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## High-sensitivity capacitance method for measuring thermal diffusivity and thermal expansion: Results on aluminum and copper

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**Abstract** Thermal diffusivity and thermal expansion in high-conducting solids can be measured by means of a capacitance method, which turns out to be simple, reliable, and accurate and yields the first property with an accuracy of  $\sim 1\%$  and the second one with an accuracy of  $\sim 2\%$ . Preliminary results, which are consistent with the literature, have been obtained on pure aluminum (99.999%) and on commercial copper, both at near room temperature.

**Key words** capacitance method - thermal diffusivity - thermal expansion

References secured to subscribers.

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