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- (71) Applicant (for all designated States except US): NANOSYS, INC. [US/US]; 2625 Hanover Street, Palo Alto, CA 94304 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): WHITEFORD, Jeffery, A. [US/US]; 1908 Valdez Avenue, Belmont, CA 94002 (US). BURETEA, Mihai [US/US]; 1386 31st Avenue, San Francisco, CA 94122 (US). SCHER, Erik [US/US]; 1040A Guerrero Street, San Francisco, CA 94110 (US). EMPEDOCLES, Steve [US/US]; 2507 Mardell Way, Mountain View, CA 94043 (US). Meisel, Andreas [DE/US]; 514 Castro, Street, San Francisco, CA 94114 (US).

- (74) Agents: QUINE, Jonathan, Alan et al.; Quine Intellectual Property Law Group, P.C., P.O. Box 458, Alameda, CA 94501 (US).
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(54) Title: ORIENTED NANOSTRUCTURES AND METHODS OF PREPARING

(57) Abstract: This invention provides compositions and devices having structurally ordered nanostructures (Figures 1A-1D), as well as methods for producing structurally ordered nanostructures.

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C. DOCU	UMENTS CONSIDERED TO BE RELEVANT						
Category *	Citation of document, with indication, where ap			Relevant to claim No.			
X,E	US 6,812,272 B2 (FISCHER) 02 November 2004 (02	2.11.2004)), Abstract	1-3, 6			
X,E	US 6,762,237 B2 (Glatkowski et al.) 13 July 2004 (1	1-3, 8-9					
X A	US 2003/0142944 A1 (Sundar et al) 31 July 2003 (31.07.2003), Abstract, Figure 1, Paragraphs 3, 8-12, 34-35, and 56-59 US 5,849,215 A (GIN et al) 15 December 1998 (15.12.1998), Figure 1-10b, Note entire						
Α.	US 5,849,215 A (GIN et al) 15 December 1998 (15.12.1998), Figure 1-10b, Note entire reference)						
A,E	US 6,733,946 B2 (Kumacheva et al) 11 May 2004 (1	1-67					
A,E	US 6,876,796 B2 (Garito et al) 05 April 2005 (05.04	1-67					
Further	documents are listed in the continuation of Box C.		See patent family annex.				
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