

Supporting Information

for

Thickness of Hole Transport Layer in Perovskite Solar Cells: Performances versus Reproducibility

Guan-Woo Kim, Dipak V. Shinde, and Taiho Park*

[*] Prof. Taiho Park. Corresponding-Author

*Chemical Engineering, Pohang University of Science and Technology (POSTECH), 77
Cheongam-Ro, Nam-gu, Pohang, Kyungbuk, Korea. Fax: +82-54-279-8298; Tel: 82-54-
279-2394; E-mail: taihopark@postech.ac.kr*

Contents

Fig. S1 Cross-sectional SEM (Scanning electron microscopy) images showing various thickness of hole transport layer (HTL): (a) 700 nm HTL, (b) 560 nm HTL, (c) 450 nm HTL, (d) 400 nm HTL, (e) 250 nm HTL, (f) 180 nm HTL

Fig. S2 Ultraviolet photoelectron spectroscopy (UPS) of spiro-MeOTAD depending on the thickness.

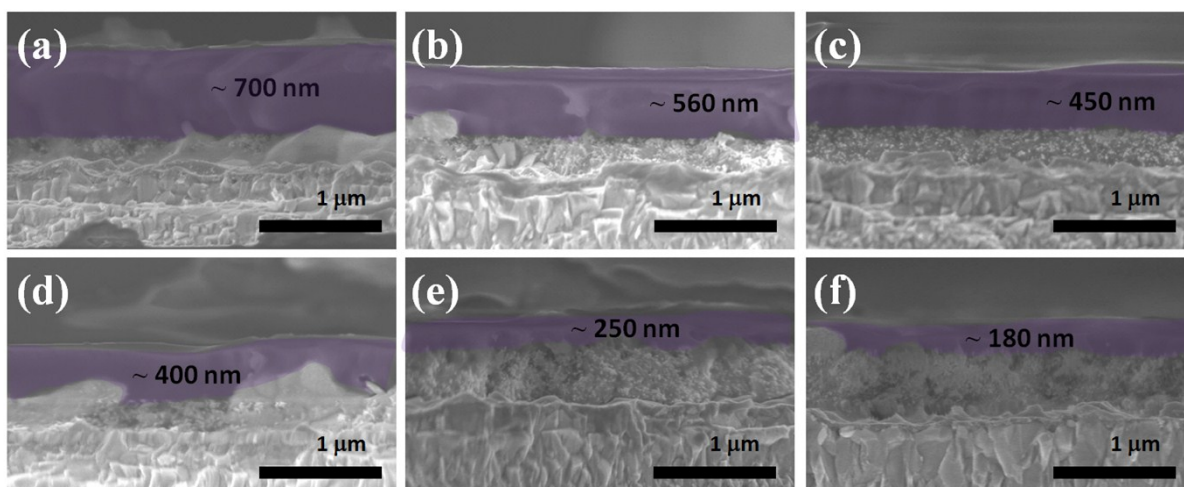


Fig. S1 Cross-sectional SEM (Scanning electron microscopy) images showing various thickness of hole transport layer (HTL): (a) 700 nm HTL, (b) 560 nm HTL, (c) 450 nm HTL, (d) 400 nm HTL, (e) 250 nm HTL, (f) 180 nm HTL

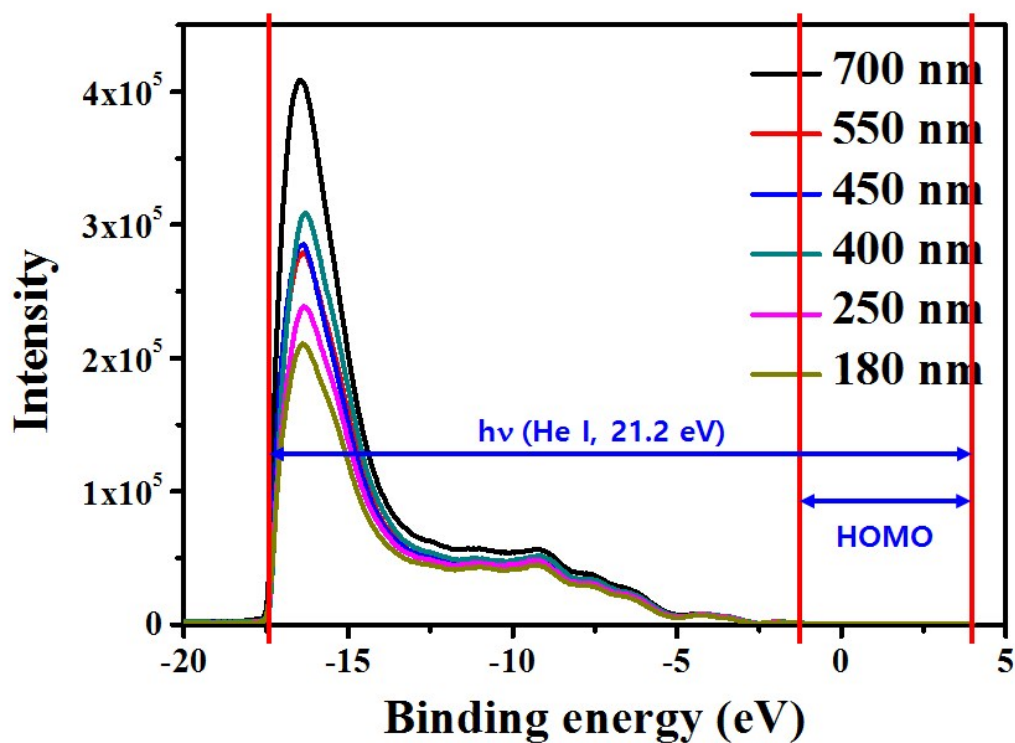


Fig. S2 Ultraviolet photoelectron spectroscopy (UPS) of spiro-MeOTAD depending on the thickness.