Supplementary Material (ESI) for Soft Matter

Supplementary Information

pH-Responsive liquid marbles stabilized with poly(2-vinylpyridine) particles

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Measurement of a diameter of the PDMS-P2VP latex particles by dynamic light scattering

Dynamic light scattering (DLS) experiment was tried to be conducted on the poly(2-vinylpyridine) (P2VP) latex particles dispersed in the mixture of *n*-hexane and 2-propanol. Unfortunately, the DLS study was not suitable for determining the diameter of the latex particles, because the P2VP particles settled on the bottom of the vial without stirring: the particle motion was controlled mainly by gravity. The DLS theory could not be applied under this condition.

Turbidimetry measurements

The transmittance (% T) of the aqueous dispersion of PDMS-P2VP particles was monitored using a Shimadzu UV-1600 spectrophotometer with a 1.0 cm quartz cell at various pH. These measurements were conducted on an upper part of the solution: floating P2VP particles at the air-water interface leads to T = 100 %.

Figure S1. Turbidimetry measurements recorded for an aqueous dispersion of PDMS-P2VP latex (Mixtures were prepared at each pH)

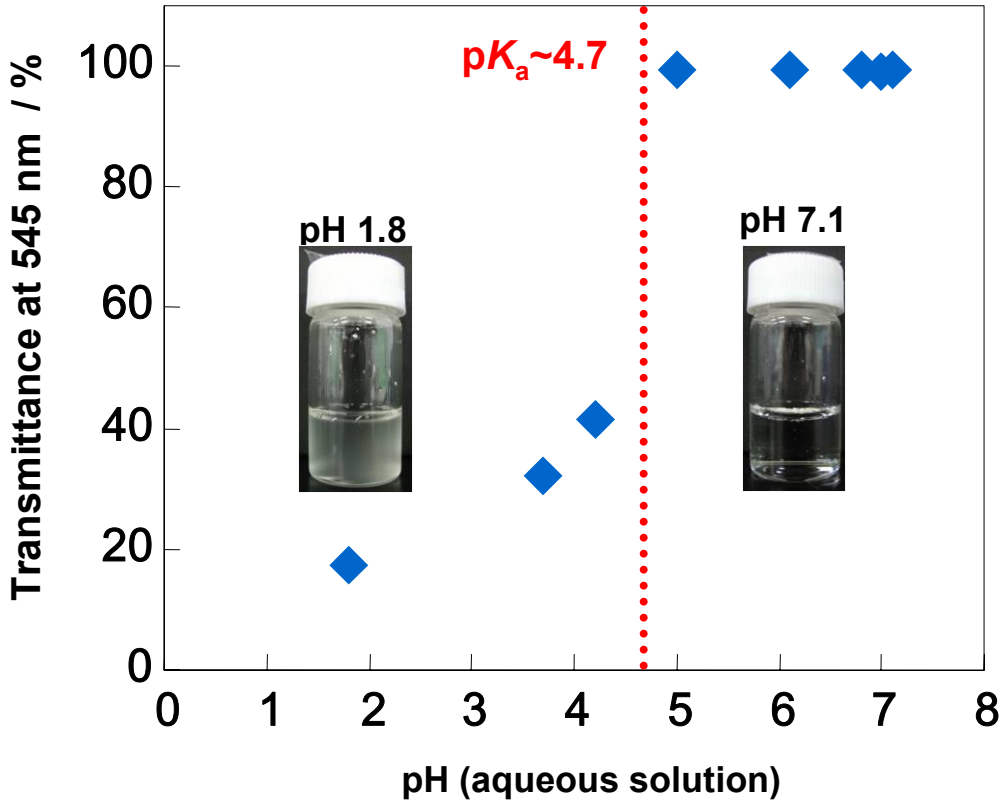

Figure S2. Digital images of liquid marbles prepared using aqueous solutions with pH 2.0 and 6.5.