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“Prof. Ferry is a highly respected expert in quantum transport of nanoscale devices. He has used a vast number of different theoretical tools to model the fascinating transport physics of these systems. He has now collected results of his scholarship in this volume, where the reader will learn about the pragmatic use of various sophisticated techniques, including Green’s functions (both in equilibrium and in nonequilibrium incarnations), density matrices, and Wigner functions. This is probably the first time all this material is available in a single volume using a unified notation, giving the interested reader a unique and self-contained view of the entire field. The reader will also benefit from the many personal and insightful discussions that interlace the technical material. A researcher with a solid command of the theoretical techniques in condensed matter and who wants to work in the borderline of physics and nanoelectronics will find this volume highly useful.”

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David K. Ferry is regents’ professor in the School of Electrical, Computer and Energy Engineering, Arizona State University (ASU), USA. He is also a faculty member in the Department of Physics and for the graduate program in Materials Science and Engineering at ASU and a visiting professor at Chiba University, Japan. He joined ASU in 1983 following shorter stints at Texas Tech University, the Office of Naval Research, and Colorado State University, USA. He enjoys teaching, which he refers to as “warping young minds,” and his research focuses on semiconductors, particularly as they apply to nanotechnology and integrated circuits as well as quantum effects in devices.

