

## SESSION 1.3 ADVANCED MATERIALS FOR PHOTOVOLTAIC APPLICATIONS

### **Invited speech – GRAPHENE AND RELATED 2D MATERIALS: A WINNING STRATEGY FOR ENHANCED EFFICIENCY AND STABILITY IN PEROVSKITE PHOTOVOLTAICS**

In this work, we proposed the successful application of graphene and related 2D materials in the field of perovskite solar cells (PSCs) by engineering the standard mesoscopic n-i-p structure. The use of 2D materials has the dual role in improving both the stability and the overall efficiency of the proposed 2D-engineered PSC structure with respect to existing devices. The easy and successfully demonstrated device scaling-up allowed the realization of efficient large area graphene/perovskite modules.

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