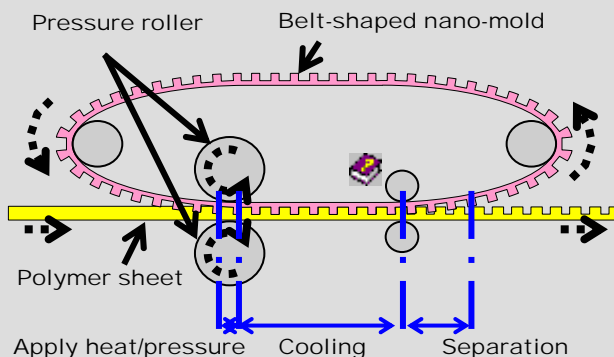


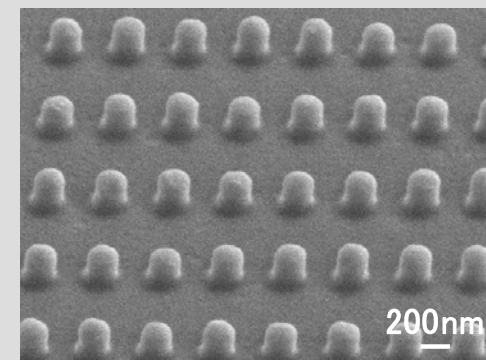
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Nano-scale pattern productivity enhanced 100 times by sheet nanoimprint technology

Appearance and schematic diagram of developed sheet nanoimprint equipment
- Continuous process of heating, pressing, cooling and parallel separation -



Example of imprinted high aspect ratio pattern
(Scanning electron microscopy)



Hitachi, Ltd., in cooperation with Ikegami Mold Engineering Co., Ltd. (Chairman: Keizo IKEGAMI) and Hitachi Plant Technologies, Ltd. (President & CEO: Masaharu SUMIKAWA) have developed sheet nanoimprint technology which enable 100 times higher productivity of nano-scale patterns (internal comparison). The enormous productivity is enabled by continuous processing of heating, pressing, cooling and separation using belt-shaped nano-mold. Sheet nanoimprint technology is expected as a breakthrough in nano-fabrication field for IT/electronics, bio/life science and energy/environment industries.

This research will be presented at the 5th International Conference on Nanoimprint and Nanoprint Technology (NNT) to be held from 15th – 17th November 2006, in San Francisco, U.S.A.

This work was conducted as part of the New Energy and Industrial Technology Development Organization (NEDO), Japan, project on R&D on the practical application of nanotechnology and advanced materials.