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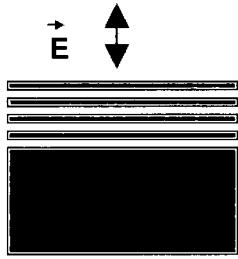
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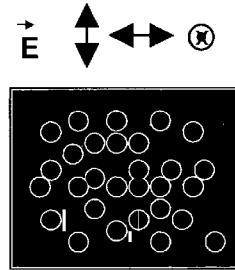
(54) **Title:** OPTOELECTRONIC DEVICES UTILIZING MATERIALS HAVING ENHANCED ELECTRONIC TRANSITIONS

a



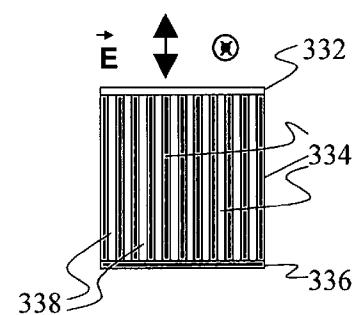
310

b



320

c



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(57) **Abstract:** An optoelectronic device that includes a material 134 (fig 1c) having enhanced electronic transitions. The electronic transitions are enhanced by mixing electronic states at an interface. The interface may be formed by a nano-well, a nano-dot, or a nano-wire.

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INTERNATIONAL SEARCH REPORT

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A CLASSIFICATION OF SUBJECT MATTER
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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)
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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)
East Search

C DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No |
|------------|--|-----------------------|
| Y | US 2003/0189202 (Li et al), 09 Oct 2003 (09 10 2003), paragraph [0035], figure 4e | 10, 16 |
| Y | US 2005/0024790 (Pmarbasi) 03 Feb 2005 (03 02 2005), figure 10 | 9, 30 |
| Y | US 2005/0196707 (Cok) 08 Sep 2005 (08 09 2005), paragraphs[0016]-[0025], figure 6 | 1-8, 11-15, 17-29, 31 |

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