JOURNAL OF RESEARCH of the National Bureau of Standards—A. Physics and Chemistry
Vol. 80A, No. 2, March–April 1976

Bidirectional Reflectometry. Part II. Bibliography on Scattering by Reflection from Surfaces

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(February 2, 1976)

In connection with the work on development of a high resolution laser source bidirectional reflectometer, a large number of papers were collected dealing with various aspects of the geometrical distribution of the radiant energy reflected from surfaces of different types.

Each paper has been classified into one or more classes on the basis of its technical content. There are eight general classes, with several subclasses in some of the general classes.

Because of the interest in this field, the bibliography is being published as a service to the public.

Key words: Bibliography; emittance; heat transfer; measurement techniques; periodic surfaces; polarization; random surfaces; reflectance; reflectance of coherent radiation; scattering; scattering theory; surface roughness; transmittance.

A large number (371) of papers was collected, dealing with various aspects of the geometrical distribution of the radiant energy scattered by reflection from surfaces, and particularly from rough surfaces. These papers were referred to during the development of a high-resolution laser-source bidirectional reflectometer.

Each paper is classified in the Bibliography into one or more of thirteen subject categories on the basis of its technical content. A key to the symbols used in the bibliography is given in table 1.

In addition, each paper by number has been classified in a second system, consisting of eight primary classes, with several subclasses in several of the primary classes, in table 2.

The bibliography, while extensive, is by no means complete. Few additions have been made since about 1972. However, it is sufficiently extensive to be of significant help to workers in the field, and particularly to those just beginning work in the field.

The references from archival journals should be available in any good technical library. Most of the reports that have not been published in the archival literature are available from the National Technical Information Service. Most of these are identified by an AD number, or other identifying number by which they can be ordered.

Copies of all papers listed are on file in the Radiometric Physics Section of the National Bureau of Standards, and may be read at NBS if not otherwise available.

TABLE 1. *Subject Categories*

Symbol	
R	Reflectance
Em	Emittance
T	Transmittance
S	Scattering
P	Polarization
Ma	Mathematics
H	Heat Transfer Between Rough Surfaces
Ex	Experimental
Th	Theoretical
Su	Survey
L	Laser
SM	Surface Roughness Measurement
Ap	Apparatus

TABLE 2. *Primary Classes*

NOMENCLATURE AND APPLICATION

8, 42, 50, 52, 97, 101, 102, 113, 125, 132, 141, 143, 144, 154, 155, 180, 195, 216, 237, 238, 243, 275, 314, 315, 327, 341, 345

SURFACE ROUGHNESS MEASUREMENT

3, 12, 13, 16, 36, 61, 64, 65, 66, 69, 73, 80, 87, 95, 98, 99, 111, 115, 127, 133, 135, 136, 149, 157, 162, 171, 176, 190, 226–232, 245, 247, 255, 257, 258, 262, 265, 267, 277, 281, 286, 308, 312, 331, 347, 359, 361–365

THEORY (RANDOM DISTRIBUTION SURFACE ROUGHNESS)

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(Paper 80A2–888)