Supporting Information

**Convenient Chirality Transfer from Organics to Titania:**

**Construction and Optical Property**

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Synthesis of achiral TiO₂

1. Synthesis of crystalline PEI template

0.474 g PEI powders were dissolved in 20 mL H₂O by heating around 80 °C with stirring. Then the hot PEI solution was placed at room temperature to form a suspension, from which white precipitate (i.e., crystalline PEI) was collected by centrifugation and further washing with H₂O three times. The as-obtained crystalline PEI above was dispersed in 15 mL H₂O.

2. Synthesis of achiral PEI@TiO₂ hybrids

The TiO₂ source solution was prepared as follows: 6 mL titanium bislactates (abbreviated as TiLact, the commercial name is TC310 from Matsumoto Chemical Co. Japan), 6 mL ammonia (1 mol/L), and 8 mL H₂O was mixed with stirring for 30 minutes. Then the PEI-containing suspension above was added into the TiO₂ source solution. After stirring for 2 hours at room temperature, white precipitate (i.e., achiral PEI@TiO₂) was collected by centrifugation, washing with H₂O and acetone, and drying under vacuum.

3. Synthesis of achiral aTiO₂ by calcination

The as-formed PEI@TiO₂ above was further calcinated at 500 °C (or 800 °C) for 1h under air, which led to achiral aTiO₂-500 (or TiO₂-800). The XRD patterns and SEM images of aTiO₂-500 and aTiO₂-800 are shown in Figure S1 and S2, respectively.

Figure S1. XRD pattern for the achiral aTiO₂ after calcination at 500 °C (black line) and 800 °C (red line).
**Figure S2.** SEM images for the achial $a$TiO$_2$ after calcination at a) 500 °C and b) 800 °C.