**Microchips for the Investigation of Thermal and Electrical Properties of Individual Nanowires**

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This paper focuses on the determination of thermal and electrical properties of individual thermoelectric nanowires, primarily bismuth and bismuth compound nanowires, as functions of their crystallinity, diameter, and composition. For measurements of the Seebeck coefficient and the electrical and thermal conductivity, specially designed microchips have been developed and employed. Finite-element simulations demonstrate that the temperature profiles of the microchips provide suitable temperature gradients for Seebeck-effect measurements and heat-sink conditions for thermal conductivity investigations. First measurements of thermal conductivity of metallic nanowires and of Seebeck coefficients of granular nanowires prepared by focused electron-beam-induced deposition are presented. Some of these results are discussed in the framework of finite-size-effect theory.