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Advanced Materials / Volume 25, Issue 41 / p. 5880-5885

Communication

Topography from Topology: Photoinduced Surface Features Generated in Liquid Crystal Polymer Networks

Michael E. McConney, Angel Martinez, Vincent P. Tondiglia, Kyung Min Lee, Derrick Langley, Ivan I. Smalyukh, Timothy J. White✉

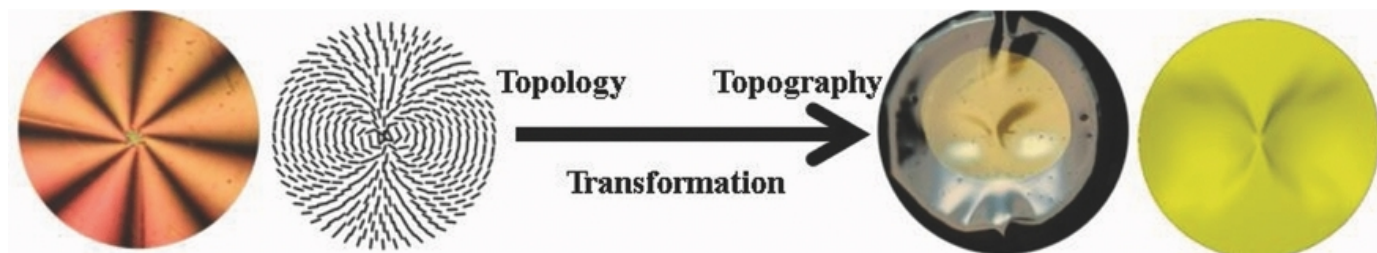
First published: 21 July 2013

<https://doi.org/10.1002/adma.201301891>

Citations: 158

Abstract

Films subsumed with topological defects are transformed into complex, topographical surface features with light irradiation of azobenzene-functionalized liquid crystal polymer networks (azo-LCNs). Using a specially designed optical setup and photoalignment materials, azo-LCN films containing either singular or multiple defects with strengths ranging from $|\frac{1}{2}|$ to as much as $|10|$ are examined. The local order of an azo-LCN material for a given defect strength dictates a complex, mechanical response observed as topographical surface features.



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