

Title:

Raman Spectroscopic Investigations on Evaporating Sprays:
Temperature and Concentration Measurements.

Abstract:

A non-contact temperature sensing method for microdroplets of water is presented, which relies on temperature dependence of the OH stretching band of the spontaneous Raman spectrum. Temperatures of freely moving evaporating droplets with mean particle diameters of approximately $35 \mu\text{m}$ have been measured with an accuracy of $\pm 1^\circ\text{C}$ in the range from 10 to 65°C . Droplet chains and sprays have been investigated. The method allows the observation of droplet cooling during the initial phase of evaporation. Simultaneously the analysis of spectral features from liquid water and water vapor can be exploited to determine the concentration of both phases.

7th ICSCS Symposium B2

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Title of Proposal

WLT Registry number 0868

RAMAN SPECTROSCOPIC INVESTIGATIONS OF EVAPORATING SPRAYS : TEMPERATURE AND CONCENTRATION MEASUREMENTS.

Sender

 VEHRING, R.

Authorship

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PROPOSAL STATUS

 Accepted Lecture Poster In reserve Lecture Poster Should be combined with proposals : Not suitable for symposium B2 Better suitable for symposium

or

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