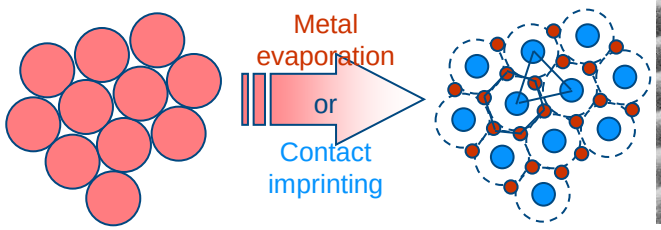
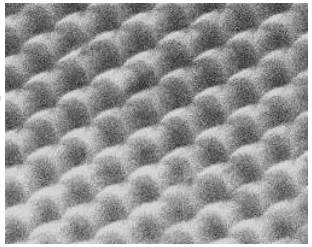
Nano-patterning

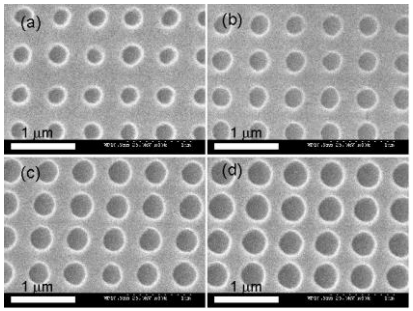
- **Different nano-patterning techniques**
  - e-beam lithography (in MMC, with SEM)
  - Nano-Imprint Lithography
  - Interference Lithography
  - Self-assembled array of microspheres

Reduced cost

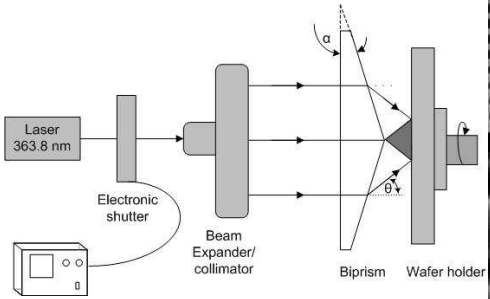


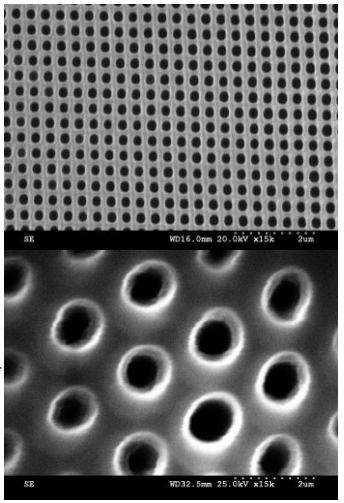


Self arranged 600nm PS spheres



Effect of exposure dose on e-beam lithography nano-pattern





Pattern obtained with bi- and tri-prism IL

Xu T., Miao JM., Ashraf M., Lin N., Chollet F., “Synthesis of regular nano-pitched carbon nanotube array by using nanosphere lithography for interconnect applications”, Materials Letters, doi:10.1016/j.matlet.2009.01.048, Vol. 63, No. 11, (2009) : 867-869

Sidhartan R., Chollet F., Murukeshan VM., “Periodic patterning using multi-facet prism based laser interference lithography”, Laser Physics, doi:10.1134/S1054660X09030256, Vol. 19, No. 3, (2009) : 505-510