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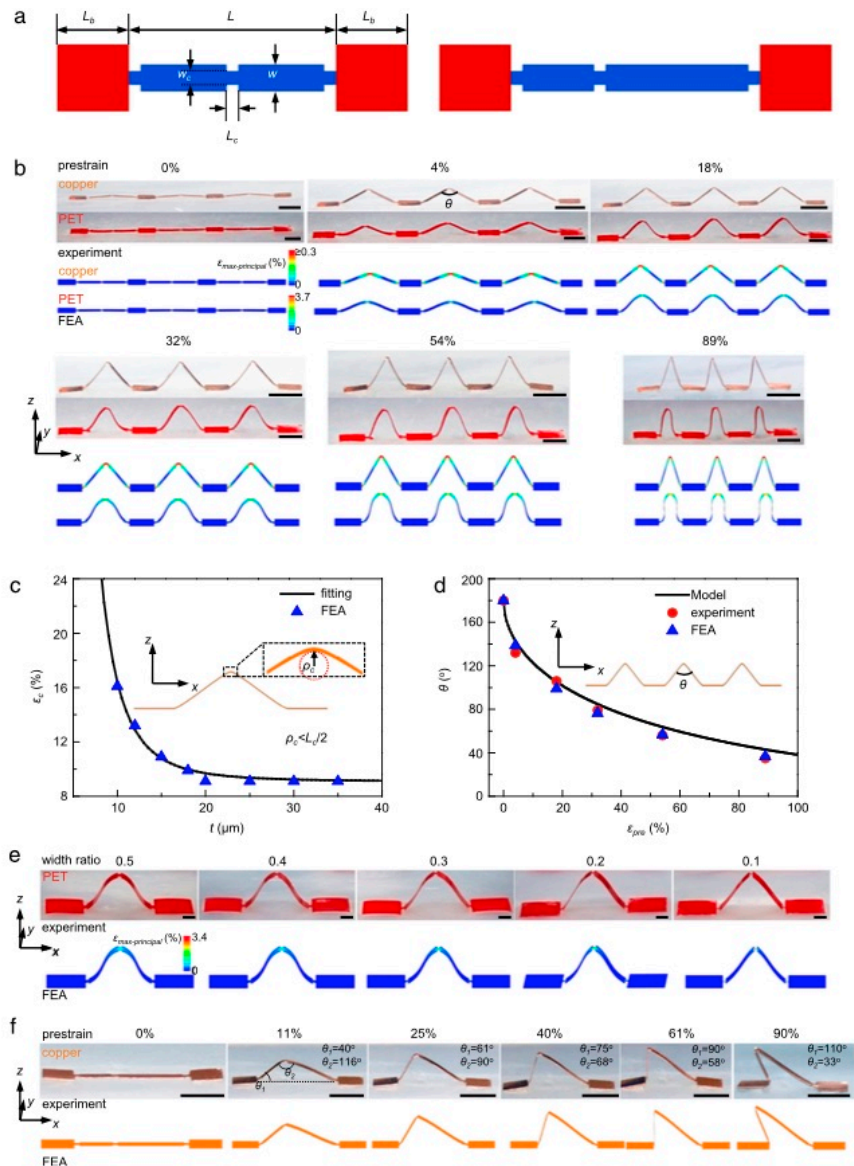


Fig. 1. Conceptual illustration and demonstrative examples of 3D origami structures assembled from 2D precursors by compressive buckling. (a) Top view of symmetric (left) and asymmetric (right) 2D precursors, in which the red color represents the bonding regions. (b) Optical images and corresponding FEA results for straight ribbon structures (thickness, 30 μm for copper and 42 μm for PET) under six different levels of prestrain. (c) Critical prestrain (ϵ_c) to initiate evident folding deformation for a symmetric ribbon design with a wide range of thicknesses (t). (d) Folding angle (θ) versus the prestrain (ϵ_{pre}) for the symmetric ribbon design with a fix thickness (30 μm). (e) Optical images and corresponding FEA results for symmetric PET ribbons (42 μm) with a range of width ratios under a fixed prestrain (32%). (f) Optical images and corresponding FEA results for copper ribbons with an asymmetric design that are under six different levels of prestrain. θ_1 and θ_2 denote the folding angle of the shorter ribbon segment and the angle between the two segments of the ribbon. In Fig. 1(b) and (e), the color in the FEA results corresponds to the magnitude of maximum principal

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See:
http://www.hy.tsinghua.edu.cn/publish/hyen/1694/2016/20160218112652208194403/20160218112652208194403_.html
<http://www.yihui Zhang.org/>
<https://scholar.google.com/citations?user=dCSFHVYAAAAJ&hl=en>
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Selected Publications:

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