Inexpensive Templates for Nanostructure Fabrication

Researchers at the University of Massachusetts Amherst have discovered a new method of formulating common polymers for industrially generating templates used in precision nanomanufacturing. The researchers found that blending commercially-available tri-block copolymer surfactants with commodity polymers that selectively associate with one of the blocks can yield bulk quantities of polymeric templates with well-ordered periodic nanostructures. Due to the low cost and ready availability of these raw materials, high-volume applications of self-assembled templates at feature sizes of under 5 nanometers are now possible. One use of this discovery is in continuous roll-to-roll processing of nanometer-scale devices and structures on plastic film.

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