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### **Energy Dissipation and Transport in Carbon Nanotube Devices**

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Power consumption is a significant challenge in electronics, often limiting the performance of integrated circuits from mobile devices to massive data centers. Carbon nanotubes have emerged as potentially energy-efficient future devices and interconnects, with both large mobility and thermal conductivity. This talk will focus on understanding and controlling energy dissipation [1-3] and transport [4-6] in carbon nanotubes, with applications to low-energy devices, interconnects, heat sinks, and memory elements [7]. Experiments have been used to gain new insight into the fundamental behavior of such devices, and to better inform practical device models. The results suggest much room for energy optimization in nanoelectronics through the design of geometry, interfaces, and materials.

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