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Title:Electrical conductivity and electromag- netic shielding effectiveness of silicone rubber filled with ferrite and graphite powders
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Abstract:There is increasing interest in electromagnetic interference (EMI) shielding due to the serious electromagnetic environment pollution caused by the continuously increased use of the electrical products and electronic devices. Electrical conductivity and EMI shielding effectiveness (SE) of composite materials made from silicone rubber with carbon powder and ferrite powder have been studied in microwaves and terahertz frequency ranges and the results are presented in this paper. In microwaves range, samples with higher electrical conductivity show a small variation of shielding performance with frequency, whereas the performance of samples with lower conductivity falls away with increasing frequency. It is shown that the variation of attenuation with frequency relates to the conductivity of the material.
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