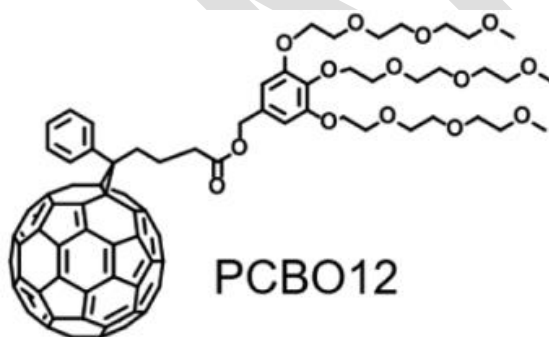


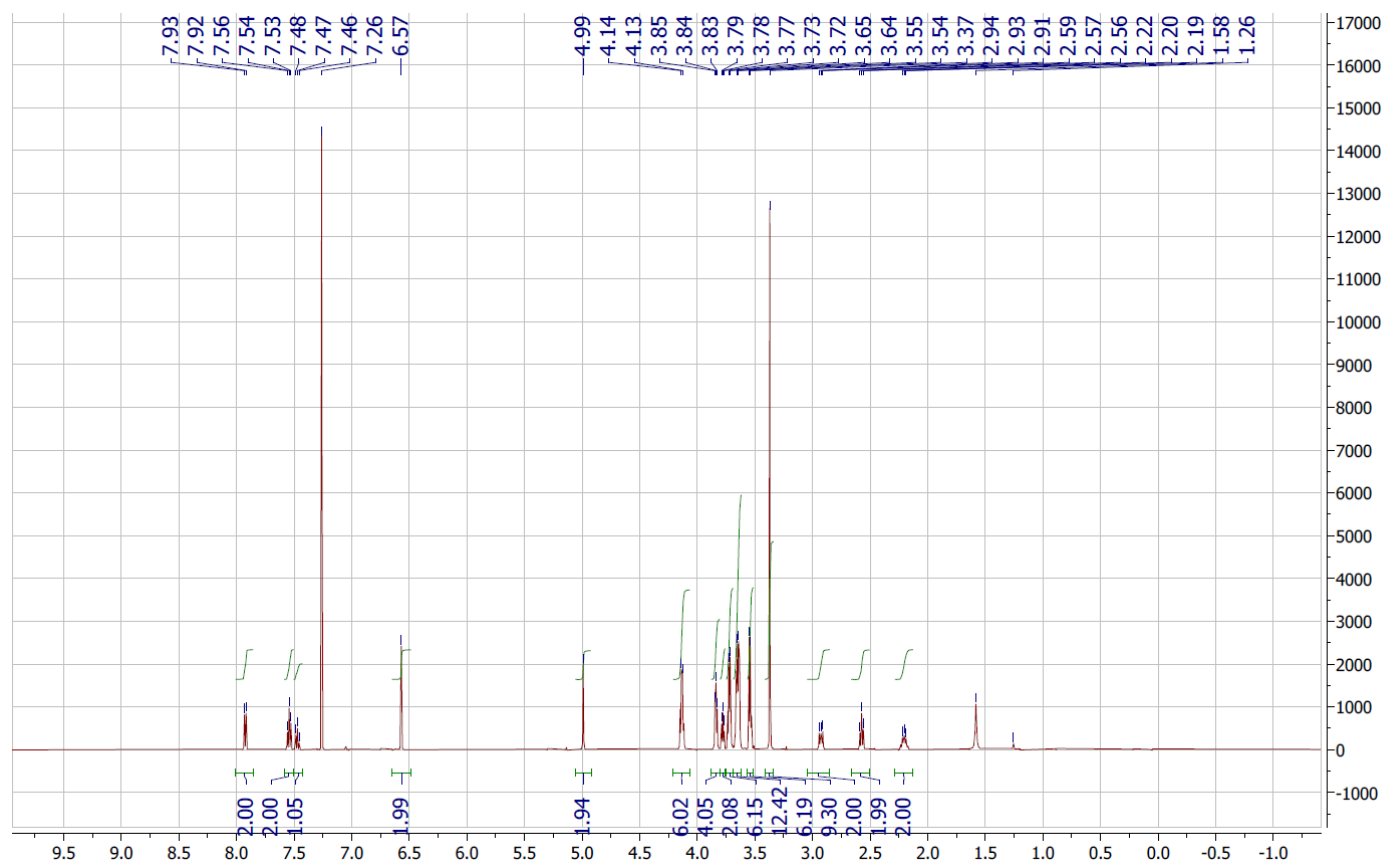
Certificate of Analysis

Common Name PCBO, PCBO-12, PCBO12
Application: Aqueous soluble fullerene acceptor for OPV
Chemical Structure:



Lot No. MY15090P
Appearance: Wax-like beige solid
Purity: 98+% (NMR)
Solubility: Soluble in water, alcohol and ethanol/water mixtures
Reference: Chem. Mater. 2018, 30, 5663–5672
Remark: Aqueous soluble fullerene acceptors for efficient eco-friendly polymer solar cells processed from benign ethanol/water mixtures

Internal reference



1-Material is dedicated to provide the material according to customer's needs, and some material we promoted may be solely offered to certain customers for their specific needs in their research and development projects on a custom synthesis basis or on a contract research basis. All the material is offered as it is, along with the information and technical advice-where verbal, in writing or by way of trials-are given in good faith and are believed to be accurate but without warranty since the conditions of use are beyond the control of 1-Material, and this also applies where proprietary rights of third parties are involved. For the condition and term of our offer and service, please consult the disclaimer in our web: www.1-material.com

