

Stanford



Sumaiya Wahid

Ph.D. Student in Electrical Engineering, admitted Autumn 2019

Bio

BIO

Sumaiya Wahid is a PhD candidate in Electrical Engineering at Stanford University. Her research interest includes the fabrication, characterization, and application of phase change memory devices, low temperature processable chalcogenide and oxide semiconductors, and flexible electronics.

HONORS AND AWARDS

- Stanford Graduate Fellowship, Stanford University (2019-2022)

LINKS

- Pop Lab: <http://poplab.stanford.edu/>
- Google Scholar Profile: <https://scholar.google.com/citations?user=STpxoIIAAAAJ&hl=en>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Phase change memory

Low temperature processable p-type semiconductors

Oxide semiconductors for upper layer transistors

Flexible Electronics

LAB AFFILIATIONS

- Eric Pop, Pop Lab (9/6/2019)

Publications

PUBLICATIONS

- **Design optimization and efficiency enhancement of axial junction nanowire solar cells utilizing a forward scattering mechanism** *RSC ADVANCES*
Ferdoushi, M., Wahid, S., Alam, M.
2022; 12 (30): 19359-19374
- **Lateral electrical transport and field-effect characteristics of sputtered p-type chalcogenide thin films** *APPLIED PHYSICS LETTERS*
Wahid, S., Daus, A., Khan, A., Chen, V., Neilson, K. M., Islam, M., Chen, M. E., Pop, E.
2021; 119 (23)
- **Barrier heights and Fermi level pinning in metal contacts on p-type GaN** *APPLIED PHYSICS LETTERS*
Wahid, S., Chowdhury, N., Alam, M., Palacios, T.

2020; 116 (21)

- **Efficiency Enhancement of Perovskite Solar Cells Using Heterojunction Bipolar Transistor Configuration** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
Wahid, S., Alam, M.
2020; 67 (2): 552-557
- **Effect of Halide Compositions on the Performance of Perovskite Solar Cells**
Wahid, S., Alam, M., IEEE
IEEE.2018: 30-33
- **Transfer Matrix Formalism-Based Analytical Modeling and Performance Evaluation of Perovskite Solar Cells** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
Wahid, S., Islam, M., Rahman, M., Alam, M.
2017; 64 (12): 5034-5041
- **Effect of spatial distribution of generation rate on bulk heterojunction organic solar cell performance: A novel semi-analytical approach** *ORGANIC ELECTRONICS*
Islam, M., Wahid, S., Chowdhury, M., Hakim, F., Alam, M.
2017; 46: 226-241
- **Physics-based modeling and performance analysis of dual junction perovskite/silicon tandem solar cells** *PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE*
Islam, M., Wahid, S., Alam, M.
2017; 214 (2)
- **Modeling and Optimization of Two-Terminal Perovskite/Si Tandem Solar Cells: A Theoretical Study**
Wahid, S., Islam, M., Alam, M., IEEE
IEEE.2015: 235-238