Supporting Information

for Adv. Mater., DOI: 10.1002/adma.201200272

Dynamic Electrostatic Lithography: Multiscale On-Demand Patterning on Large-Area Curved Surfaces

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Supplementary material for “Dynamic Electrostatic Lithography: Multiscale On-demand Patterning on Large-Area Curved Surfaces”

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Figure S1. Schematic of the experimental set-up for the traditional *Electrostatic Lithography*. 
Figure S2. Nominal stress vs. stretch for an Ecoflex film under uniaxial tension. The Ecoflex polymer follows the Neo-hookean model when $\lambda_p \leq 2.5$, but deviates from the model when $\lambda_p > 2.5$ due to stiffening.
Figure S3. Schematic illustration of the fabrication process of the cone-shaped surface. (A) An Ecoflex polymer film was uniaxially pre-stretched and then bonded on a rigid substrate, Kapton. (B, C) The polymer-substrate bilayer was cut following the dash lines marked on its surface. (D) The resultant bilayer was folded and glued to form a cone-shape structure. (E) Electrodes were attached to the inner and outer surfaces of the cone and an electric voltage was applied between the electrodes for pattern formation.
Video S1. The DEL dynamically switches the surface of a polymer film pre-stretch by $\lambda_p = 2$ from the flat state to aligned creases and aligned craters.

Video S2. The DEL dynamically switches the surface of a polymer film pre-stretch by $\lambda_p = 5$ from the flat state to aligned creases and aligned lines.