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X-ray diffraction and nanostructures based third generation solar cell

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Nanostructures based third generation solar cell presents a promising future of inexpensive, highly-efficient and scalable new generation of solar cell industry. Various nanostructures, materials systems and device architecture have been extensively studied; yet in all of the advantages and disadvantages co-exist. XRD, as a characterization tool, provides unique insight into the materials compositions, device and device performance and stability, etc. In this talk, an overview of the recent progress in nanostructures based third generation solar cell will be given. Different approaches to overcome the limits in the nanostructures based solar cell will be discussed as well.

Biography

Gen Long received his BS in Physics from Shandong University, China and his PhD in Physics from University at Buffalo. He worked in Global Foundries (US) as senior integration engineer on 14nm FinFET technology before joined St John's University as Assistant Professor in Physics. His research area mainly focuses on the synthesis, characterization and device applications of novel metal and semiconductor nanostructures (nanoparticles, nanowires, nanorods, nanodiscs, nanoplatelets, etc. made by solution-phase or gas-phase growth). He is an active member of APS, MRS and AAPT.

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