Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Deep UV Pattern Definition in PMMA BRIAN BURKE, TIMOTHY HERLIHY, ANDREW SPISAK, KEITH WILLIAMS, University of Virginia — We have patterned polymethyl methacrylate (PMMA) resist by exposing it with the fifth harmonic (213 nm) of an Nd:YAG source through metallized apertures in contact with the resist. Interference patterns with both near- and far-field origins were observed. In order to test the contrast and uniformity of exposure, we deposited germanium onto developed areas to form arrays with feature sizes of approximately 200 nm. We present a straightforward model for interference effects generated in our process, and discuss opportunities for direct-write lithography through single apertures.

Brian Burke
University of Virginia

Date submitted: 16 Nov 2007 Electronic form version 1.4