Computer Simulation and Performance Optimization of Metal-Semiconductor-Metal Back-Contact Perovskite Solar Cells

Publisher: IEEE Cite This PDF

Iliyas T. Dossayev ; Assylan Akhanuly ; Erik O. Shalenov ; Askhat N. Jumabekov All Authors

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Abstract:
In this work, a computer simulation of the optical and electrical properties of metal-semiconductor-metal (MSM) back-contact (BC) perovskite solar cells (PSCs) is presented. An experimental MSM BC PSC reported in the literature is taken as a basis for the computer simulation experiments. The thickness of the perovskite layer and its charge carrier diffusion lengths in MSM BC PSCs are varied to obtain devices with the maximum power conversion efficiency (PCE).

Published in: 2023 7th IEEE Electron Devices Technology & Manufacturing Conference (EDTM)

Date of Conference: 07-10 March 2023

DOI: 10.1109/EDTM55494.2023.10103102

Date Added to IEEE *Xplore*: 26 April 2023

Publisher: IEEE

ISBN Information:

Conference Location: Seoul, Korea, Republic of