

# Photomotile elastic structures

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Specially crafted polymers can acquire a residual strain of a few percents upon illumination. In recent experiments, it has been reported that thin beams or rings made up of such polymers can be set in permanent motion by shining light onto them. With the aim to explain this surprising feature, we derive and solve a beam model whose natural curvature is coupled to the intensity and the relative direction of the incident light.