

Description of Additional Supplementary Files

Supplementary Movie 1: Video footage showcasing the process of fuel injection into a fluidic actuator using a syringe pump.

Supplementary Movie 2: Demonstration of fuel expulsion by chemical gas generation (10 mg citric acid, 10 mg sodium carbonate, 20 mg ethylcellulose) triggered by water absorption, the fuel was successfully emptied with minimal residue. The prototype was for demonstration only and not characterized for expulsion duration and triggering time.

Supplementary Movie 3: Demonstration of the motion of an edible aquatic robot (sample L1 presented in Fig. 4 of the main text) that exhibits complex random trajectory and prolonged motion duration.

Supplementary Movie 4: The illustration of the edible aquatic robot's fabrication procedure, corresponding to the 'Methods' section in the main text, comprises the creation of the lightweight, porous hull, the shaping of the fluidic layers with milli-fluidic patterns and the gas generation reaction chamber, the bonding and sealing of the layers, and the loading of fuel and reactants into the device.