MATERIAIS 2019

ABSTRACTS

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ABSTRACTS

ORAL PRESENTATIONS

SYMPOSIUM A

Scale Up of Microwave Annealed $FA_{0.83}Cs_{0.17}PbI_{1.8}Br_{1.2}$ Perovskite Towards an Industrial Scale

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Perovskite solar cells (PSCs) efficiency has rapidly increased from the initial 2009's 3.8 to recent 22.7 %. This high efficiency has attracted serious attention of the researchers and industry worldwide also due to their low material cost, and simple solution-based fabrication process. However, fundamental studies on PSCs are usually produced through lab-scale actions and carried out on small-area devices (≤1 cm^2). Various deposition methods have been recently developed to enlarge the device area from the millimeters to hundreds of centimeters scale. In the present work we present the advances of up-scaling of microwave annealing of perovskite films on large area specimens, 25 cm^2, Figure 1, looking forward the fabrication of PSC's from lab-scale to industrial-scale. Morphological, structural and optical characterization were performed in order to confirm the effectiveness of the scaled up microwave annealing.

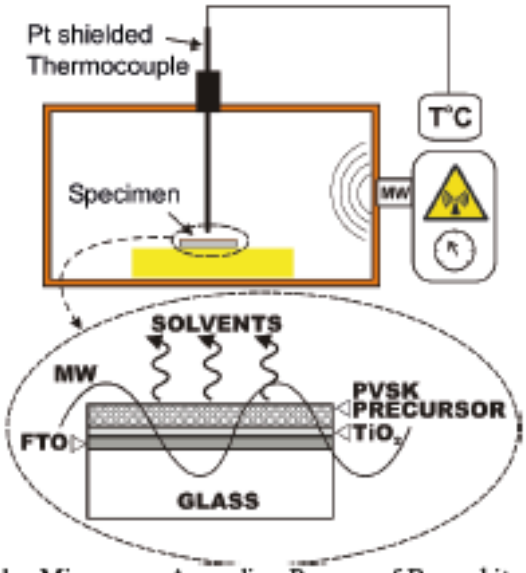

Figure 1 – Microwave Annealing Process of Perovskite Films

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