Metamaterials. Critique and Alternatives

Description: A Convincing and Controversial Alternative Explanation of Metamaterials with a Negative Index of Refraction

In a book that will generate both support and controversy, one of the world’s foremost authorities on periodic structures addresses several of the current fashions in antenna design most specifically, the popular subject of double negative metamaterials. Professor Munk provides a comprehensive theoretical electromagnetic investigation of the issues and concludes that many of the phenomena claimed by researchers may be impossible. While denying the existence of negative refraction, the author provides convincing alternative explanations for some of the experimental examples in the literature.

Although the debate on this subject is just beginning, Professor Munk has received support by various numerical simulations, winning him the encouragement of numerous experts in the field. The issues that are raised here have not been addressed thoroughly by the metamaterials community, and this book will serve as a catalyst for much healthy debate and discussion.

Metamaterials: Critique and Alternatives is destined to become a classic resource for graduate students and researchers in electromagnetics, antenna theory, materials research, and chemistry.

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