

Abstract Submitted  
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**Heat transfer studies at solid/gas interfaces using time-resolved ellipsometry** CHANG-KI MIN, SUNG CHUL BAE, DAVID CAHILL, STEVE GRANICK, University of Illinois — Heat transfer from a solid surface to gas is studied by pump laser pulses which impulsively increase the temperature of Au metal film. Transient changes of refractive index in the nearby fluid phase are monitored by off-null ellipsometry using time-delayed probe pulses with 100 fs resolution. The initial psecond rise of signals shows how acoustic waves are created and reveals energy exchange mechanisms at solid-gas and solid-liquids interfaces.

Chang-Ki Min  
University of Illinois

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