

Abstract Submitted
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Differential AC/scanning chip nanocalorimeter for in-situ measurements of vapor deposited glasses MATHIAS AHRENBURG, University of Rostock, KATIE WHITAKER, University of Wisconsin-Madison, HEIKO HUTH, University of Rostock, MARK D. EDIGER, University of Wisconsin-Madison, CHRISTOPH SCHICK, University of Rostock, UNIVERSITY OF ROSTOCK TEAM, UNIVERSITY OF WISCONSIN-MADISON TEAM — We use nanocalorimetry to investigate the formation of extraordinarily stable glasses prepared by vapor deposition. For that purpose we've built a vapor deposition chamber that allows in-situ characterization of vapor-deposited organic molecules down to liquid nitrogen temperature. The use of commercially available nanocalorimeter sensors permits us to measure the temperature at the sample position directly via heater resistivity. The calibration of this method was done with the frequency dependence of the dynamic glass transition temperature of low molecular glass formers such as toluene over a broad frequency range. This was applied to investigate vapor deposition of glass formers as a function of time as well as vapor deposited samples as a function of temperature.

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