Supporting info for

MAPbI_{3-x}Cl_x mixed halide perovskite for hybrid solar cells: the role of chloride as dopant on the transport and structural properties

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As for film orientation, the XRD spectra point out that PS2 and PS3 highly oriented but PS1 is not. However MAPbI₃ films prepared using DMF as the solvent were found to be highly oriented (Figure S1), which suggests that orientation is determined by the solvent used and from the influence it has on the self-assembling process rather than to the presence of chloride.

Figure S1. XRD pattern of SP1, SP2, and SP3 films compared with the one of MAPbI₃ prepared using DMF instead of γ-butyrolactone as the solvent.

Figure S2. SEM investigation on mesoporous TiO₂ surfaces bare and filled with PS1-3.

Figure S3. Schematic representation of the simulated supercell of 32 $\text{CH}_3\text{NH}_3\text{PbI}_{(3-x)}\text{Cl}_x$ units.

Figure S4. Optimized geometries of the $\text{CH}_3\text{NH}_3\text{PbI}_3$, structure 1 (a) and 2 (b). Three different geometry orientations have been shown.

Figure S5. Absorption spectra of PS1-3 devices.