

359f Forming Electrically Conductive Interconnects between Nanowires Using Solder Reflow

Zhiyong Gu, Hongke Ye, Thomas Yu, Adam Bernfeld, and David H. Gracias

In this paper we describe the utilization of solder reflow to form electrically conductive interconnects between nanowires-nanowires and nanowires-substrates. The nanowires that range in diameter from 30 nm to 200 nm are fabricated using electrodeposition in nanoporous templates. Reflowed solder joints are characterized using electron microscopy and electrical probe testing. We will describe the integration of nanowires to form elementary electrical devices such as an AC integrator.