Supporting Information
Legends for Supplementary Movies

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Supplementary Movie 1. Single-molecule imaging of a photodegradation reaction of a chiral helical π-conjugated polymer, (–)-poly(MtOCAPA), on a mica substrate under *n*-octylbenzene at room temperature. A violet laser of 405 nm wavelength was irradiated since 8.4 s. In the movie, the violet triangle shows a region during a violet laser irradiation. XY: 150 nm x 150 nm, Z: 10 nm. Frame rate: 12.4 fps. Laser power: 0.2 mW (as the outgoing ray from the objective). [1]

Supplementary Movie 2. Single-molecules imaging of micro-Brownian movement in a chiral helical π-conjugated polymer chain, (+)-poly(ChOCAPA), on an APS-coated mica under *n*-octylbenzene at 25 ± 1 ºC. XY: 500 nm x 375 nm, Z: 16.8 nm, Frame rate: 5.0 fps (x4 play = 20 fps). [2]

Supplementary Movie 3. Single-molecule imaging of a macromolecular walking along a chiral helical π-conjugated polymer chain, (–)-poly(ChOCPA), on an APS-coated mica under *n*-octylbenzene at 25 ± 1 ºC. XY: 250 nm x 188 nm, Z: 8.4 nm, Frame rate: 5.0 fps (x3 play = 15 fps). [2]

References:

1. K. Shinohara et al., *J. Polym. Sci. Part A: Polym. Chem.* **48,** 4103–4107 (2010)
2. K. Shinohara et al., *Polymer Preprints, Japan* **62,** 2474-2475 (2013)