

Abstract Submitted
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Gecko inspired carbon nanotube based thermal gap pads¹ SUNNY SETHI, ALI DHINOJWALA, The University of Akron
— Thermal management has become a critical factor in designing the next generation of microprocessors. The bottleneck in design of material for efficient heat transfer from electronic units to heat sinks is to enhance heat flow across interface between two dissimilar, rough surfaces. Carbon nanotubes (CNT) have been shown to be promising candidates for thermal transport. However, the heat transport across the interface continues to be a challenging hurdle. In the current work we designed free standing thermal pads based on gecko-inspired carbon nanotube adhesives. The pads were made of metallic carbon nanotubes and the structure was designed such that it would allow large area of intimate contact. We showed that these adhesive pads can be used as electrical and thermal interconnects.

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