PHOTONICS AND NANOSTRUCTURES - 
FUNDAMENTALS AND APPLICATIONS

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DESCRIPTION

Including metamaterials

This journal establishes a dedicated channel for physicists, material scientists, chemists, engineers and computer scientists who are interested in photonics and nanostructures, and especially in research related to photonic crystals, photonic band gaps and metamaterials. The Journal sheds light on the latest developments in this growing field of science that will see the emergence of faster telecommunications and ultimately computers that use light instead of electrons to connect components.

A special section on metamaterials inherits the tradition of Metamaterials journal (www.journals.elsevier.com/metamaterials) and covers a broad range of research on artificial electromagnetic materials and surfaces in microwave and optical range, including their fabrication and applications.

The Journal features mainly original research work in experiment, theory and applications. Papers suitable for publication cover topics such as:

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- Fabrication of photonic structures and devices using various methods, including lithography, self-assembly, holography, etc.
- Subwavelength optics of structured materials
- Metallic and metallo-dielectric photonic structures
- Structures for Terahertz optics
- Plasmonics
- Metamaterials and left-handed metamaterials
- Chiral and bianisotropic media
- Periodic electromagnetic structures
- Frequency selective surfaces
- High-impedance surfaces
- Metamaterials for antenna and circuit technology
- Metamaterial-based devices
- Acoustic and elastic metamaterials
- Photonic crystal fibers and "holey" fibers
• Micro- and nanophotonic devices such as optical waveguides, switches, lasers, and other components of optical integrated circuits
• Integration of photonic crystals
• Micro-optical-electro-mechanical-systems (MOEMS)
• Optical microcavities and photonic "dots"
• Novel approaches to micro- and nanophotonics
• Critical assessment of new application fields (light sources, lasers, biophotonics, detectors, optical components, atom and molecule confinement).

AUDIENCE

Applied physicists, Materials scientists, Computer scientists, Engineer, Chemists

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