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(54) Title: COVALENTLY ATTACHED NILE BLUE DERIVATIVES FOR OPTICAL SENSORS

(57) Abstract: A composition comprising a pH indicator, a polymerizable group, and a spacer therebetween. The polymerizable group can be acrylate or methacrylate and the spacer can be an oxyalkyl group, an oxypropyl group, or an oxybenzoyl group. The composition can be polymerized to copolymers to form indicating polymers and optodes.



WO 2007/059449 A3

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. C09B69/10 G01N33/533 G01N33/84 C09B19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C09B G01N

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 practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/066986 A (MEDTRONIC MINIMED INC [US]) 29 August 2002 (2002-08-29) page 4, paragraph 9 paragraph [0069] paragraph [0071] claim 14 figures 7,18	1-4, 9-14,16, 21,22
Y		5
X	WO 88/05533 A (KELSIUS INC [US]) 28 July 1988 (1988-07-28) page 7, line 6 - line 8 page 13, line 28 - page 14, line 7 page 19 page 20, line 1 - line 19 example 14	1,3, 9-11,13, 16,21,22



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Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 98/33866 A (CIBA GEIGY AG [CH]) 6 August 1998 (1998-08-06) page 33 page 34 page 58	5
X	----- EP 0 529 247 A (BOC HEALTH CARE [US]) 3 March 1993 (1993-03-03) page 6, line 12 - page 7, line 49 page 8, line 31 - page 9, line 3 page 13, line 25 - line 35 page 13, line 47 - line 49 page 16, line 10 - line 23 page 16, line 41 - page 18, line 21 -----	1,2, 9-13,16, 21,22
A	US 5 275 160 A (LILGE LOTHAR [DE] ET AL) 4 January 1994 (1994-01-04) examples	1,2,9,16
A	----- DE 43 24 991 A1 (MERCK PATENT GMBH [DE]) 2 February 1995 (1995-02-02) the whole document	1,16
A	----- EP 0 481 740 A (PURITAN BENNETT CORP [US]) 22 April 1992 (1992-04-22) page 4	1,16
A	----- DE 43 34 949 A1 (BARD INC C R [US]) 19 May 1994 (1994-05-19) figures -----	1,16

INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/US2006/060805

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02066986	A	29-08-2002	AU 2002251944 A1	04-09-2002
WO 8805533	A	28-07-1988	NONE	
WO 9833866	A	06-08-1998	NONE	
EP 0529247	A	03-03-1993	CA 2070533 A1	28-02-1993
US 5275160	A	04-01-1994	NONE	
DE 4324991	A1	02-02-1995	WO 9503340 A1	02-02-1995
			EP 0662094 A1	12-07-1995
			JP 8502549 T	19-03-1996
EP 0481740	A	22-04-1992	CA 2053449 A1	17-04-1992
			JP 5010887 A	19-01-1993
DE 4334949	A1	19-05-1994	JP 6192213 A	12-07-1994