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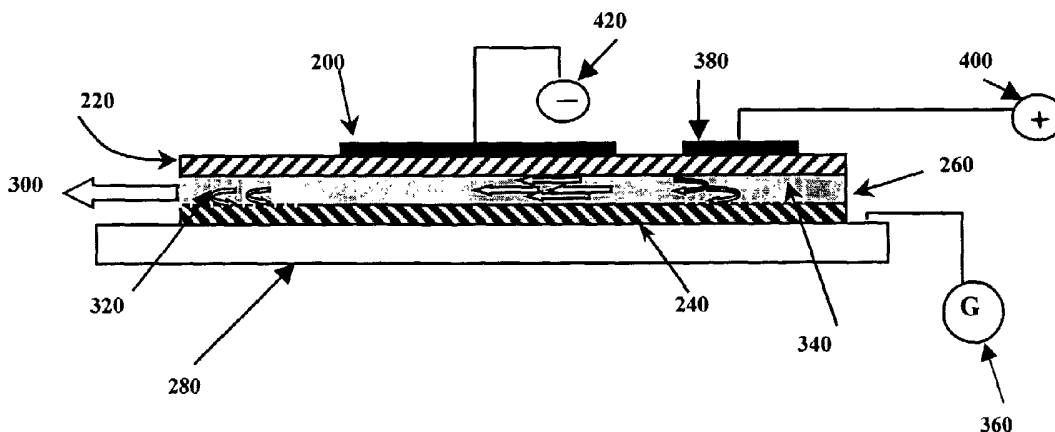
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(54) Title: POLYMERIC WAVEGUIDE LASER AND AMPLIFIER



(57) Abstract: The present invention provides a family of novel polymeric devices including an optical laser and optical amplifier, as well as novel methods and materials for their manufacture. The devices of the invention preferably each comprise optical nonlinear second-order polymers (including polymer blends) which exhibit electroluminescence. The devices can be present in a single layer (e.g., either singly, or in an array including a side-by-side arrangement), and optionally comprise a plurality of layers, such as at least two layers, preferably which are stacked (e.g., either a stack of single devices, or a stack of arrayed devices). The devices of the invention optionally can be fabricated attached to other devices (optical or non-optical) or elements of devices (e.g., electrodes and the like).



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## INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 H01S3/063		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) IPC 7 H01S		
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, WPI Data, PAJ, INSPEC		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 111 902 A (FORREST STEPHEN R ET AL) 29 August 2000 (2000-08-29) abstract column 4, line 29 - line 34 column 6, line 61 - column 7, line 51 ---	1, 2, 5, 7, 9-13
X	EP 0 792 089 A (RIKAGAKU KENKYUSHO) 27 August 1997 (1997-08-27) abstract page 7, line 10 - line 28; figure 2 ---	1, 5
X	US 5 247 190 A (BRADLEY DONAL D ET AL) 21 September 1993 (1993-09-21) abstract column 12, line 40 - line 66 ---	1, 5
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
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Date of the actual completion of the international search  22 January 2003		Date of mailing of the international search report  29/01/2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Galanti, M

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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A	WO 01 06305 A (TRANS PHOTONICS L L C ;GHARAVI ALIREZA (US)) 25 January 2001 (2001-01-25) cited in the application page 36, line 18 -page 38, line 7 -----	1-40

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