Two-Phase Transport of Dielectric Fluids in Silicon Microchannel Heat Sinks

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**Objective**

Explore, quantify and model boiling heat transfer in silicon microchannel heat sinks using dielectric fluids.

**Approach**

- Investigate boiling phenomenon in micro scale.
- Perform high-speed visualizations.
- Conduct local measurements of wall temperature & heat flux.

**Impact**

- Can achieve extremely high heat transfer rates.
- Provides the ability for chip-integration.

**Selected Publications**