

Supporting Information

Electrocoiling-guided printing of multiscale architectures at single-wavelength resolution

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1. Jet velocities as a function of the applied voltage for different polymer concentrations in precursor inks

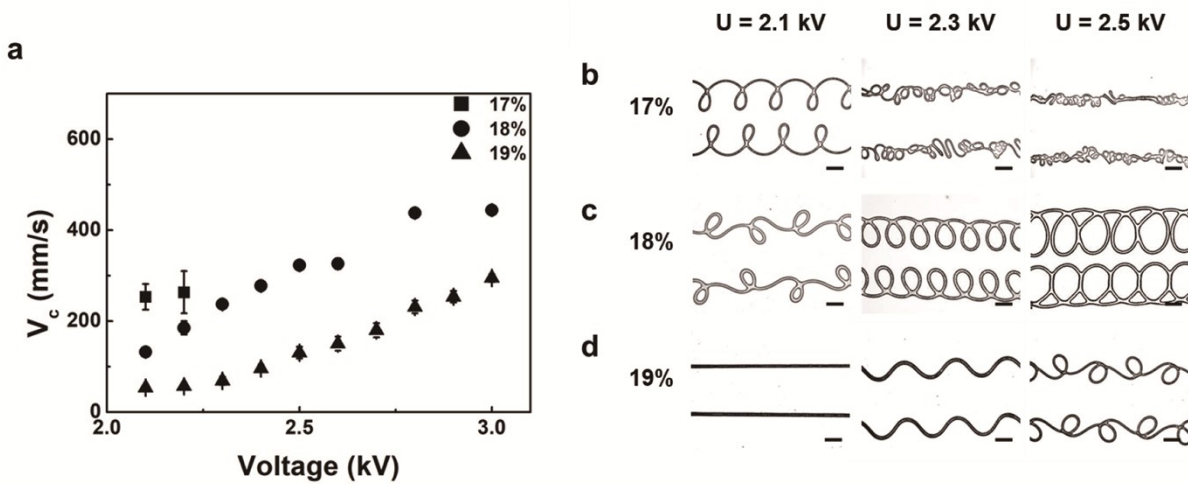


Fig. S1 (a) Jet velocity V_c as a function of the applied voltage for various PCL concentrations in precursor inks. The optical microscope images of different filament patterns at voltages of 2.1 kV, 2.3 kV and 2.5 kV for PCL concentration of **(b)** $\alpha = 17$ wt. %, $V_p = 100$ mm·s⁻¹; **(c)** $\alpha = 18$ wt. %, $V_p = 50$ mm·s⁻¹; **(d)** $\alpha = 19$ wt. %, $V_p = 50$ mm·s⁻¹. For 17 wt. % PCL solution, when the applied voltage is higher than 2.3 kV, the pattern becomes chaotic. Scale bars are 300 μ m.

Scanning electron microscope (SEM) images of printed nano-filaments with different curled patterns

