

140

Accession number:20114714532502

Title:Relativistic electron beam excitation of surface fields in artificial materials based on one- and two-dimensional periodic structures

Authors:Konoplev, I.V. (1); Cross, A.W. (1); Phelps, A.D.R. (1)

Author affiliation:(1) Department of Physics, University of Strathclyde, Glasgow, United Kingdom

Corresponding author:Konoplev, I.V.

Source title:IEEE Transactions on Plasma Science

Abbreviated source title:IEEE Trans Plasma Sci

Volume:39

Issue:11 PART 1

Issue date:November 2011

Publication year:2011

Pages:2610-2611

Article number:5971796

Language:English

ISSN:00933813

CODEN:ITPSBD

Document type:Journal article (JA)

Publisher:Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract:The understanding of the evolution of the electromagnetic (EM) fields on the surface of a metamaterial which mitigates the nonlinear nonstationary interactions between nonneutral plasmas such as relativistic electrons and EM fields is an important and challenging problem. Studies in this field have recently led to many breakthroughs in optics, vacuum electronics, and photonics. The realization of many ideas, as well as bridging the terahertz gap, is strongly linked to understanding and controlling the EM field's evolution inside and on the surface of artificial materials.

Number of references:9