Chip-scale calorimeters: Potential uses in chemical engineering

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**ABSTRACT**

This work illustrates the potential use of chip-scale calorimeters in typical applications found in chemical engineering including thermal hazard screening, material characterization, and mixing compatibility screening. Experimental results were obtained from two liquid nanocalorimeters and one thermal conductivity sensor designed and commercialized by Xensor Integration, and from two microfabricated calorimeter prototypes developed at Texas A&M University and University of Louisiana at Lafayette.

**Keywords:** Chip-scale calorimeters; Liquid nanocalorimeter; Thermal hazard screening