INCLUSIONS DISTRIBUTION SSC CORRELATION MATRIX OF DISPERSE

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If the position of all particles known as, for example, crystals can accurately determine the configuration matrix system and calculate multipole moments and the effective dielectric constant in any desired order. For disordered systems averaged over ensemble clearly defined decision in principle, if asked -particle distribution. For large systems, this is almost impossible, because only you can determine approximate solutions corresponding distributions below. We consider only homogeneous macroscopic system, ie one-homogeneous distribution, and use only those single and dvochastkovi distributions in which fluctuation is negligible effects.

In general, the higher multipole moments other particles in the zone correlations allow the inclusion of local field acting on each particle and make it uneven, which in turn leads to the emergence of higher multipoles even spherical particle. Since the dipole moment of each particle is associated with higher multipoles other particles from the zone correlations effective dielectric constant change under their influence and deviates from the formula Maxwell-Garnett. These changes depend on the specific nonspherical of bipartite distribution and volume concentration of the order. To macroscopically homogeneous system, assuming a uniform external field instead of a plane-parallel, we get the same results. Thus, the effective dielectric constant volume property is macroscopically homogeneous system, and does not depend on the shape that it raises.

Conclusions

The external field is homogeneous in a macroscopic homogeneous system of small-scale bipartite distribution. Field formed by particles not in the zone correlation also becomes uniform, regardless of the shape and orientation of the particles. Golf in the area other particle correlations generally heterogeneous and

critically dependent on the form of bipartite distribution. If a spherical distribution, these particles do not give inclusions in the local field acting on the central piece. Thus, all multipole moments except dipole disappear, and within a mean field are clearly the result of the Maxwell-Garnett.