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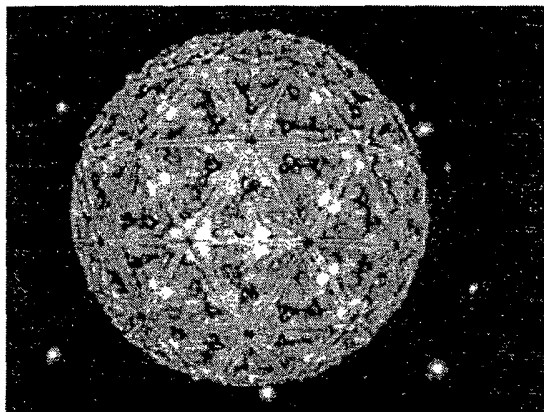
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(54) Title: METHOD AND APPARATUS FOR DETERMINING A BIDIRECTIONAL REFLECTANCE DISTRIBUTION FUNCTION OF A SUBJECT



(57) Abstract: An apparatus and method for determining a bi-directional reflectance distribution function comprising a light source (28) for emitting light onto a sample (12) and taking measurements at different locations using a kaleidoscope (18).

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/17507

A. CLASSIFICATION OF SUBJECT MATTER
 IPC(7) : G01N 21/47
 US CL : 446
 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)
 U.S. : 446,445

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)
 Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,637,873 A (DAVIS et al) 10 June 1997 (10.06.1997), figures 5 and 7.	1 and 10-13
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Y		2-9
Y	US 6,285,855 B1 (TSUJI) 04 September 2001 (04.09.2001), col 5, lines 9-15.	2-9

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 09 December 2004 (09.12.2004)	Date of mailing of the international search report 09 FEB 2005
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. (703) 305-3230	Authorized officer Gregory J Toatley, Jr. Telephone No. 571-272-2800 Jean Proctor Patent Officer

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/17507

Continuation of B. FIELDS SEARCHED Item 3:

EAST

search terms: kaleidoscope, BRDF, Bidirectional Reflectance Distribution Function, Scattering, Sub surface scattering