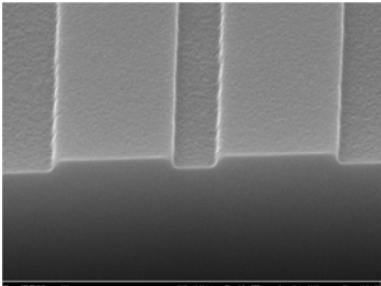
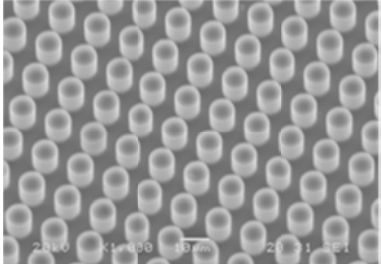
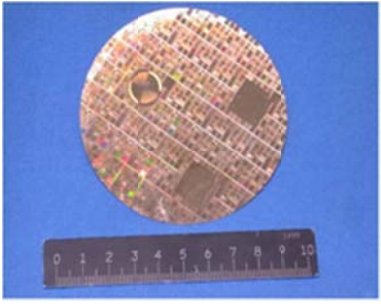
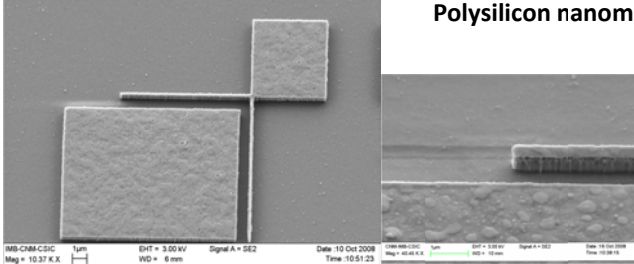


Micro Nano Patterning

NIL LAB – Moulds for Micro and Nanoreplication

Fundación TEKNIKER, Spain



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Material class:	Silicon X	Polymer	Metal X	Ceramic	Glass	Organic	Other
Short technology description:	Clean room equipment to produce moulds with micron/submicron resolution <ul style="list-style-type: none"> – UV photolithography and thermal NanoImprint Lithography – DRIE (Bosch process for deep etching) and high anisotropic RIE for low depths – Wet etching – PVD coating of metals – Nickel electroplating 						
Typical structures and designs:			Silicon nanochannels (80 x 80 nm) made by NIL				
			Silicon obstacles for DLD separation of particles by size				
			Four inches nickel stamp containing micro and nanostructures fabricated by NIL and electroplating				
			Polysilicon nanomechanical device				
Special features:	<ul style="list-style-type: none"> – Minimum feature > 50 nm – Aspect ratio up to 15 in silicon – Antiadhesive layers based on silane chemistry 						
Limitations, constraints:	<ul style="list-style-type: none"> – Maximum aspect ratio of 4 for replication 						
Material examples:	<ul style="list-style-type: none"> – Four inches moulds on silicon and silicon dioxide – Electroplating of Nickel 						