Preventing Delamination Failure from Thermal Cycling of Model Thermal Interface Materials
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**OBJECTIVE**
To achieve balance between mechanical and thermal performance, we study the reliability and degradation mechanism of a model TIM under accelerate thermal cycling and aging conditions.

**APPROACH**
- Study a model TIM of PDMS filled with Cu nanoparticles.
- Develop experimental measurements to evaluate mechanical and thermal performance.
- Investigate macro- and microscopic levels of delamination tests.
- Measure the thermal conductivity through IR microscope, which is conducted by prof. Marconnet research lab.

**IMPACT**
- Demonstrate that aging tests did affect the bulk and surface properties.
- Characterize the effects of Cu nanoparticles on degrading PDMS matrix of model TIM.

**Selected Publications**