

About Dr. Trilok Singh

Dr. Trilok Singh is an Associate Professor in the Department of Energy Science and Engineering, Indian Institute of Technology Delhi (IITD.) where he is developing Novel Organic-Inorganic halide perovskite absorber layer for high-efficiency next generation solar cells. Prior joining to IIT Delhi, he worked at IIT Kharagpur as an Assistant Professor in the School of Energy Science and Engineering. Dr. Singh received Ph.D. degree from the thin films laboratory (TFL), Department of Physics, IIT Delhi in 2012.

He was a post-doctoral fellow in Prof. Sanjay Mathur's group at University of Cologne, Germany. During his tenure (11/2011 till 4/2015) at University of Cologne he extensively worked on the synthesis of metal oxide thin films via Chemical Vapor Deposition (CVD), Plasma Enhanced Chemical Vapor Deposition (PECVD), Atomic Layer Deposition (ALD) and Physical Vapor Deposition (PVD) and systematic modification/engineering of thin films properties for their application in solar energy driven water splitting. He also led a project on the Resistive Random Access Memory (ReRAM) to evaluate the potential of ultra-thin films of metal oxide for non-volatile memory applications. In mid of 2015 he joined Prof. Tsutomu Miyasaka group at Tohoku University of Yokohama, Japan through JSPS fellowship where he worked on the synthesis of lead and lead-free based Organic-Inorganic halide perovskite for photovoltaic application.

Research Interests:

His research interests include integrating micro- and nanotechnology to develop innovative methods to solve energy generation problems. His interests also include the design, fabrication, and development of high-efficiency flexible solar cells for various energy applications. Usage of Machine Learning tools in Energy generation for predictive analysis.