SUPPORTING INFORMATION

Controlled atmosphere electrospinning of organic nanofibers with improved light emission and waveguiding properties

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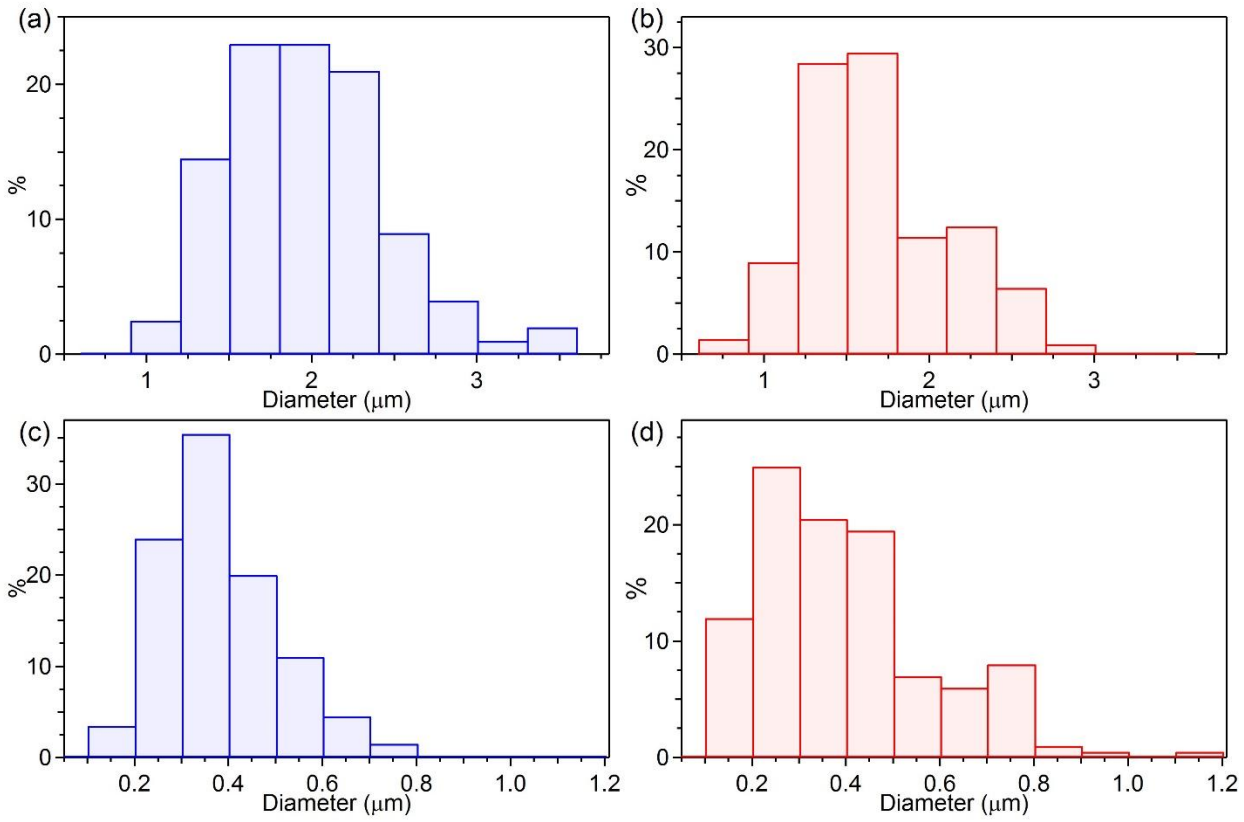

Figure S1. Diameter distributions of fibers based on F8BT (a, b) and MEH-PPV/PVP (c, d) electrospun in controlled nitrogen atmosphere (a, c) and in air (b, d).

