



Energy Autonomous Micro and Nano Systems (ISTE)

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Providing a detailed overview of the fundamentals and latest developments in the field of energy autonomous microsystems, this book delivers an in-depth study of the applications in the fields of health and usage monitoring in aeronautics, medical implants, and home automation, drawing out the main specifications on such systems. Introductory information on photovoltaic, thermal and mechanical energy harvesting, and conversion, is given, along with the latest results in these fields. This book also provides a state of the art of ultra-low power sensor interfaces, digital signal processing and wireless communications. In addition, energy optimizations at the sensor node and sensors network levels are discussed, thus completing this overview.

This book details the challenges and latest techniques available to readers who are interested in this field. A major strength of this book is that the first three chapters are application orientated and thus, by setting the landscape, introduce the technical chapters. There is also a good balance between the technical application, covering all the system-related aspects and, within each chapter, details on the physics, materials and technologies associated with electronics.

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