

Electroplated copper contacts on small-area single-junction perovskite solar cells (PSCs) using an atomic layer deposited (ALD) Al₂O₃ masking layer on ITO are demonstrated for the first time.

For the first time, this work presents industrially relevant mask and plate for front metallization of III-V-based solar cells replacing expensive photolithography. Metal contacts are fabricated by nickel (Ni) ...

The invention also discloses a preparation method of the mask plate and a method for preparing a photovoltaic module by using the mask plate.

Low-cost approaches for mass production of III-V-based photovoltaics are highly desired today. For the first time, this work presents industrially relevant mask and plate for front metallization of III-V-based ...

"For the first time, the successful application of mask and plate metallization on such devices is demonstrated," the researchers stated.

This work further demonstrates the applicability of mask and plate copper metallization to 1.21 cm²-sized perovskite silicon tandem solar cells without significant damage. It can, thus, be an enabler for ...

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