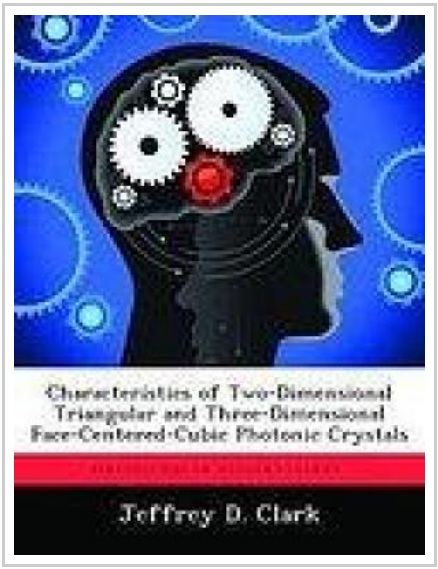

Characteristics of Two-Dimensional Triangular and Three-Dimensional Face-Centered-Cubic Photonic Crystals

By Jeffrey D. Clark

Bibliioscholar Nov 2012, 2012. Taschenbuch. Book Condition: Neu. 246x189x11 mm. This item is printed on demand - Print on Demand Neuware - Photonic crystals (PhC's) are periodic structures of differing dielectrics that create a photonic band gap (PBG). A PBG, in turn, inhibits the propagation of electromagnetic waves of a speci c frequency range. This thesis focuses on the fabricationand characterization of triangular-structured, two-dimensional PhC's with a PBG de-signed for visible wavelengths and with applications in visible integrated photonicsystems. A three-dimensional PhC with a PBG in the infrared is also studied for itscharacteristics in regard to its PBG.The two-dimensional fabrication processes pursued were: focused ion beam,electron beam lithography and holographic photo-polymerization/lithography. Thefabrication techniques and materials used to create the PhC in part determined thecharacterization technique required to investigate the PBG. Characterization tech-niques include: the coupling of a beam by means of a prism into a wave-guidingmedium in which the PhC has been fabricated, Fourier transform infrared spectrom-eter, spectrophotometer, and edge ring techniques. Analysis of the transmission andre-ectance properties of a PhC for various incident angles (within the two dimen-sional plane of the PhC) con rms the presence of a PBG. The design of the PhC wasbased on a program created...

Reviews

Basically no terms to clarify. It is actually writter in basic terms rather than confusing. I found out this ebook from my dad and i suggested this book to find out.

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