Fundamental Experimental Investigation of Thin-film Evaporation

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**Objective**
Develop comprehensive understanding of transport phenomena occurring near the contact line of evaporating thin liquid films

- Hot-spots can be potentially cooled using thin-film evaporation

**Approach**
- Utilize various measurement techniques to experimentally characterize heat and mass transport of liquid films in important geometries
- Develop experimentally validated numerical models
- Design novel heat transfer devices which effectively exploit thin-film evaporation

**Impact**
- Thin-film evaporation shown to be dominant heat transport mechanism in many two-phase systems
- Sustaining and enlarging thin-film area could dramatically enhance heat dissipation capabilities of next-gen devices

**Selected Publications**