



SAMIA SUBRINA

Asia & the Pacific

Electronic engineering and nanotechnology

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Dr. Subrina's research focuses on the modeling of thermal and electronic transport in nanoscale materials and the applications of these materials in nanoscale devices. She is particularly interested in nanomaterials with high thermal conductivity, such as graphene (a form of carbon), that make it useful in heat mitigation. Fast, high-performance electronic devices tend to suffer from overheating, which causes performance degradation and shortens the life of the devices. Use of high heat-carrying materials in electronic device design can provide a solution to this issue. Dr. Subrina is also focused on how physical properties of materials change as devices are increasingly scaled down to the nano level; identifying nanomaterials with the right thermal and electronic properties for this scale can lead to new technologies such as low-power nanoelectronics, high-efficiency solar cells, and thermoelectric power generators.

Dr. Subrina received her PhD in Electrical Engineering from the University of California Riverside in 2011. Her research has been published in many prestigious journals including *Nature Materials*, *Nature Scientific Report*, and the *Journal of Applied Physics*. She has been honoured with a number of awards throughout her career, including the Best Paper Award at the 2018 Institute of Electrical and Electronics Engineers (IEEE) WIECON-ECE conference and the Young Scientist Award from the Bangladesh Academy of Sciences and TWAS, the World Academy of Sciences, in 2016. She is also the recipient of the Dean's Distinguished Fellowship from the University of California, Riverside, and is a TWAS Young Affiliate. She has been involved in organizing many conferences, workshops and tutorials, and is actively engaged in several national and international professional organizations, including as executive committee member and Chair (in 2017) of the IEEE EDS/SSCS Bangladesh Chapter and editorial board member of *Nature Scientific Report*. Dr. Subrina is dedicated to building the technological capacity of women in engineering in Bangladesh, and has served as Affinity Group Treasurer (in 2015) of the Women in Engineering group of IEEE Bangladesh. She is also involved in various kinds of consultancy services in the public and private sectors of Bangladesh.

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This prestigious award is not only recognition and a driving force for my work, it is also an inspiration for my fellow peers in the journey to ensure equity in STEM in the developing world.

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