

The control of errors in i.r. spectrophotometry—V. Assessment of errors in the evaluation of optical constants by transmission measurements on thin films.

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Streszczenie

In this paper we assess the errors associated with the computation of the optical constants of liquids from transmission measurements in the i.r. by the methods developed in the two preceding papers. The computations investigated include (a) the iteration algorithm to obtain $k(v)$ and $n(v)$ from $k_a(v)$; (b) truncation errors in the computation of the $n(v)$ from the $k(v)$ spectrum by both the conventional (KK) and the subtractive (SKK) Kramers—Kronig transformations; (c) the effect of truncating the wings of the $k(v)$ curve; (d) the influence of neighboring bands outside the range of measurement on the calculation of the $n(v)$ spectrum by both Kramers—Kronig methods; (e) interactive effect of errors in the $n(v)$ spectrum on the computation of $k(v)$, and of errors in the $k_a(v)$ spectrum on the computation of $n(v)$, and $k(v)$.

Adres publiczny

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