



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁶:

H01L 29/47

A2

(11) International Publication Number:

WO 98/21755

(43) International Publication Date:

22 May 1998 (22.05.98)

(21) International Application Number: PCT/US97/20862

(22) International Filing Date: 10 November 1997 (10.11.97)

(30) Priority Data:

60/030,501	12 November 1996 (12.11.96)	US
60/040,129	7 March 1997 (07.03.97)	US
60/040,130	7 March 1997 (07.03.97)	US
60/040,131	7 March 1997 (07.03.97)	US
60/040,132	7 March 1997 (07.03.97)	US
60/040,159	7 March 1997 (07.03.97)	US
60/040,335	7 March 1997 (07.03.97)	US
60/040,628	7 March 1997 (07.03.97)	US

(71) Applicant (for all designated States except US): INTERNATIONAL BUSINESS MACHINES CORPORATION [US/US]; Old Orchard Road, Armonk, NY 10504 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ANGELOPOULOS, Marie [US/US]; 30 East Hill Road, Cortlandt Manor, NY 10566 (US). DIMITRAKOPOULOS, Christos, Dimitrios [GR/US]; 791 Lake Street, West Harrison, NY 10604-1606 (US). FURMAN, Bruce, Kenneth [US/US]; 66 Greenwood Drive, Beacon, NY 12508 (US). GRAHAM, Teresita, Ordonez [US/US]; 4 Center Street, Irvington, NY 10533

(US). LIEN, Shui-Chih, Alan [US/US]; 19 Pea Pond Lane, Briarcliff Manor, NY 10510 (US).

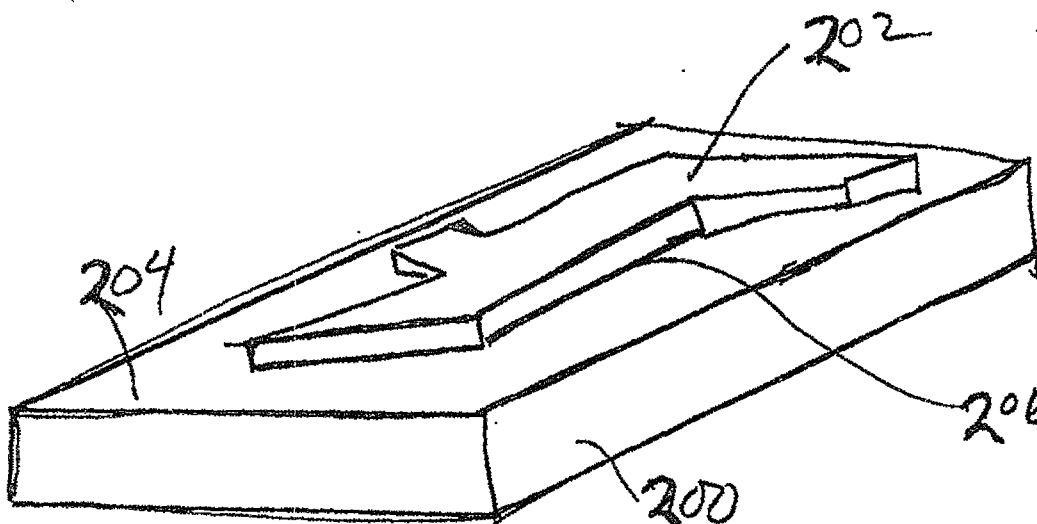
(74) Agent: MORRIS, Daniel, P.; IBM Corporation, Intellectual Property Law Dept., P.O. Box 218, Yorktown Heights, NY 10598 (US).

(81) Designated States: CN, JP, KR, SG, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published

Without international search report and to be republished upon receipt of that report.

(54) Title: PATTERNS OF ELECTRICALLY CONDUCTING POLYMERS AND THEIR APPLICATION AS ELECTRODES OR ELECTRICAL CONTACTS



(57) Abstract

Electronic devices having patterned electrically conductive polymers providing electrical connection thereto and methods of fabrication thereof are described. Liquid crystal display cells are described having at least one of the electrodes providing a bias across the liquid crystal material formed from a patterned electrically conductive polymer. Thin film transistors having patterned electrically conductive polymers as source drain and gate electrodes are described. Light emitting diodes having anode and coated regions formed from patterned electrically conductive polymers are described. Methods of patterning using a resist mask; patterning using a patterned metal layer; patterning the metal layer using a resist; and patterning the electrically conductive polymer directly to form electrodes and anode and cathode regions are described.