Micromolding fabrication of “T” cross section SiC SPM probes

CHIAYUN WU, Physics U. Mass Lowell, SHIHANG WANG, DANIEL SCHMIDT, Plastics Eng U. mass Lowell, JOEL THERRIEN, ECE U. Mass Lowell — Micromolding techniques using pre-ceramic polymers have been demonstrated for the creating silicon carbide based AFM cantilevers. In an attempt to reach higher resonance frequencies without significantly increasing the spring constant of the cantilevers, a “T” cross section cantilever was fabricated. The resonant frequency and spring constant have been compared to the standard rectangular cross section cantilevers of both Sic and commercially available silicon cantilevers.