

Supporting Information

Colorful flexible polymer tandem solar cells

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Table S1 Summary of recent reports on colorful polymer solar cells

Year	Strategy and device structure	PCE	Reference
2017	Strategy: Mixing dye molecule ASSQ Structure: ITO/ZnO/PCE10:N2200:ASSQ/MoO₃/Ag	Red: 3.62% Blue: 5.00% Purple: 5.00%	Kong <i>et al.</i> , <i>Nano energy</i> 2017, 38, 36-42.
2017	Strategy: MoO₃/LiF photonic crystals Structure: ITO/ZnO/PTB7-Th:PC₇₁BM/MoO_x/Au/Ag/ [MoO₃/LiF]^{pairs}	From neutral to blue: 5.4%-7.0%	Xu <i>et al.</i> , <i>Adv. Funct. Mater.</i> 2017, 27, 1605908.
2016	Strategy: TiO₂/SiO₂ photonic crystal (1DPC) Structure: 1DPC/ITO/PFN/PTB7:PC₇₁BM/PEDOT:PSS	5.2%	Zhang <i>et al.</i> , <i>J. Mater. Chem. A</i> 2016, 4, 11821-11828
2015	Strategy: WO₃/LiF photonic crystal Structure: ITO/TiO₂/PSBTBT:PC₆₀BM/WO₃/Ag/[WO₃/LiF]^{pairs}	3.4%-4.01%	Yu <i>et al.</i> , <i>RSC Adv.</i> , 2015, 5, 54638-54644
2014	Strategy: Ag/NPB/Ag microcavity Structure: ITO/PEDOT:PSS/MoO₃/DTDCPB/DTDCPB:C₇₀/C₇₀/Bphen/Ag/NPB/Ag	From bluish to reddish: 4.20%-5.15%	Chen <i>et al.</i> , <i>Adv. Mater.</i> 2014, 26, 1129-1134
2013	Strategy: MoO₃/LiF photonic crystals Structure: ITO/PEDOT:PSS/PTB7:PC₇₁BM/BCP/Ag/LiF/ MO₃/LiF	Red: 4.6% Blue: 4.7% Green: 5.2%	Betancur <i>et al.</i> , <i>Nat. Photonics</i> , 2013, 7, 995-1000
	Strategy: Transparent polymer top electrode Structure: PES/Ag/PEI/P3HT:ICBA/m-PEDOT:PSS/PEIE/PTB7-Th:PC₇₁BM/PEDOT:PSS	Red: 8.34% Blue: 8.14% Green: 7.23%	This work

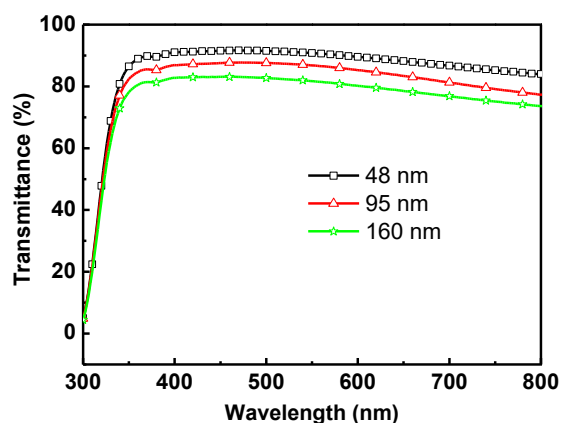


Figure S1. Transmittance of the transfer-printed PEDOT:PSS films with different thicknesses.

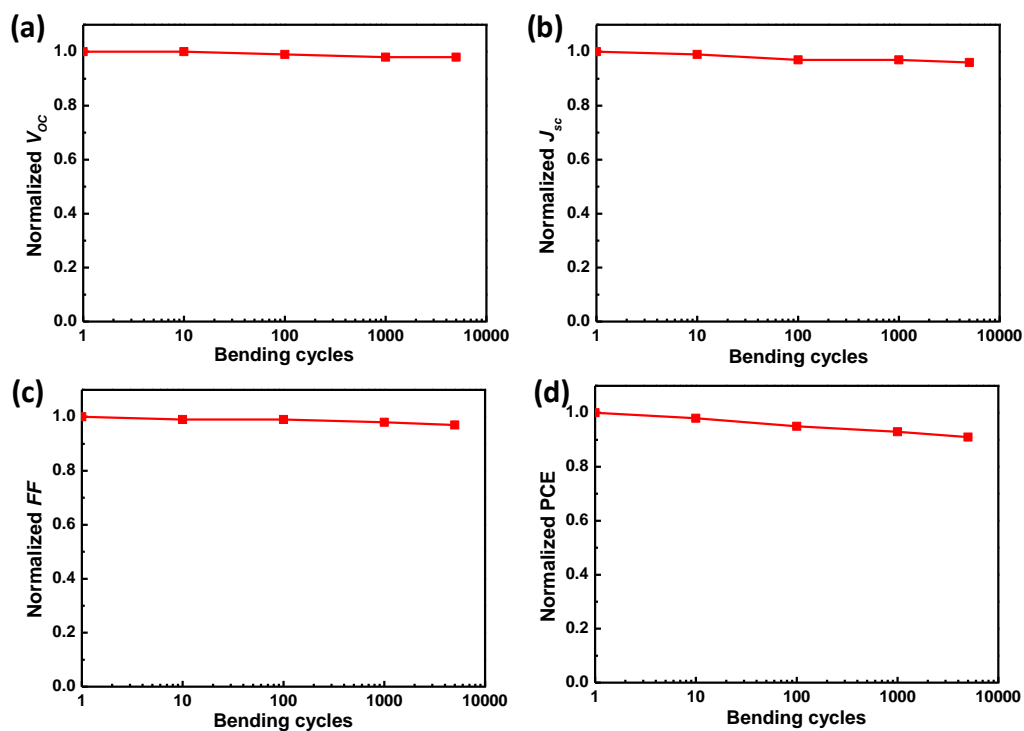


Figure S2. Normalized V_{oc} , J_{sc} , FF and PCE of a colorful solar cell with 95 nm PEDOT:PSS after 5000 bending cycles with a radius of 5 mm.