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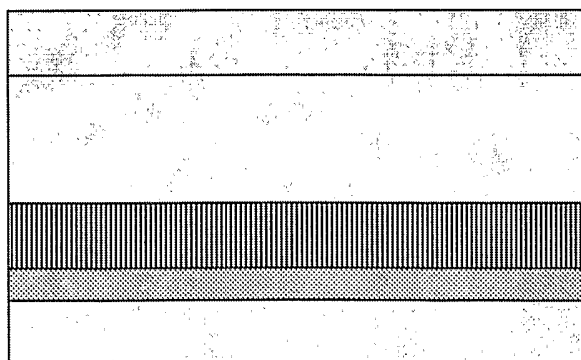
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(54) Title: LIGHT EMITTING POLYMER DEVICES USING SELF-ASSEMBLED MONOLAYER STRUCTURES



Reflective Metal Cathode

LEP Emitter Layer

SAM

ITO Anode

Glass Substrate

(57) Abstract: A light emitting device comprising a transparent substrate; a layer of conducting material in contact with the transparent substrate; a self-assembled monolayer bonded to the layer of conducting material; one or more light emitting polymer layers in electron contact to the self-assembled monolayer; and a reflective metal layer in electron contact with the light emitting polymer layer is provided. The light emitting device provided gives enhanced performance as compared to currently available devices. Also provided is a self-assembled monolayer having the formula: R^2-R^3-Y where Y is a group capable of electron contact with a light emitting polymer, R^3 contains a conjugated group, and R^2 is a group capable of bonding to a conducting material.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 257/40,103

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 Non Patent Literature - Inventor seach Professor Tobin Marks, Northwestern University, Evanston, Illinois, US

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.
X	US 2003/0162053 A1 (MARKS et al) 28 August 2003 (28.08.2003), Figures.	1-8, 11, 14-17, 19, 22
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Y		9-10, 12-13, 18
Y	US 2004/0191567 A1 (CABALLERO) 30 September 2004 (30.09.2004), Figures.	9-10, 12, 18
Y	SHINAR, JOSEPH. ORGANIC LIGHT-EMITTING DEVICES: A SURVEY. Springer-Verlag, NewYork (2004), Chapter I.	13
A	US 2003/0087127 A1 (LEE et al) 8 May 2003 (08.05.2003), Abstract.	1-22
A	KOIDE, YOSHIHIRO. Hot Microcontact Printing for Patterning ITO Surfaces. Methodology, Morphology, Microstructure, and OLED Charge Injection Barrier Imaging	1-22
A	US 6,361,885 B1 (CHOU) 26 March 2002 (26.03.2002), Figures	1-22

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"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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