

Abstract Submitted
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Similarity between the Damping Function and Payne Effect in Particle-Filled Elastomers XIAORONG WANG, Chemical Engineering, Tongji University, Shanghai — Recent research activities at Tongji have revealed that for many particle-filled rubbers their mechanical properties in step-shear and oscillatory-shear experiments display similar superposed rheological behavior in both linear and nonlinear regimes. The question addressed here are: does the damping function from the time-strain superposition take the same form as the Payne effect from the frequency-strain superposition does? Experimentally, both sets of data appear to be overlapping each other. If so, what would be the important implementation?

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