energies

MDPI

Supplementary Materials

Plasma-Deposited Fluorocarbon Coatings on Methylammonium Lead Iodide Perovskite Films

Vincenza Armenise [1], Silvia Colella [2,*], Antonella Milella [1,*], Fabio Palumbo [2], Francesco Fracassi [1,2] and Andrea Listorti[1]

[1] Department of Chemistry, University of Bari Aldo Moro, via Orabona 4, 70125 Bari, Italy; andrea.listorti@uniba.it (A.L.); antonella.milella@uniba.it (A.M.); vincenza.armenise@uniba.it (V.A.); francesco.fracassi@uniba.it (F.F.)

[2] National Research Council, Institute of Nanotechnology (CNR-NANOTEC), c/o Department of Chemistry, University of Bari Aldo Moro, via Orabona 4, 70125 Bari, Italy; silvia.colella@nanotec.cnr.it (S.C.); fabio.palumbo@cnr.it (F.P.)

* Correspondence: silvia.colella@nanotec.cnr.it; Tel.: +390805442009; antonella.milella@uniba.it; Tel:+39 080 544 2858

Table S1. Thickness values of pristine $MAPbI_3$ film and of samples obtained by the plasma deposition of the fluorocarbon coating performed for different time on the perovskite.

Sample	Thickness (nm)
$MAPbI_3$	440 ± 10
$MAPbI_3$ + coating 10s	453 ± 9
$MAPbI_3$ + coating 30s	466 ± 10
$MAPbI_3$ + coating 60s	488 ± 4
$MAPbI_3$ + coating 120s	529 ± 9

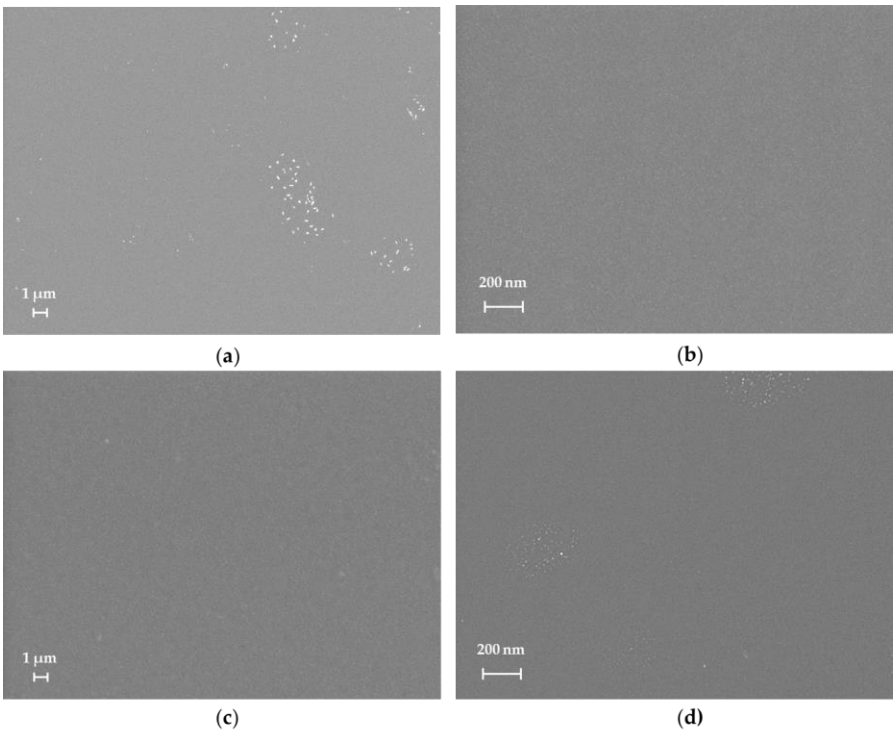


Figure S1. SEM images of the fluorocarbon coating deposited in (**a**,**b**) 10 s and (**c**,**d**) 120 s on a glass substrate.

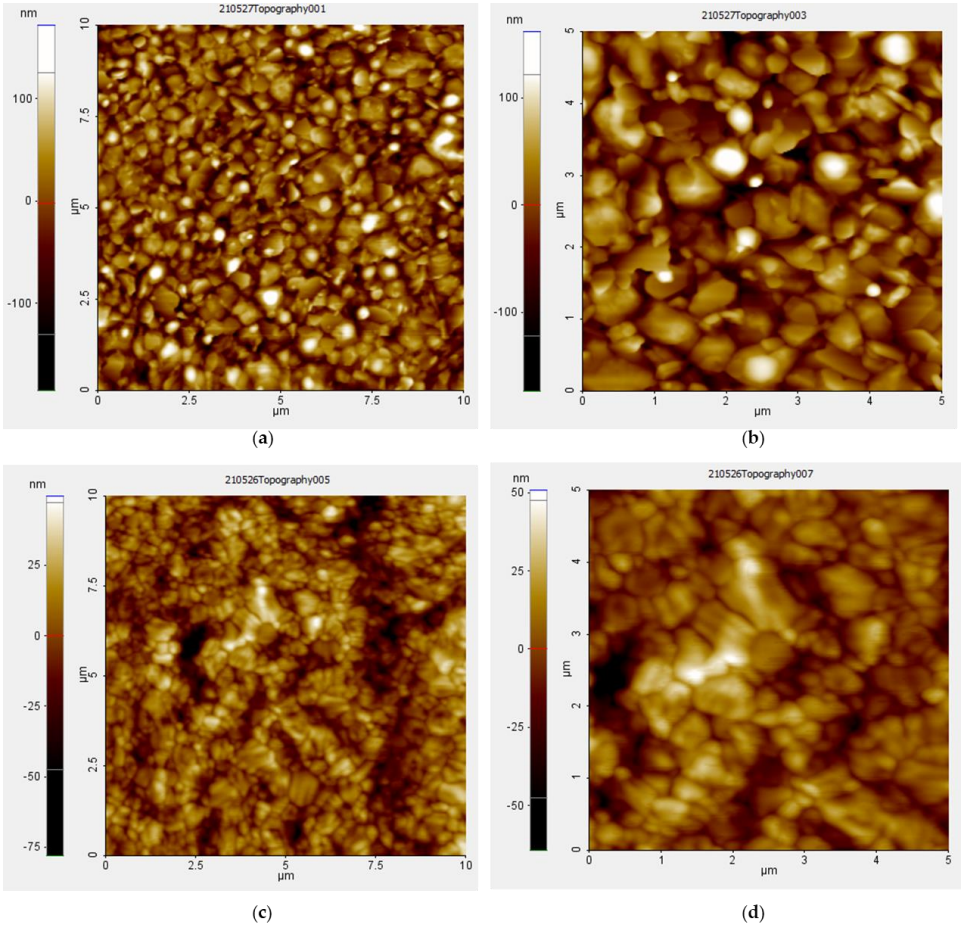


Figure S2. AFM images of the (**a**,**b**) pristine $MAPbI_3$ film (RMS = 44.8 nm) and of (**c**,**d**) samples obtained by the plasma deposition of the fluorocarbon coating performed for 60 s on the perovskite (RMS = 14.9 nm).

Table S2. WCA values of fluorocarbon coatings deposited in different time.

Sample	WCA (°)
coating 10 s	107 ± 3
coating 30 s	107 ± 2
coating 60 s	109 ± 1
coating 120 s	108 ± 2