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(74) Agents: MESSINA, Gerard A. et al.; Kenyon & Kenyon, LLP, One Broadway, New York, New York 10004 (US).

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(71) Applicant (for all designated States except US): EVI-DENT TECHNOLOGIES [US/US]; 216 River Street, Suite 200, Troy, New York 12180 (US).

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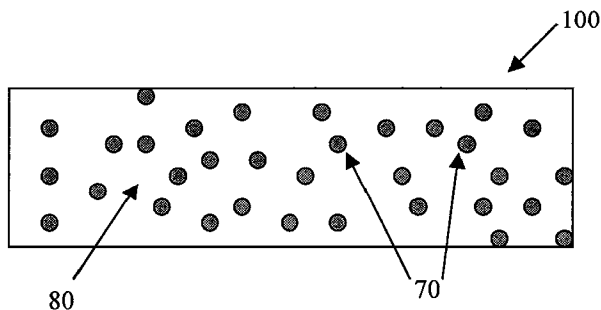
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(72) Inventors; and

(75) Inventors/Applicants (for US only): LOCASCIO, Michael [US/US]; 44 Sterling Heights Drive, Clifton Park, New York 12065 (US). GILLIES, Jennifer [US/US]; 1934 NY 2, Petersburg, New York 12138 (US). HINES, Margaret [US/US]; 554 First Avenue, Troy, New York 12182 (US).

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(54) Title: SEMICONDUCTOR NANOCRYSTAL HIGH-REFRACTIVE INDEX MATERIALS



(57) Abstract: A high-refractive index material that includes semiconductor nanocrystal compositions. The high-refractive index material has at least one semiconductor nanocrystal composition incorporated in a matrix material and has a refractive index greater than 1.5. The semiconductor nanocrystal composition has a semiconductor nanocrystal core of a II-VI, III-V, or IV-VI semiconductor material. A method of making a high-refractive index material includes incorporating at least one semiconductor nanocrystal composition in a matrix material. An application of a high-refractive index material includes incorporating at least one semiconductor nanocrystal composition in a matrix material to form the high-refractive index material and depositing the high-refractive index material on the surface of a lighting device.

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC: **G02B 26/00**( 2006.01);**G02F 1/00**( 2006.01),**1/01**( 2006.01),**1/03**( 2006.01);**H01S 3/04**( 2006.01),**5/00**( 2006.01);**H01L 29/12**( 2006.01),**21/20**( 2006.01),**21/31**( 2006.01);**C04B 35/00**( 2006.01);**F21V 9/00**( 2006.01)  
  
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**B. FIELDS SEARCHED**  
 Minimum documentation searched (classification system followed by classification symbols)  
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 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
  
 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/0142944 A1 (SUNDAR et al.) 31 July 2003 (31.07.2003), whole document	1-18
A	US 6,819,692 B2 (KLIMOV et al.) 16 November 2004 (16.11.2004), whole document	1-18
A	US 6,005,707 (BERGGREN et al.) 21 December 1999 (21.12.1999), whole document	1-18
A	US 5,508,829 (FREEOUF et al.) 16 April 1996 (16.04.1996), whole document	1-18
A	US 5,434,878 (LAWANDY) 18 July 1995 (18.07.1995), whole document	1-18
X	WO 2005/067524 A2 (NANOSYS, INC.) 28 July 2005 (28.07.2005)	1-6, 9-13, 18
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A		7, 8, 14-17

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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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 Authorized officer: Charles Garber, Telephone No. (571) 272-2800