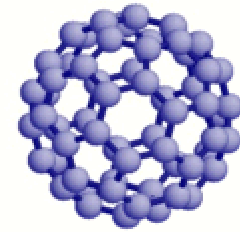


MIT·Stanford·UC Berkeley  
Nanotechnology Forum



# Beyond Photolithography

## *The Promise of Nano-Imprint Lithography*

September 16<sup>th</sup>, 2004

Anthony Waitz    [anthony@quantuminsight.com](mailto:anthony@quantuminsight.com)

[www.quantuminsight.com](http://www.quantuminsight.com)



# *Status of Nano-imprint Lithography*

	<b>Technology</b>	<b>Business</b>
<b>Hurdles</b>	Creation of 1x mask	Unknown or ill-defined markets
	Registration	Adoption of new technology in existing markets
	Defect density and control	Plethora of technical approaches today. Where to make the investment?
<b>Drivers</b>	Need for higher resolution	Need for lower cost of ownership
	Need for process simplicity	Interest in nanotechnology



# Target Markets and Timelines

<b>Application</b>	<b>Probable Timeline</b>
Optical components	2006
Patterned media for HDD	2006
Nano-fluidics	2008
CMOS	2013
<i>Others:</i>	
Biosensors	2008+
SAW devices	2008+
Solar cells	2008+
Photonics	2006+
Displays	2008+
MEMS/NEMS	2008+
Flip-chip packaging	2008+
Molecular memory & logic	2010+

