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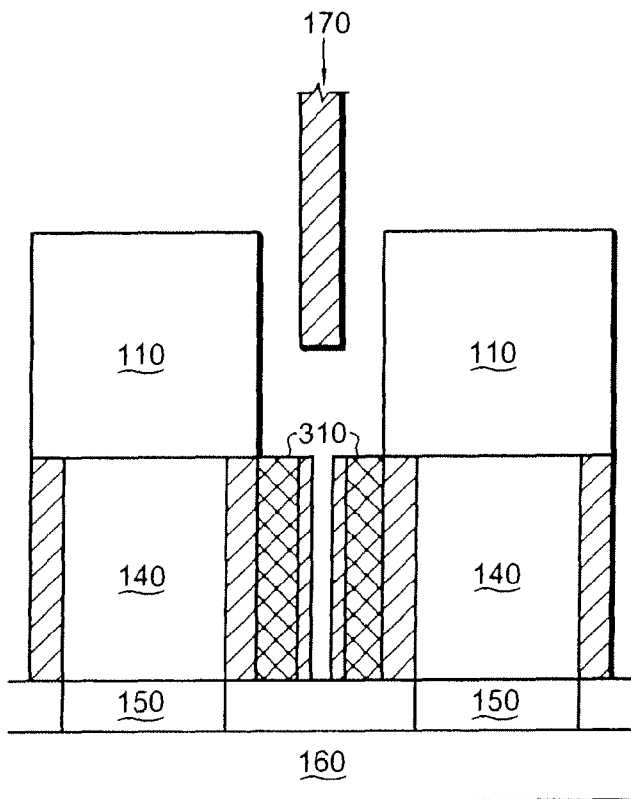
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[Continued on next page]

(54) Title: CROSS-TALK AND BACK SIDE SHIELDING IN A FRONT SIDE ILLUMINATED PHOTO DETECTOR DIODE ARRAY



(57) Abstract: A front side illuminated photo detector array is shielded from X-ray cross-talk by filling the septa between individual photo detector diodes with a high atomic number material such as tungsten. The processing circuitry is also shielded from stray X-rays by a barrier such as tungsten placed between each photo detector diode and the processing circuitry. This barrier serves a dual role as shielding the processing circuitry from stray X-ray radiation and acting as the electrical contact between the detector diode and the circuitry.

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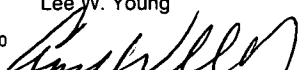
- *with international search report*
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INTERNATIONAL SEARCH REPORT

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<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G01T 1/24 (2007.10) USPC - 250/370.11 According to International Patent Classification (IPC) or to both national classification and IPC</p>																							
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC(8): G01T 1/24 (2007.10) USPC: 250/370.11</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8): G01T 1/24 (2007.10) (text search) USPC: 250/370.11, 505.1 (text search)</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST(USPT,PGPB,EPAB,JPAB); Internet search via Google Web and Google Scholar search engines. Search Terms Used: electronic circuit circuitry array CT (computerized tomographic gamma Xray crosstalk oxide dioxidesepa gap tungsten wolfram gold scintillator photodiode tungsten wolfram</p>																							
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X --- Y</td> <td>US 5,773,829 A (IWANCZYK et al.) 30 June 1998 (30.06.1998) col. 5 ln. 6 to col. 11 ln. 35, Fig. 1-4</td> <td>1, 2, 4-13 and 15-21 ----- 3 and 14</td> </tr> <tr> <td>Y</td> <td>US 4,429,227 A (DIBIANCA et al.) 31 January 1984 (31.01.1984) col. 5 ln. 13-33, Fig. 4 3 and 14</td> <td>3 and 14</td> </tr> <tr> <td>A</td> <td>US 4,414,473 A (HOFFMAN et al.) 08 November 1983 (08.11.1983) col. 4 ln. 31-57</td> <td>1-21</td> </tr> <tr> <td>A</td> <td>US 4,417,144 A (HOFFMAN et al.) 22 November 1983 (22.11.1983) col. 3 ln. 22 to col. 4 ln. 55</td> <td>1-21</td> </tr> <tr> <td>A</td> <td>US 5,866,908 A (NOVAK) 02 February 1999 (02.02.1999) col. 3 ln. 45 to col. 5 ln. 20</td> <td>1-21</td> </tr> <tr> <td>A</td> <td>US 6,667,183 B2 (LEVY) 23 December 2003 (23.12.2003) col. 4 ln. 44 to col. 5 ln. 3</td> <td>1-21</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X --- Y	US 5,773,829 A (IWANCZYK et al.) 30 June 1998 (30.06.1998) col. 5 ln. 6 to col. 11 ln. 35, Fig. 1-4	1, 2, 4-13 and 15-21 ----- 3 and 14	Y	US 4,429,227 A (DIBIANCA et al.) 31 January 1984 (31.01.1984) col. 5 ln. 13-33, Fig. 4 3 and 14	3 and 14	A	US 4,414,473 A (HOFFMAN et al.) 08 November 1983 (08.11.1983) col. 4 ln. 31-57	1-21	A	US 4,417,144 A (HOFFMAN et al.) 22 November 1983 (22.11.1983) col. 3 ln. 22 to col. 4 ln. 55	1-21	A	US 5,866,908 A (NOVAK) 02 February 1999 (02.02.1999) col. 3 ln. 45 to col. 5 ln. 20	1-21	A	US 6,667,183 B2 (LEVY) 23 December 2003 (23.12.2003) col. 4 ln. 44 to col. 5 ln. 3	1-21
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<p>Date of the actual completion of the international search 18 October 2007 (18.10.2007)</p>		<p>Date of mailing of the international search report 15 FEB 2008</p>																					
<p>Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</p>		<p>Authorized officer: Lee W. Young  PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</p>																					