Contribution ID: **86** Type: **Poster**

Enhanced stability with Ni2+ addition-based perovskite solar cells by slot-die-coating

Tuesday, 5 December 2023 14:00 (3 hours)

Perovskite solar cells (PSCs) is a promising technique in energy harvesting. Many reports have been focused on PSCs mainly on the enhancement of the power conversion efficiency (PCE) and stability due to the sensitivity to hydrogen, oxygen and light. So far, the lab-scale PSCs develop rapidly with high PCE and decent stability after many researchers engaging in an effort to optimize the properties of PSCs through composition engineering, additive engineering and interface engineering. However, the lack of stability would be a key issue when it comes to the commercialization of PSCs. Thus, how to improve the stability of large-scale PSCs is critical for the practical application. As reported before, the introduction of bifunctional metal Ni2+ enhanced grain size and defect passivation through using a method of controllable two-step sequential deposition perovskite films. Also enhanced PCE could be achieved for the Ni2+ addition-based PSCs with enhanced cell stability under ambient conditions. In this work, Ni2+ will be introduced to the slot-die-coating fabricated PSCs. The mechanism of Ni2+ improving PCE and stability of slot-die-coated PSCs will be demonstrated.

Primary authors: Prof. MÜLLER-BUSCHBAUM, Peter (Technical University of Munich); JIN, Zhaonan

Presenter: JIN, Zhaonan

Session Classification: Poster Session

Track Classification: Material Science