Programmed Assembly of Metallodielectric Patchy Particles in External AC Electric Fields
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Supplementary Figures

Supplementary Fig. 1 Optical micrograph and simulation results of structures from 11% single-patch 5 μm particles formed at low-frequency AC electric fields. (A) The particles form regular, straight chains in applied AC electric field of ~ 55 V cm⁻¹ at 0.5 kHz. Two-pole patchy particles also form regular, straight chains when such low-frequency AC fields are applied. (B) Effect of the angle between two 11% single-patch particles on their potential energy difference in an AC field of 1 kHz frequency. The chains parallel to the field direction are the most favorable at low-
frequency AC fields. In the optical image in (A) the electric field direction is between the top and bottom of the image and the scale bar represents 20 μm.

Supplementary Fig. 2 Optical micrograph of structures assembled from single-patch particles with smaller diameters. The particles of 2.4 μm diameter have a single patch of 11% and form perpendicular chains in an AC electric field of ~ 190 V cm⁻¹ at 400 kHz. The electric field direction is between the top and bottom of the image and the scale bar represents 20 μm.