Supplementary information

Template Electrosynthesis of Tailored-Made Helical Nanoswimmers

Jinxing Li, Sirilak Sattayasamitsathit, Renfeng Dong, Wei Gao, Ryan Tam, Xiaomiao Feng, Stephen Ai, Joseph Wang*

Department of Nanoengineering, University of California, San Diego, La Jolla, California 92093, United States.

*Corresponding Author: josephwang@ucsd.edu

1. Supplementary Figures

Fig. S1 SEM image of 400 nm nanosprings encapsulated within Al₂O₃ nanotubes after the dissolution of the PC membranes.

2. Supplementary Videos

SI 1. The frequency-dependent transition motion behavior of a 400 nm diameter helical nanoswimmer upon increasing the magnetic frequency from 10 to 100 Hz.

SI 2. Movement of a helical nanoswimmer (3 μm long; 400 nm diameter) over the 3 sec period at a magnetic frequency of 150 Hz.

SI 3. Movements of helical nanoswimmers with different diameters (100, 200 and 400 nm) over the 2 sec period at a magnetic frequency of 120 Hz.