

## Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: **Reversible shape changes between flat and helical of PANI:s-CSA macrostripe.**

The PANI:s-CSA macrostripe curled into a left-handed helical ribbon when vast amounts of iPrOH were added into THF. By contrast, when the amount of THF dominated, the helical ribbon returned to its flat shape, and the process conducted in reverse. The video was sped up 10 times, to clarify the helical motion of the ribbon.

File Name: Supplementary Movie 1

Description: **Actuation behavior of PANI:s-CSA stripe when expose to mismatched chiral species.**

When the PANI:s-CSA stripe exposed to (*R*)-(+)-2-aminohexane, slower de-doping with irregular locus happened in the stripe, which resulted in disordered deformation of the stripe. The video was sped up 10 times, to clarify the deformation characteristics of the ribbon.