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Cole-Davidson dielectric relaxation as a self-similar relaxation process

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Abstract

An effort has been undertaken to understand the nature of one type of non-exponential relaxation, namely Cole-Davidson relaxation. Toward this end, a model of relaxation as a self-similar process is proposed. An equation containing operators of fractional integration and differentiation is obtained and solved, which the relaxation function obeys in this case. © 1997 American Institute of Physics.