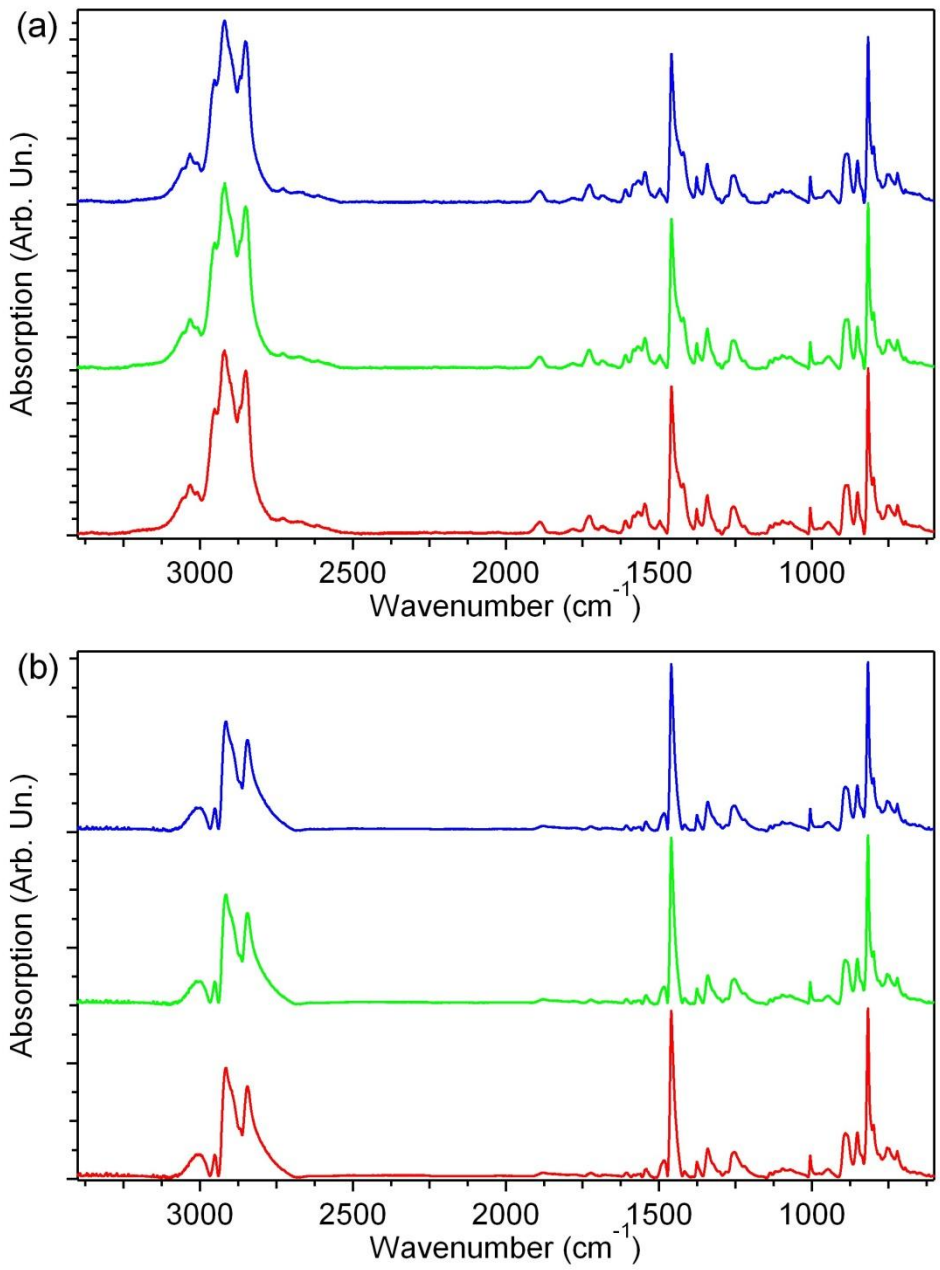

Figure S2. (a,b) FTIR absorption spectra of free-standing mats of F8BT fibers realized in controlled atmosphere (a) and in air (b). Red, green and blue lines correspond to spectra acquired before and after 30 minutes and 60 minutes of UV irradiation, respectively. Spectra are vertically shifted for better clarity.

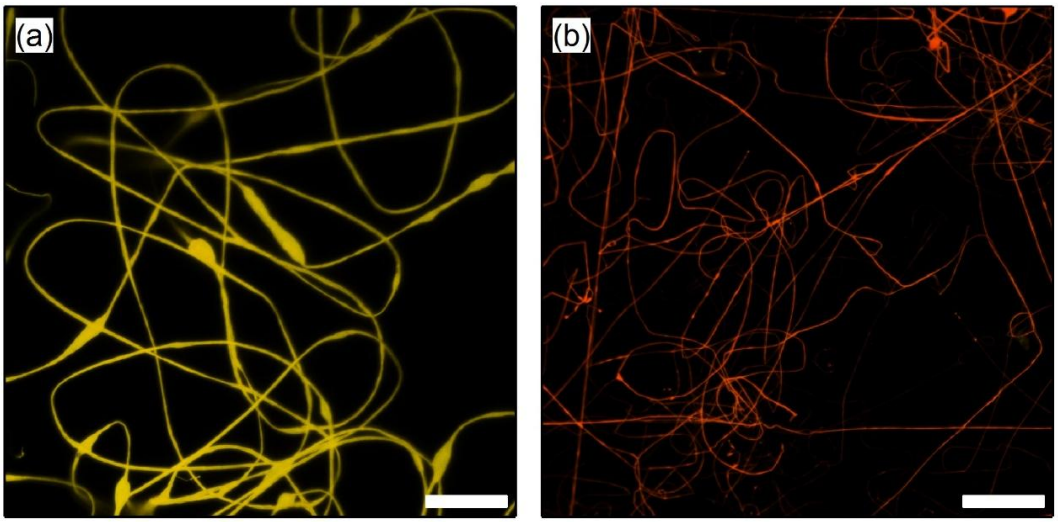

Figure S3. Fluorescence confocal micrographs of F8BT (a) and MEH-PPV/PVP (b) fibers electrospun in air. Scale bars = 100 µm. Excitation wavelengths: 408 nm (a) and 488 nm (b).

