Abstracts

Averaging Rules for the Scattering by Randomly Oriented Chiral Particles (Short Papers)

G. Oberschmidt and A.F. Jacob. "Averaging Rules for the Scattering by Randomly Oriented Chiral Particles (Short Papers)." 1996 Transactions on Microwave Theory and Techniques 44.3 (Mar. 1996 [T-MTT]): 476-478.

The orientational averages arising when calculating the effective behavior of ensembles of randomly dispersed (chiral) particles are examined. Two methods, i.e., the vector radiative transfer equation (VRTE) and the Lorenz-Lorentz mixing formulas, are briefly discussed. Since integration over products of up to six elements of a rotational matrix are involved, the effort for performing the averaging is high. To minimize the computational burden, rules for evaluating the integrals will be given in this communication. Application to average polarizability-tensors are presented.

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