Abstracts

Turnstile Reflecto-Polarimeter Using the Principal Incidence Method: Determination of Permitivities Up to 1200°C and Industrial Applications

A. Bretenoux, C. Marzat and R. Sardos. "Turnstile Reflecto-Polarimeter Using the Principal Incidence Method: Determination of Permitivities Up to 1200°C and Industrial Applications." 1993 Transactions on Microwave Theory and Techniques 41.10 (Nov. 1993 [T-MTT]): 1945-1949.

Having designed a free-space reflecto-polarimeter at 10 and 35 GHz using circular horns and turnstile analyzers, the authors proceed to use this device to measure the dielectric constants of various substances at temperatures up to 1200° C. Prismatic samples are used to eliminate the influence of the back face of the sample as well as that of interference phenomena. Some results are given, and also a practical application of principal- or Brewster-angle incidence to the heating of substances using microwaves is described.

❑ Return to main document.