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## Electronic supplementary information for **Porous Organic Polymers in Solar Cells**

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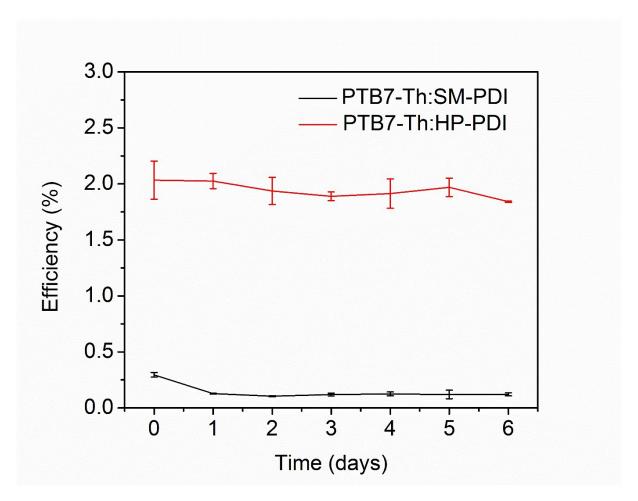


Figure S1 The stability data of OSC with PTB7-Th:SM-PDI (black) and PTB7-Th:HP-PDI (red) up to six days. Reproduced with permission from ref<sup>1</sup>. Copyright 2017, Royal Society of Chemistry.

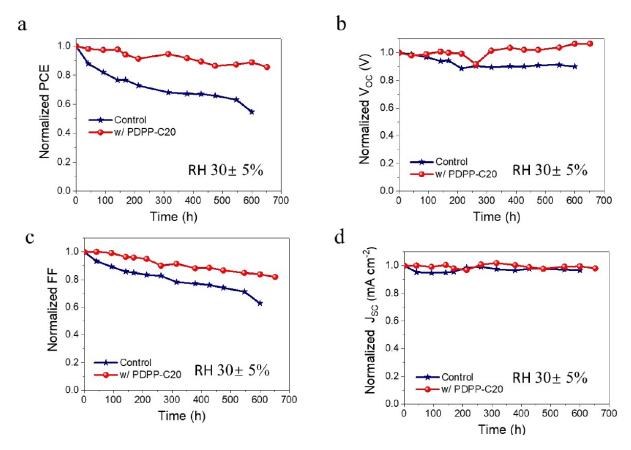


Figure S2 Normalized Stability data regarding solar cells with (red dots and line) or without (dark blue dots and line) PDPP-C20 in terms of (a) PCE; (b) Voc; (c) FF; (d) Jsc. The devices are stored under room temperature and non-encapsulated environment with a relative humidity of  $30 \pm 5\%$ . Reproduced with permission from ref<sup>2</sup>. Copyright 2021, Springer Nature.

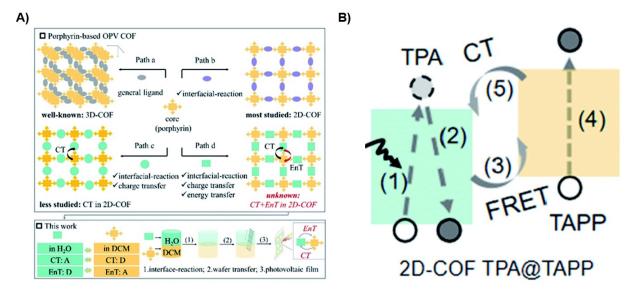


Figure S3 A) schematics of the common object-oriented path for porphyrin-based OPV COF synthesis, the lower diagram depicts the synthetic flow of incorporating TAPP and TPA as building blocks. B) Photophysical process of D-A heterojunction COF. (1) Photons excitation in TPA; (2) relaxation and emission; (3) ultrafast energy transfer from TPA domain to TAPP domain; (4) excitation of TAPP; (5) charge transfer from TAPP to TPA. Reproduced with permission from ref<sup>3</sup>. Copyright 2020, Royal Society of Chemistry.

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