Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information

Dewetting of Polymer Thin Films on Modified Curved Surfaces: Preparation of Polymer Nanoparticles with Asymmetric Shapes by Anodic Aluminum Oxide Templates

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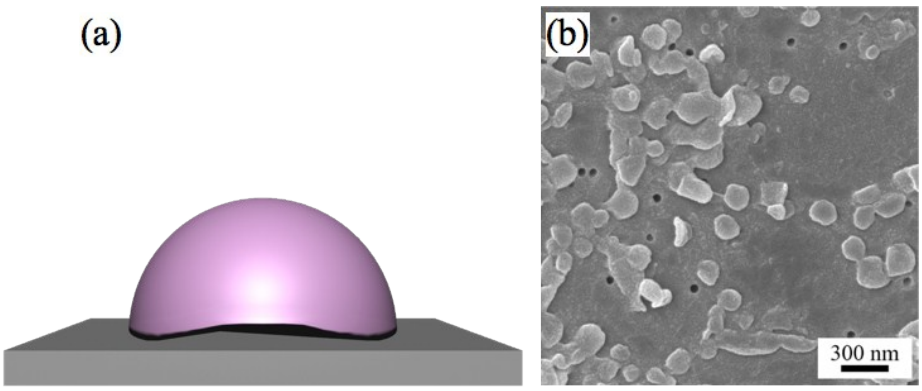

Figure S1. (a) Illustration of a nanoparticle deposited on a substrate. (b) SEM image of PMMA nanoparticles by dissolving the AAO template using NaOH(aq).

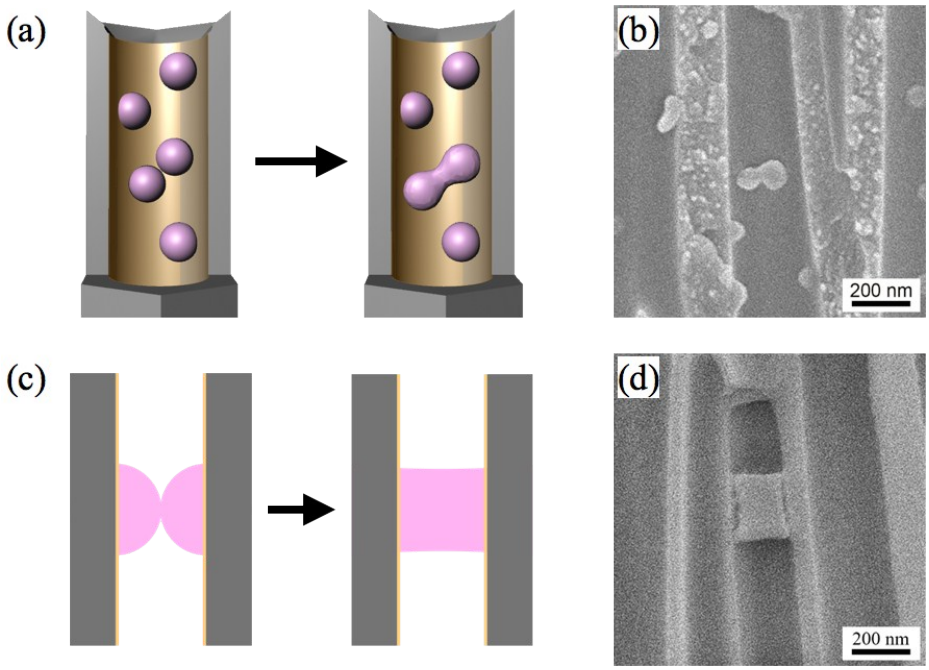

Figure S2. (a) Illustration of the merging process of two neighboring nanoparticles in the nanopore of an AAO template. (b) SEM image of a merged PMMA nanoparticle in the nanopore of an AAO template using a 5 wt % PMMA solution and annealing at 150 °C for 2 h. (c) Illustration of the merging process of two connecting nanoparticles in the nanopore of an AAO template. (d) SEM image of a merged PMMA nanostructure in the nanopore of an AAO template using a 10 wt % PMMA solution and annealing at 150 °C for 2 h.

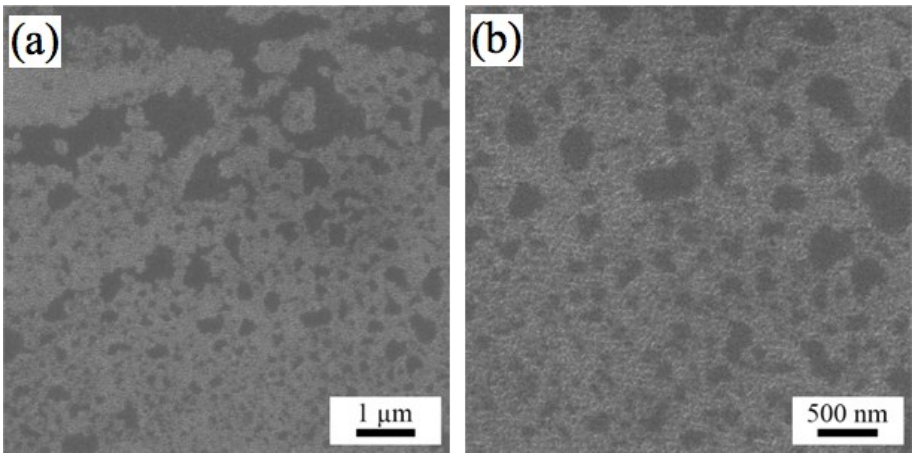

Figure S3. SEM images of dewetted PMMA patterns at different magnifications by thermally annealing the PMMA films on flat ODTS-modified alumina sheets at 150 °C for 2 h: (a) lower and (b) higher magnifications.

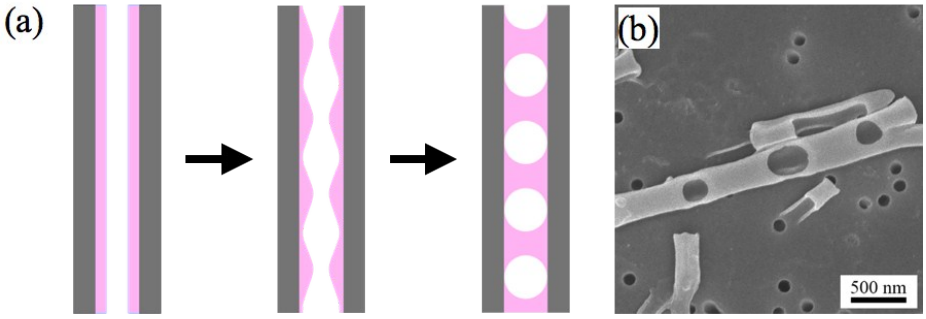

Figure S4. (a) Illustration of the morphology transformation of a nanotube confined in the non-modified nanopore driven by the Rayleigh instability. (b) SEM image of PMMA nanostructures annealed in the nanopores of a AAO template at 150 °C for 10 h.