

Title: Progress in organic-inorganic perovskite research on photovoltaic application

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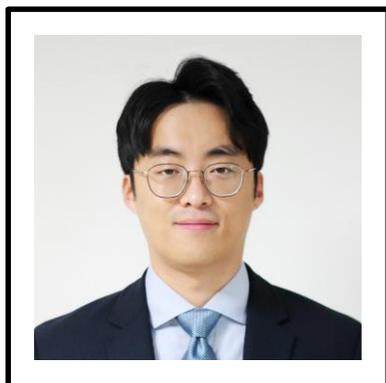
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Abstract

Organic-inorganic halide perovskites for solar cell applications have generated tremendous research interest because of their unique photovoltaic properties and ease of fabrication. In this seminar, the progress on organic-inorganic perovskite solar cells will be introduced. This talk consists of two parts, in the first part, the past work of our perovskite research will be discussed. For this class of materials to be a true contender for commercial photovoltaics, durability and scaling up to large area need to be addressed without compromising performance. Therefore, the fabrication method for high-performance perovskite solar cell from small to large device and the stability issues of perovskite solar cells will be elucidated in this section. In the second part, not irrelevant to the first section, the ongoing work of perovskite solar cells will be presented allowing finding the future opportunity of perovskite solar cell.

Bio



Dr Jincheol Kim received his B.S. and M.S. in materials science and engineering from Seoul National University, Korea in 2008 and 2011, respectively. After working as a senior researcher at LG Household & Healthcare between 2011 and 2014, he received his Ph.D. degree in photovoltaic engineering from the University of New South Wales (UNSW) in 2018. After obtaining Ph.D. degree under the supervision of Profs Anita Ho-Baillie, Shujuan Huang and Martin Green – a world expert in the field of solar cells, he was awarded an Australian Centre for Advanced Photovoltaics (ACAP) postdoctoral fellowship at UNSW with a topic of high-performance large-area perovskite-silicon tandem solar cells. In 2019, he moved to Korea Electronics Technology Institute (KETI) as a senior researcher undertaking advanced independent research about perovskite PV module. He is currently working at Macquarie university as a research fellow on the topic of perovskite solar cells.