

## Tailoring Mixed-Halide, Wide-Gap Perovskites via Multistep Conversion Process - DTU Orbit (08/11/2017)

### Tailoring Mixed-Halide, Wide-Gap Perovskites via Multistep Conversion Process

Wide-band-gap mixed-halide  $\text{CH}_3\text{NH}_3\text{PbI}_{3-x}\text{Br}_x$ -based solar cells have been prepared by means of a sequential spin-coating process. The spin-rate for  $\text{PbI}_2$  as well as its repetitive deposition are important in determining the cross-sectional shape and surface morphology of perovskite, and, consequently,  $J-V$  performance. A perovskite solar cell converted from  $\text{PbI}_2$  with a dense bottom layer and porous top layer achieved higher device performance than those of analogue cells with a dense  $\text{PbI}_2$  top layer. This work demonstrates a facile way to control  $\text{PbI}_2$  film configuration and morphology simply by modification of spin-coating parameters without any additional chemical or thermal post-treatment.

#### General information

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