

NATO Science for Peace and Security Series - B:
Physics and Biophysics

Fundamental and Applied Nano-Electromagnetics II

THz Circuits, Materials, Devices

Edited by
Antonio Maffucci
Sergey A. Maksimenko

Springer

1st
edition1st ed. 2019, VIII, 214 p.
127 illus., 92 illus. in color.

Printed book

Hardcover

Printed book

Hardcover

ISBN 978-94-024-1686-2

\$ 179,99

Available

Discount group

Professional Books (2)

Product category

Proceedings

Series

NATO Science for Peace and Security
Series B: Physics and Biophysics

Other renditions

Softcover

ISBN 978-94-024-1689-3

Softcover

ISBN 978-94-024-1688-6

Physics : Nanoscale Science and Technology

Maffucci, Antonio, Maksimenko, Sergey A. (Eds.)

Fundamental and Applied Nano-Electromagnetics II

THz Circuits, Materials, Devices

- Provides an in-depth and comprehensive overview of cutting-edge results in Nanoelectromagnetics
- Presents a wide range of nanoelectronics and nanophotonics applications
- Demonstrates rigorous approaches in modelling the electromagnetic field theory coupled to quantum mechanics

The increasing prevalence of nanotechnologies has led to the birth of "nanoelectromagnetics," a novel applied science related to the interaction of electromagnetic radiation with quantum mechanical low-dimensional systems. This book provides an overview of the latest advances in nanoelectromagnetics, and presents contributions from an interdisciplinary community of scientists and technologists involved in this research topic. The aspects covered here range from the synthesis of nanostructures and nanocomposites to their characterization, and from the design of devices and systems to their fabrication. The book also focuses on the novel frontier of terahertz technology, which has been expanded by the impressive strides made in nanotechnology, and presents a comprehensive overview of the: -synthesis of various nanostructured materials; -study of their electrical and optical properties; -use of nano-sized elements and nanostructures as building blocks for devices; -design and fabrication of nanotechnology devices operating in the THz, IR and optical range. The book introduces the reader to materials like nanocomposites, graphene nanoplatelets, carbon nanotubes, metal nanotubes, and silicon nanostructures; to devices like photonic crystals, microcavities, antennas, and interconnects; and to applications like sensing and imaging, with a special emphasis on the THz frequency range.

Order online at [springer.com/booksellers](https://www.springer.com/booksellers)

Springer Nature Customer Service Center LLC

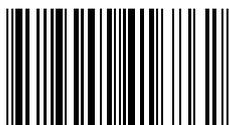
233 Spring Street

New York, NY 10013

USA

T: +1-800-SPRINGER NATURE

(777-4643) or 212-460-1500

customerservice@springernature.com

ISBN 978-94-024-1686-2 / BIC: TBN / SPRINGER NATURE: SCP25140

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.

Part of **SPRINGER NATURE**