

Dr Sekhar Bhattacharya

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and
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Dr. Sekhar Bhattacharya, has 20 years of research experience in the areas of semiconductor, photovoltaics and MEMS. He received MSc in Chemistry from IIT Kharagpur and PhD in Electrical Engineering (semiconductor devices) from the Queens University, Belfast in UK. His PhD work was on Silicon Germanium and Strained Silicon technology. During his Ph.D he developed a novel method for fabrication of Silicon-on-Insulator (SOI) and grew strained silicon by UHVCVD method. In his postdoctoral work he developed a prototype Atomic Layer deposition (ALD) system for deposition of high-k dielectric materials with Oxford Instruments in UK.

He has over 40 research publications in refereed international journals and in proceedings of international conferences.

He was the Principal Investigator of the following two projects:

1. Amorphous silicon thin films for microbolometer application (completed)
Funding Agency: SSPL Delhi
Duration: 2011 – 2013
Amount: Rs. 9.5 lakhs
2. Title: Research Investigations on Amorphous Silicon Thin Film Photovoltaics (completed)
Funding Agency: DRDO
Duration: 2011 – 2014
Amount: 88 lakhs

His areas of expertise are in :

LPCVD of epitaxial Si, PECVD of amorphous silicon, ALD of High-k HfO₂ dielectric, Photolithography, Dry and wet etching, Sputtering, Ion implantation, Electrical and optical characterisations of thin films and fabrication processes for crystalline and amorphous silicon solar cells.