

Abstract Submitted  
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**Liquid**

**Crystal**

**Alignment on Sheared DNA Films**<sup>1</sup> MICHI NAKATA, University of Colorado, GIULIANO ZANCHETTA, MARCO BUSCAGLIA, TOMMASO BELLINI, Università di Milano, NOEL CLARK, University of Colorado — We have studied the alignment of commercial nematic and smectic A liquid crystals (8CB, 6CB, CCN47, MBBA) on the chiral surface obtained by shearing double stranded DNA on a glass surface. Simple characterization of hybrid cells (DNA-homeotropic) and partially sliding cells (DNA-GLYMO) reveal that the nematic director at the DNA surface is oriented at an angle from 50° to 100° with respect to the shearing direction, indicating that the liquid crystal molecules align preferentially perpendicularly to the DNA grooves. These observations present clear evidence for a large chiral orientational effect in the anchoring of a typical nematic/SmA LC on dehydrated sheared DNA films.

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