neuroscience and Environmental sciences. In recent years, CUNY ASRC has attracted many world-renowned professors and researchers due to its excellent location and research facility. It has become the hub for interdisciplinary research networks across New York City.

The ASRC's Photonics Initiative has established itself as a leading optics and photonics research center in New York City, nationwide, and internationally. Prof. Andrea Alù, a world-renowned scholar in electromagnetism, metamaterials and nanophotonics, is the founding director of the Photonics Initiative. Currently, ASRC Photonics Initiative has 4 professors leading high-impact research in different directions, covering almost all frontiers of photonics, including Metamaterials and Metasurfaces, Topological photonics, Radio Frequency and Millimeter Waves, Quantum Optics, Ultrafast and Nonlinear Optics, Integrated Photonics and Quantum Materials. CUNY ASRC Photonic Initiative has the most state-of-the-art nanofabrication facility in the United States, and a series of high-frequency, ultra-fast laser, spectroscopy, and imaging facilities.

EEO/AA Policy

CUNY's Policy on Equal Opportunity and Nondiscrimination applicable to all colleges and units is—to



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recruit, employ, retain, promote, and provide benefits to employees and to admit and provide services for students without discriminating on the basis of actual or perceived race, color, creed, national origin, ethnicity, ancestry, religion, age, sex, sexual orientation, gender, gender identity, marital status, partnership status, disability, genetic information, alienage, citizenship, military or veteran status, pregnancy, status as a victim of domestic violence/stalking/sex offenses, unemployment status, caregiver or familial status, prior record of arrest or conviction, or any other legally prohibited basis in accordance with federal, state and city laws.

Contact Information

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

Contact Qiushi Guo

Photonics Initiative

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