

Abstract Submitted  
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**Viscoelastic** **Analysis**  
**of Thermally Stiffening Polymer Nanocomposites**<sup>1</sup> ANDREW EHLERS\*,  
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Institute — Poly(ethylene oxide), PEO, filled with silica nanoparticles coated with  
poly(methyl methacrylate), PMMA, was shown to present thermally stiffening be-  
havior above the glass transition temperature of both PEO and PMMA. In the  
current study, the viscoelastic behavior of this nanocomposite system is investigated  
via nanoindentation experiments to complement on going rheological studies. Re-  
sults were compared to neat polymers, PEO and PMMA, to understand the effect  
of coated nanoparticles.

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