Differential AC/scanning chip nanocalorimeter for in-situ measurements of vapor deposited glasses

MATHIAS AHRENBERG, HEIKO HUTH, CHRISTOPH SCHICK, University of Rostock, KATIE WHITAKER, MARK D. EDIGER, University of Wisconsin-Madison — 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. 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 melting point of several metals. 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.

Mathias Ahrenberg
University of Rostock

Date submitted: 17 Nov 2009
Electronic form version 1.4