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## **Supporting Information**

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Osmotic Engine: Translating Osmotic Pressure into Macroscopic Mechanical Force via Poly(Acrylic Acid) Based Hydrogels

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Movie S1: Time lapse recording of several swelling and shrinking cycles. In the experiment, 10 g of a commercial hydrogel (RD 474), consisting of particles in the size of  $370 - 670 \mu m$ , were alternately exposed to deionized water and a 4.3 wt% NaCl solution to lift a weight of 1.5 kg. In the video, the time lapse is 1:375, resulting in a swelling-shrinking time of about 60 minutes.