## **Description of Additional Supplementary Files**

File Name: Supplementary Movie 1 Description: Linear propulsion of the rocket-like swimmer.

File Name: Supplementary Movie 2 Description: Linear propulsion of the rectangular swimmer.

File Name: Supplementary Movie 3 Description: Circular motion of the rectangular swimmer.

File Name: Supplementary Movie 4 Description: Circular motion of the rocket-like swimmer.

File Name: Supplementary Movie 5 Description: Rotary motion of the microswimmer.

File Name: Supplementary Movie 6 Description: A parallel movement of multiple microswimmers with identical shapes.

File Name: Supplementary Movie 7 Description: Time-course motion change of the microswimmer.

File Name: Supplementary Movie 8 Description: Disassembly of the microswimmer after a designated time.

File Name: Supplementary Movie 9 Description: Long-range (1.5m) propulsion of the rocket-like microswimmer

File Name: Supplementary Movie 10 Description: Spiral movement of the microswimmer.

File Name: Supplementary Movie 11 Description: Reverse-spiral movement of the microswimmer.

File Name: Supplementary Movie 12 Description: Disassembly and a change in motion (from circular to linear) of the microswimmer.

File Name: Supplementary Movie 13 Description: Disassembly and a change in motion (from linear to circular) of the microswimmer