2. Scanning electron microscope (SEM) images of printed nano-filaments with different curled patterns

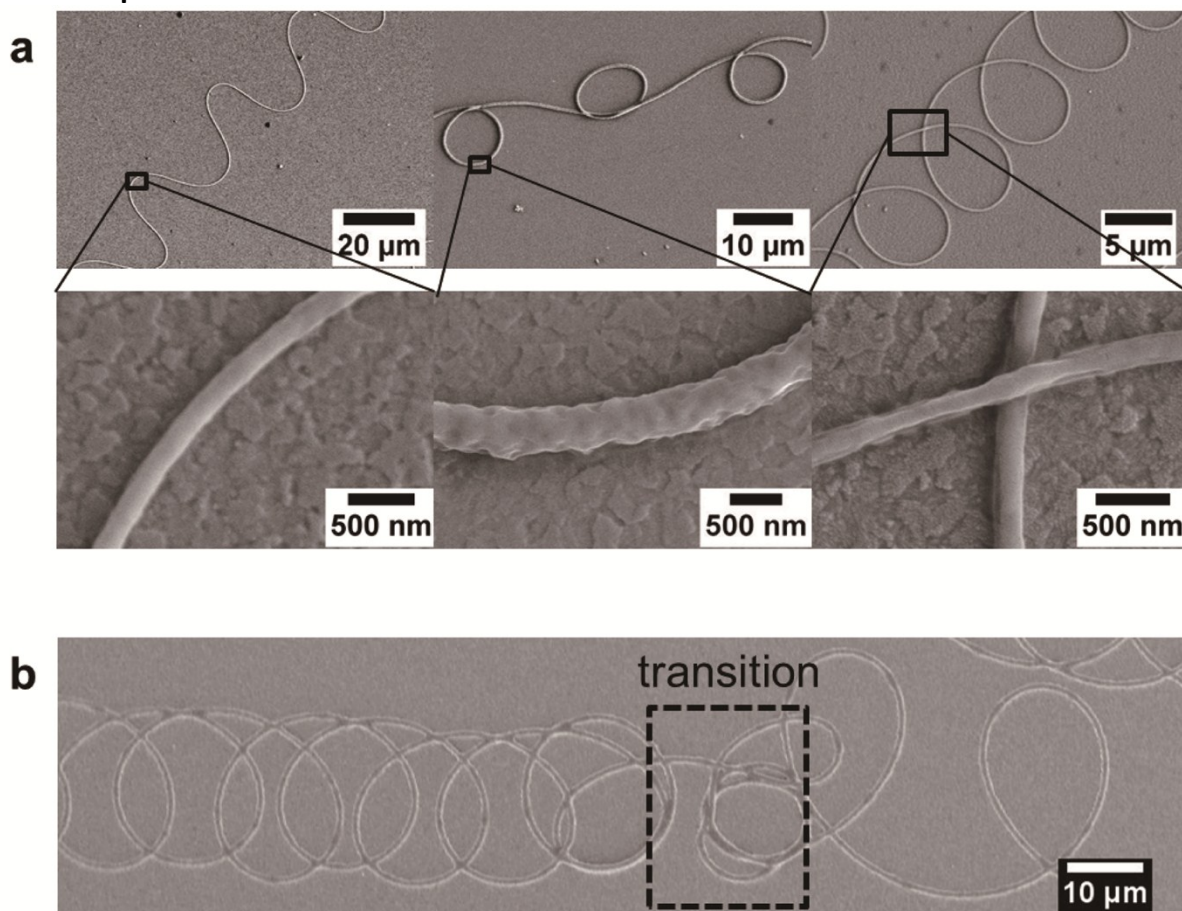


Fig. S2 SEM images showing (a) filaments with patterns of meanders, alternating loops and translated coils, respectively, as well as (b) transition in filament pattern

3. Comparison of the observed and targeted velocity profiles of the translation platform

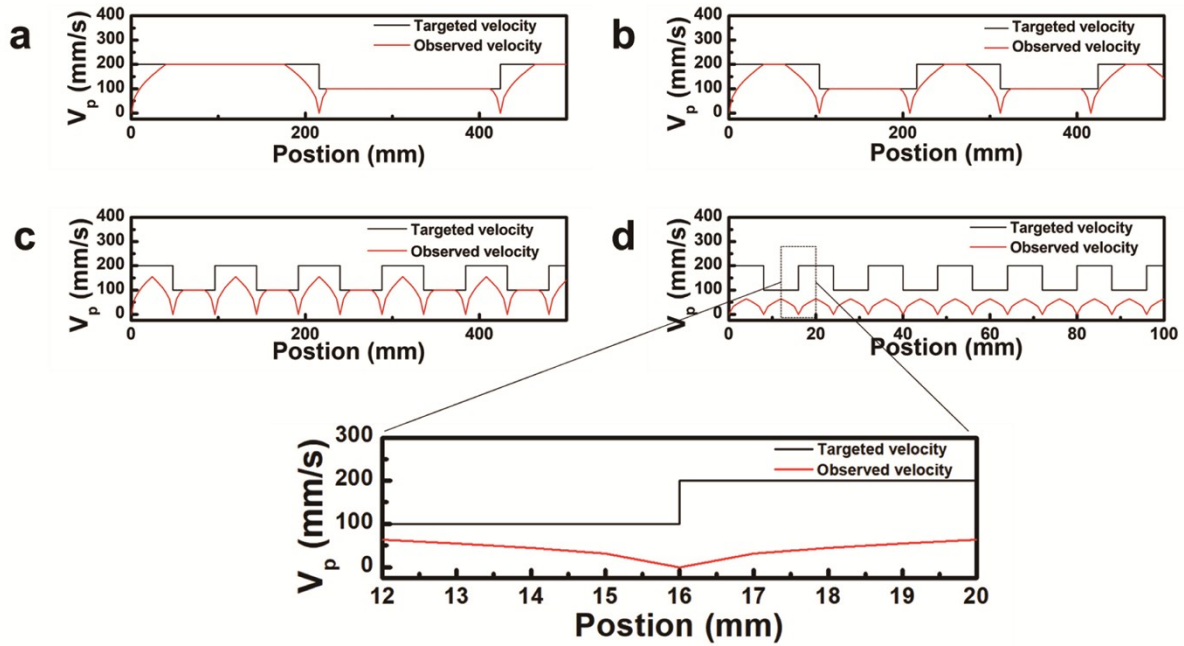


Fig. S3 Comparison of the observed and targeted velocity profiles of the translation platform when the velocity is alternated between $100 \text{ mm}\cdot\text{s}^{-1}$ and $200 \text{ mm}\cdot\text{s}^{-1}$ every (a) 216 mm, (b) 104 mm, (c) 48 mm and (d) 8 mm.