

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Actuating performance of GO/PPy(a) under the stimulus of humidity; Actuating performance of GO/PPy(b) under the stimulus of humidity; Actuating performance of GO/PPy(c) under the stimulus of humidity

File Name: Supplementary Movie 2

Description: Actuating performance of GO/PPy(b) under the stimulus of IR light

File Name: Supplementary Movie 3

Description: The process of foam's picking and release by smart GO/PPy gripper with cross structure under the stimulus of humidity.

File Name: Supplementary Movie 4

Description: The process of flower's picking from vase by smart GO/PPy gripper with helical structure under the stimulus of humidity

File Name: Supplementary Movie 5

Description: The movement of a soft walking robot under the interval stimulus of IR light.