- The process of the invention, which consists in using a block copolymer composition with a dispersity of between 1.1 and 2, makes it possible to carry out the annealing necessary to structure the block copolymer composition at temperatures lower by 30 to 50°C with respect to the temperature used when the block copolymer composition exhibits a low dispersity (typically less than 1.1), or in shorter times.

- Such block copolymer compositions are, for example, accessible by simplified anionic polymerization methods, ring opening polymerization, by controlled or uncontrolled radical polymerization, combination of these polymerization technics methods or also by blending block copolymers.

Summary ~~of the invention~~:

~~The invention relates to~~In an aspect, there is provided a process for producing thick nanostructured films with a minimum of defects, obtained from a block copolymer composition, the dispersity of which exhibits a value of between 1.1 and 2, comprising the following stages:

- preparation of the block copolymer composition, the dispersity of which exhibits a value of between 1.1 and 2,
- deposition of this composition in solution or not on a surface,
- annealing.

In another aspect, there is provided the use of the process as defined above to generate lithography masks or nanostructured film at nanometer scale.

In another aspect, there is provided a lithography mask obtained according to the use as defined above.