Ref 1: Aqueous soluble fullerene acceptors for efficient eco-friendly polymer solar cells processed from benign ethanol/water mixtures. *Chem. Mater.* 2018, 30, 5663–5672

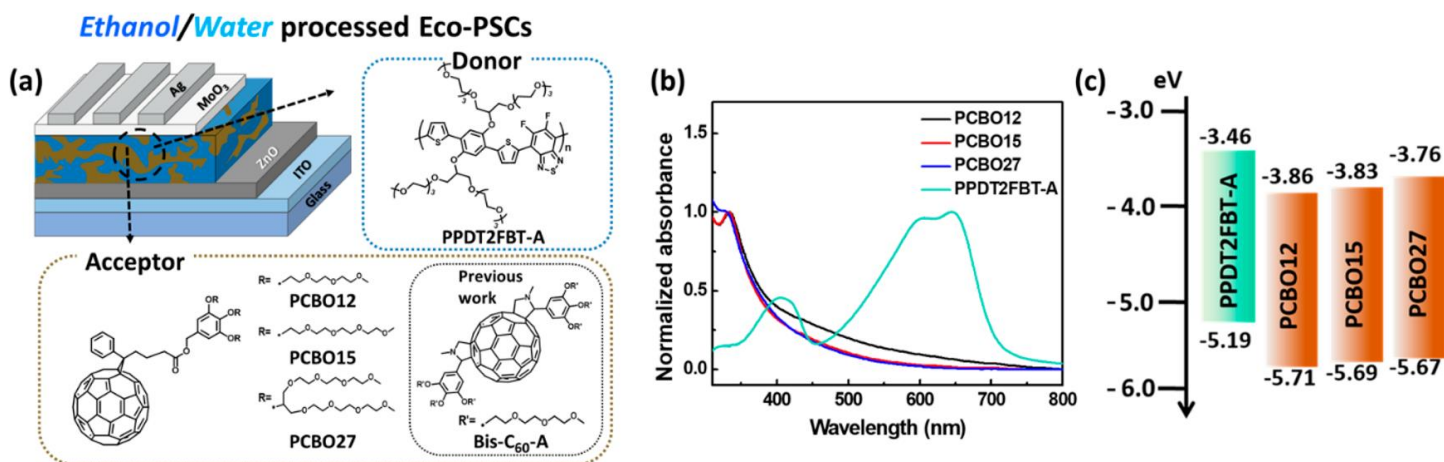
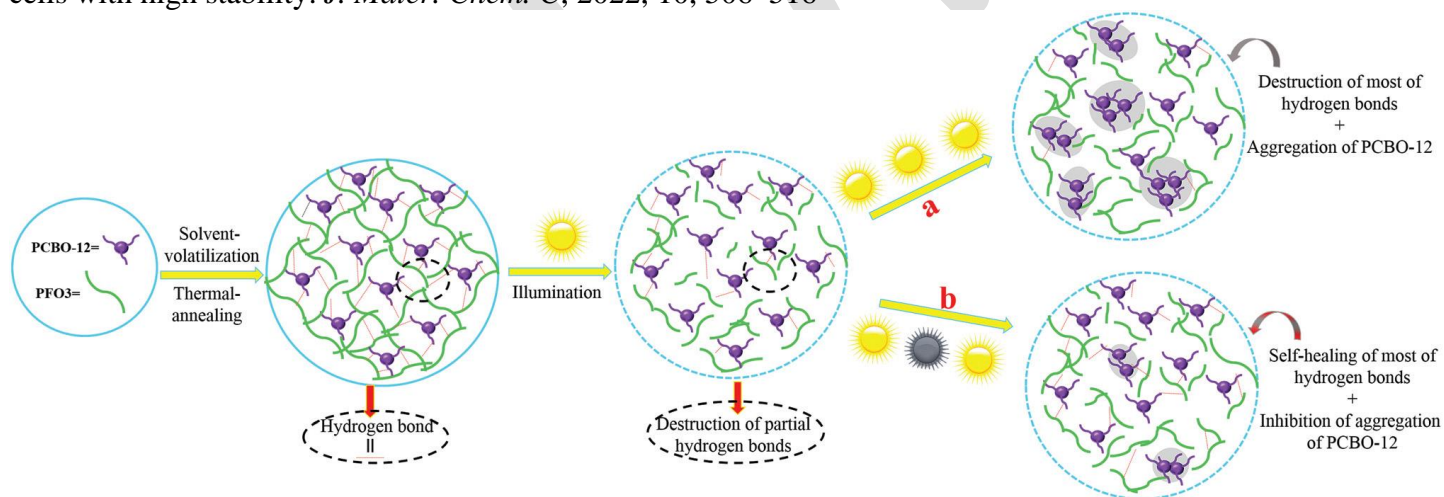


Figure. (a) Device structure of inverted PSC and chemical structures of donor and acceptor used in this study; (b) normalized UV-visible absorption spectra in film; (c) the energy level diagram of the ethanol/water-soluble polymer donor (PPDT2FBT-A) and PCBO12, PCBO15, and PCBO27.

Ref 2. Simple furan-based polymers with the self-healing function enable efficient eco-friendly organic solar cells with high stability. *J. Mater. Chem. C*, 2022, 10, 506–516



Scheme: The schematic diagram of the variation of the PFO3:PCBO-12 film post-treated with (a) continuous illumination for 200 h in an inert atmosphere and (b) discontinuous illumination but still with the same light-soaking of 200 h in an inert atmosphere, respectively.

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