

Title (en)  
METHOD OF FORMING AN IN-SITU RECESSED STRUCTURE

Title (de)  
VERFAHREN ZUR BILDUNG EINER IN-SITU VERTIEFTEN STRUKTUR

Title (fr)  
PROCEDE DE FORMATION DE STRUCTURE EN RETRAIT IN SITU

Publication  
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Application  
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Abstract (en)  
[origin: WO2006033872A2] The present invention features a method of patterning a substrate that includes forming, on the substrate, a multi-layer film with a surface, an etch rate interface and an etch-differential interface. The etch-differential interface is defined between the etch rate interface and the surface. A recorded pattern is transferred onto the substrate defined, in part, by the etch-differential interface. The recorded pattern has etched pattern characteristics (EPC) that define the shape of the pattern formed for a given etch process or set of etch processes. The etch-differential interface modifies the EPC. By establishing a suitable etch-differential interface, one may obtain a recorded pattern that differs substantially in shape compared with the shape of the patterned layer or the same pattern may be obtained.

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Citation (search report)

- [X] US 6375870 B1 20020423 - VISOVSKY NICK J [US], et al
- [X] EP 1403928 A2 20040331 - HEWLETT PACKARD DEVELOPMENT CO [US]
- [X] WO 0207199 A1 20020124 - NANONEX CORP [US], et al
- [AD] JOHNSON S C ET AL: "Advances in step and flash imprint lithography", PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, SPIE, BELLINGHAM, VA; US, vol. 5037, 25 February 2003 (2003-02-25), pages 197 - 202, XP002314656
- [A] WATANABE H ET AL: "SUBMICRON FEATURE PATTERNING USING SPIN-ON-GLASS IMAGE REVERSAL (SOGIR)", JOURNAL OF THE ELECTROCHEMICAL SOCIETY, ELECTROCHEMICAL SOCIETY, MANCHESTER, NEW HAMPSHIRE, US, vol. 135, no. 11, 1 November 1988 (1988-11-01), pages 2863 - 2866, XP000126521, ISSN: 0013-4651
- See references of WO 2006033872A2

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