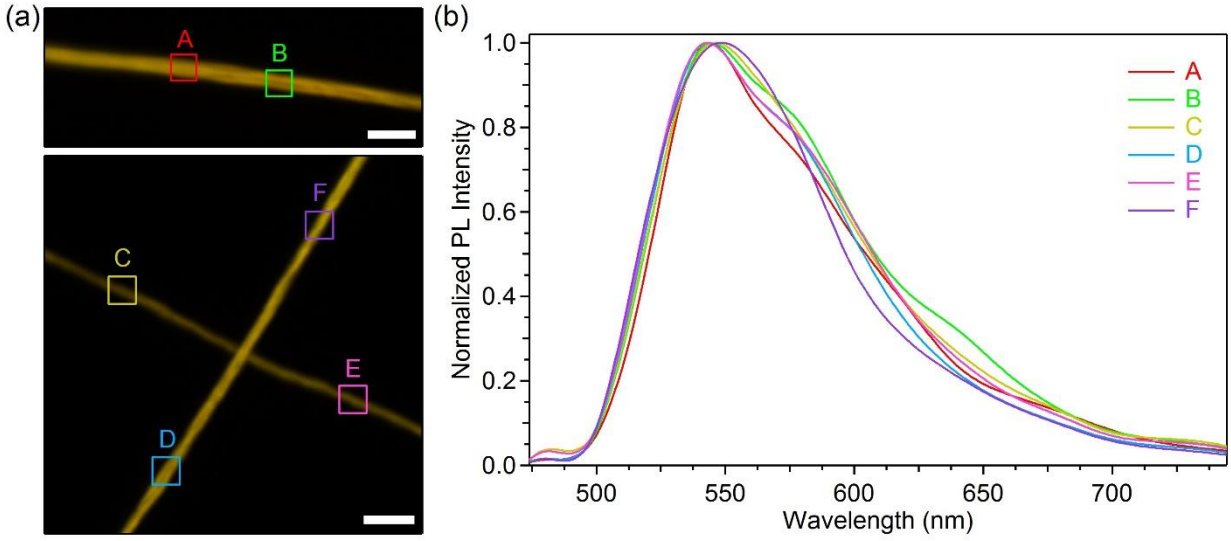

Figure S4. Confocal fluorescence images (a) and spatially-resolved photoluminescence spectra (b) of F8BT fibers electrospun in air. Scale bar = 5 µm. Excitation wavelength: 408 nm. Each emission spectrum, measured in a different region of the fibers (squares in a), is normalized to its maximum value. The size of each analyzed square is 2.5×2.5 μm^2.

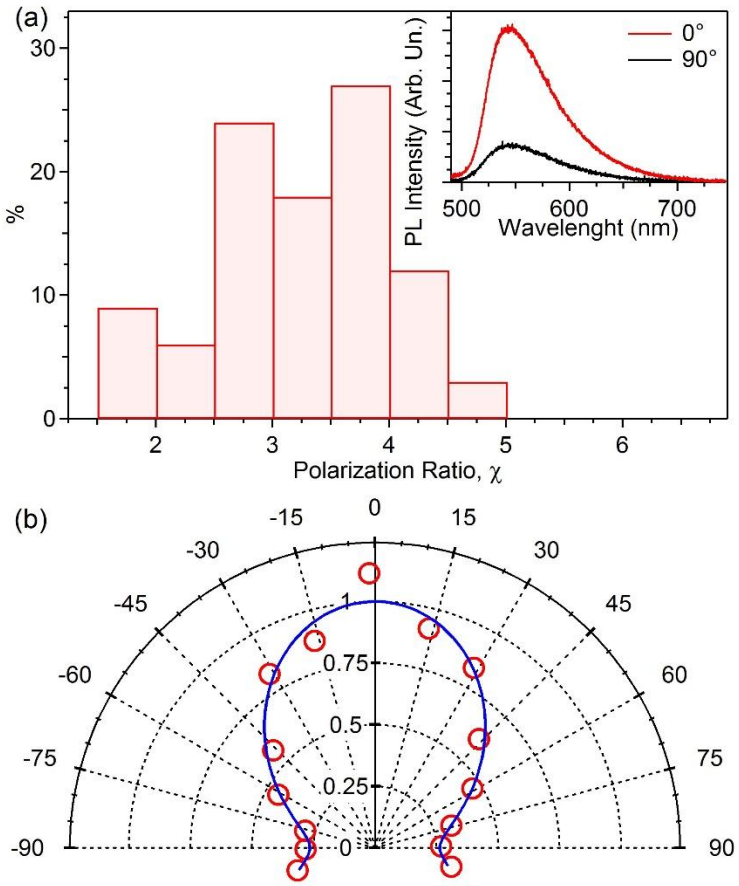

Figure S5. (a) Distribution of photoluminescence polarization ratio for single F8BT fibers electrospun in air. Inset: corresponding polarized emission spectra obtained with the analyzer axis parallel (red line) and perpendicular to (black line) the fiber length. (b) Normalized photoluminescence intensity (circles) vs. polarization angle of the analyzer filter, θ, measured with respect to the fiber longitudinal axis. Continuous line: best fit to data by a Malus law.