

DOI: 10.1016/j.solener.2021.11.006 Corpus ID: 244383455; High efficiency CIGS solar cells on flexible stainless steel substrate with SiO₂ diffusion barrier layer @article{Zhang2021HighEC, ...

Cu(In,Ga)Se₂ (CIGS) films on soda-lime glass and stainless steel (SUS) substrates with several [Ga]/([Ga] + [In]), GGI, and Fe concentrations are fabricated by so-called "multi-layer precursor ...

Abstract: This work demonstrates the perovskite (CH₃NH₃PbI₃) solar cell devices on flexible stainless-steel as a substrate that can be used for flexible electronics applications. The ...

Toward lossless photovoltaic efficiency of Laser-shaped flexible Cu(In,Ga)Se₂ solar cells on stainless steel substrates. Author links open overlay panel Tian Yang a 1, Kang ...

The copper indium gallium selenium (CIGS) thin film is recognized as the most potential material for photovoltaics applications, and the thin film solar cell with flexible ...

1. Choosing the right type of stainless steel: stainless steel surface property is critical for the quality of as-deposited thin films as well as the device performance. Figure 1 shows how the ...

This study investigated the integration of perovskite solar cells (PSCs) on stainless steel (SS) substrates for application in building-integrated photovoltaics (BIPV). Using advanced atomic force microscopy ...

Stepwise transformation of a semitransparent perovskite solar cell (A), via cells with an opaque metal bottom electrode on glass (B I, B II, and B III), to a substrate-configuration cell on steel (C III). Metal is Au in B I and B II, ...

Ultra-thin stainless-steel substrates with excellent water-oxygen barrier properties and high thermal and electrical conductivities are suitable for the fabrication of ...

Zheng et al. report a 17.1% efficient perovskite solar cell on steel, elucidating the important role of an indium tin oxide interlayer as a barrier against iron diffusion from the steel substrate. They also report an n-octylammonium bromide ...

Each module consists of 12 cells. The cells have a flexible stainless substrate that is 120 μm thick. The combined thickness of the three photovoltaic layers applied to the stainless steel is only 1 ...

The influences of process parameters and Fe diffusing into Cu(In,Ga)Se₂ (CIGS) films on the orientation of CIGS absorbers grown on the stainless steel (SS) foils are investigated. The ...

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