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Transmission; Appendix; References; 2 Optimum Conditions for Recording Infrared Spectra of Ultrathin Films; 2.1. IR Transmission Spectra Obtained in Polarized Radiation; 2.2. IRRAS Spectra of Layers on Metallic Surfaces ("Metallic" IRRAS)
2.3. IRRAS of Layers on Semiconductors and Dielectrics
2.3.1. Transparent and Weakly Absorbing Substrates ("Transparent" IRRAS);
2.3.2. Absorbing Substrates; 2.3.3. Buried Metal Layer Substrates (BML-IRRAS); 2.4. ATR Spectra; 2.5. IR Spectra of Layers Located at Interface; 2.5.1. Transmission; 2.5.2. Metallic IRRAS; 2.5.3. Transparent IRRAS; 2.5.4. ATR; 2.6. Choosing Appropriate IR Spectroscopic Method for Layer on Flat Surface; 2.7. Coatings on Powders, Fibers, and Matte Surfaces; 2.7.1. Transmission; 2.7.2. Diffuse Transmittance and Diffuse Reflectance; 2.7.3. ATR
2.7.4. Comparison of IR Spectroscopic Methods for Studying Ultrathin Films on Powders
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3.7.8. Optical Effects

Sommario/riassunto

Because of the rapid increase in commercially available Fourier transform infrared spectrometers and computers over the past ten years, it has now become feasible to use IR spectrometry to characterize very thin films at extended interfaces. At the same time, interest in thin films has grown tremendously because of applications in microelectronics, sensors, catalysis, and nanotechnology. The Handbook of Infrared Spectroscopy of Ultrathin Films provides a practical guide to experimental methods, up-to-date theory, and considerable reference data, critical for scientists who want to measure and
