

Abstract

Design of Functionally Graded Dielectrics Using Prescribed Microstructures

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Composite dielectric insulators for use in power transmission need to possess suitable overall dielectric properties while at the same time minimize electric field concentrations. It is often the case that microstructures available to the designer are limited by manufacturing constraints. In this context we illustrate a rigorous strategy for the design of composite dielectrics with graded properties for control of field concentrations.

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