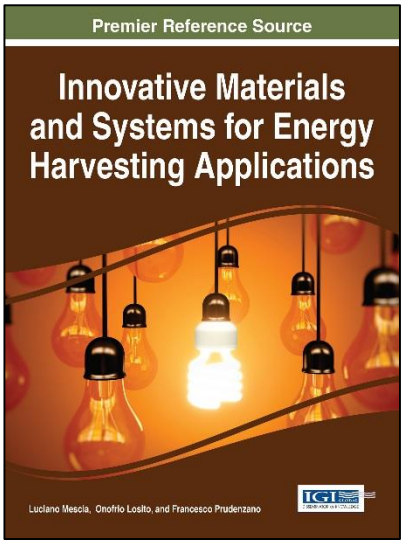
Innovative Materials and Systems for Energy Harvesting Applications



Part of the Advances in Environmental Engineering and Green Technologies (AEEGT) Book Series

Luciano Mescia (Politecnico di Bari, Italy), Onofrio Losito (Politecnico di Bari, Italy), and Francesco Prudenzano (Politecnico di Bari, Italy)

Description:

Wearable electronics, wireless devices, and other mobile technologies have revealed a deficit and a necessity for innovative methods of gathering and utilizing power. Drawing on otherwise wasted sources of energy, such as solar, thermal, and biological, is an important part of discovering future energy solutions.

Innovative Materials and Systems for Energy Harvesting Applications reports on some of the best tools and technologies available for powering humanity's growing thirst for electronic devices, including piezoelectric, solar, thermoelectric, and electromagnetic energies.

Readers:

This book is a crucial reference source for academics, industry professionals, and scientists working toward the future of energy.

ISBN: 9781466682542 **Release Date:** April, 2015 **Copyright:** 2015 **Pages:** 413

Topics Covered:

- Biomechanical Methods
- Energy Conversion Devices
- Nanofluidic Reverse Electrodialysis
- Non-Conventional Systems
- Optical Systems
- Piezoelectric Methods
- Thermoelectric Methods
- Wireless Energy Transfer

Hardcover + Free E-Access: $235.00

E-Access Only: $220.00

Luciano Mescia joined the Department of Electrical and Electronic Engineering at the Politecnico of Bari as Assistant Professor. His research activity focus on fibre and integrated optic technologies, with emphasis on rare-earth doped active devices, optical sensors for the environmental monitoring, optical fibres (conventional and microstructured) for industrial, biological and biomedical applications. Recently, he works in the field of the swarm intelligence for the design, optimization and characterization of high power fibre amplifiers for space applications and harsh environments. Moreover, his research activity is devoted to the design of lasing action in rare earth doped microspheres and to the design of novel optical antennas for solar energy harvesting. During his activity research he has cooperated with many national and international research institutions and he has been involved in several collaborative projects with academic and industrial partners. Moreover, he serves as reviewer for many international conferences and journals, as well as chairman at international conferences.

Onofrio Losito took his degree in Electronic Engineering, in 2002 from Politecnico di Bari, and in the September 2007, a PhD degree in Information Engineering at the University of Lecce. Since 1999 he has cooperated as an outside expert with the High schools, as activities on the techniques of installation for systems of telecommunications and measures of electromagnetic fields focusing the research activity, to the analysis and design of one dimensional and periodic leaky wave antennas, antennas array, microwave filters, and electromagnetic shielding, for RF. Since 2007 he has joined at the ITEL telecommunication s.r.l., as researcher coordinator in the ITEL Laboratory of electromagnetic compatibility. Since 2012 he is a fellow research in the Electromagnetic Fields Group of the Dipartimento di Ingegneria Elettrica e dell'Informazione at Politecnico di Bari. He was executive scientific manager for some national project (PON01_02238, PON02_00576_33297, LECJBT5) and a reviewer of some international journals as IEEE AP. Dr. Losito is a member of IEEE AP-Society, IEEE EMC Society, EurAAP, SIEm and CNIT.