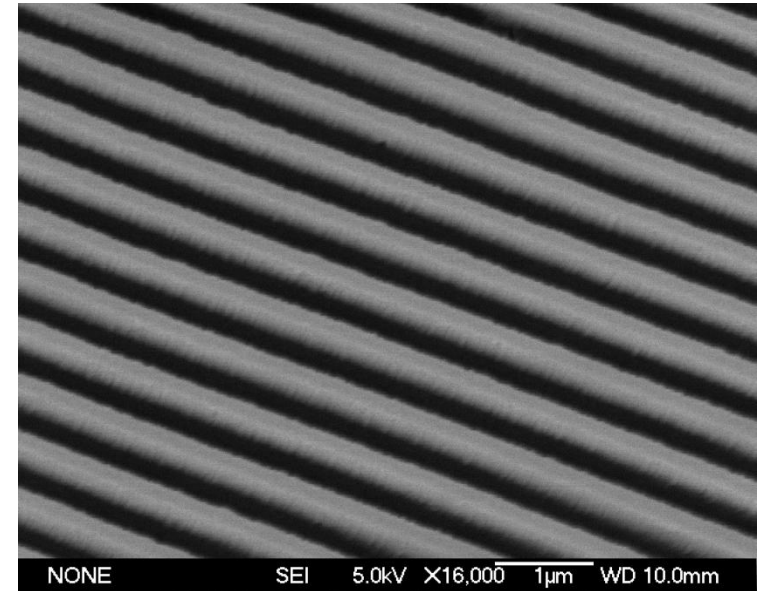
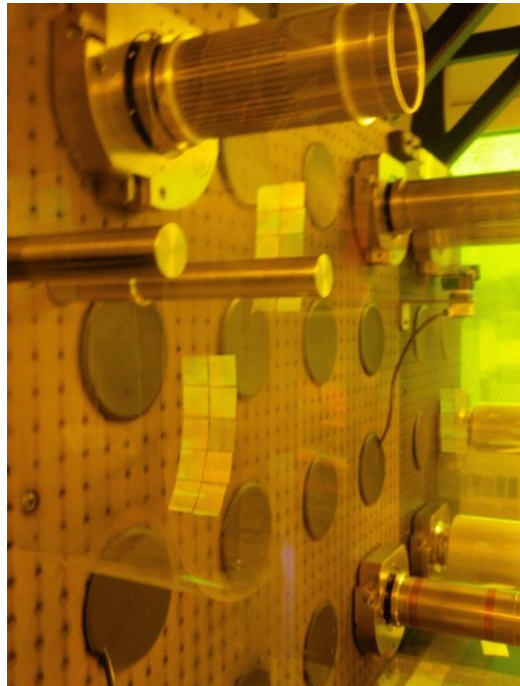
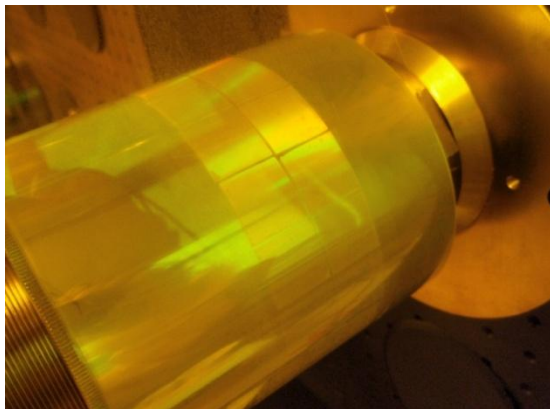
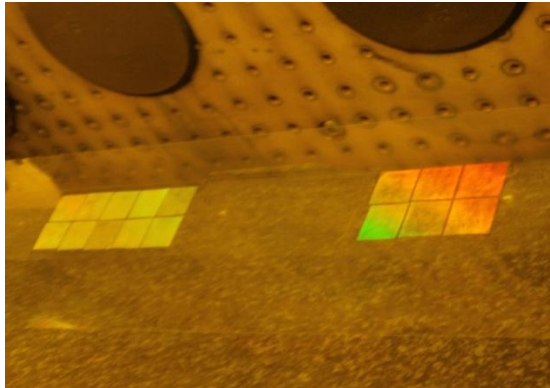


Roll-to-Roll Nanoimprint Test Bed

The CHM has initiated a new roll-to-roll system-level test bed program to facilitate the development of a manufacturing platform for fabrication of low-cost, large-area nano-materials and devices using roll-to-roll processing technology. This roll-to-roll process test bed was developed to address the challenge of fabricating nanostructured thin films on a high-speed, high-reliability platform. Moving forward, this test bed will enable low-cost commercialization of nanotechnology in applications ranging water purification & filtration, batteries and thin film organic-based photovoltaics. The center accepted delivery of the first custom roll-to-roll nanoimprint lithography (R2RNIL) tool in June 2011. Center researchers are now routinely printing sub-200 nm features in a continuous web process. Center researchers are currently developing new materials and processes to enable printing of features to the ten's of nanometers. Understanding flow and rheological properties is critical to the mission. Real-time inspection and metrology capabilities are being developed for the new tools.



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