

ANOMALOUS NEGATIVE  
THERMAL EXPANSION IN A CONDENSED  
HETEROGENEOUS LYOPHOBIC SYSTEM

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S u m m a r y

A reduction in the volume of a heterogeneous lyophobic system (HLS) at the temperature growth (the so-called negative thermal expansion, NTE) is experimentally observed. For the investigated HLS “silicalite-1 + water”, the NTE effect is shown to exceed the corresponding values observed for other known materials by more than an order of magnitude. The physical principles of this phenomenon are explained, and a mathematical model for its description is proposed.