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# Rewriting bulk photoalignment of nematic liquid crystals in a two-step exposure system

[Sarah Hicks](#) ([/profile/Sarah.Hicks-4251072](#)), [Kyung Min Lee](#), [Michael E. McConney](#), [Nelson Tabiryan](#) ([/profile/Nelson.Tabiryan-9070](#)), [Timothy J. Bunning](#) ([/profile/Timothy.Bunning-9544](#))

[Author Affiliations +](#) (.)

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**Abstract**

This presentation reveals the re-writability property of azobenzene liquid crystal photoalignment. Stable in thermal fluctuations, one can change existing photoalignment by exposing it to polarized light in the visible regime. One can use this unique property by patterning photoalignment through the liquid crystal bulk in that the sample's front and back have differing director orientations. Photoalignment using linear polarized light as well as complex polarizations will be covered. No surface alignment on sample substrates is necessary because the azobenzene is mixed with the liquid crystal in-situ in sample preparation.

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