

Supplementary Information

for

Direct and Indirect Effects on Molecular Mobility in Renewable Polylactide-Poly(propylene adipate) Block Copolymers as Studied by Dielectric Spectroscopy and Calorimetry

Panagiotis A. Klonos,^{a,b,*} Zoi Terzopoulou,^a Alexandra Zamboulis,^a Miguel Ángel
Valera,^c Ana Mangas,^c Apostolos Kyritsis,^b Polycarpos Pissis,^b
and Dimitrios N. Bikiaris^{a,*}

^a *Department of Chemistry, Laboratory of Polymer Chemistry and Technology, Aristotle University of Thessaloniki, GR-541 24, Thessaloniki, Greece*

^b *Department of Physics, National Technical University of Athens (NTUA), Zografou Campus, 15780, Athens, Greece*

^c *AIMPLAS, Asociación de Investigación de Materiales Plásticos Y Conexas, Carrer de Gustave Eiffel, 4, 46980 Valencia, Spain*

^{*} *Corresponding authors: pklonos@central.ntua.gr (P.A.K.); dbic@chem.auth.gr (D.N.B.).*

Additional Experimental Data

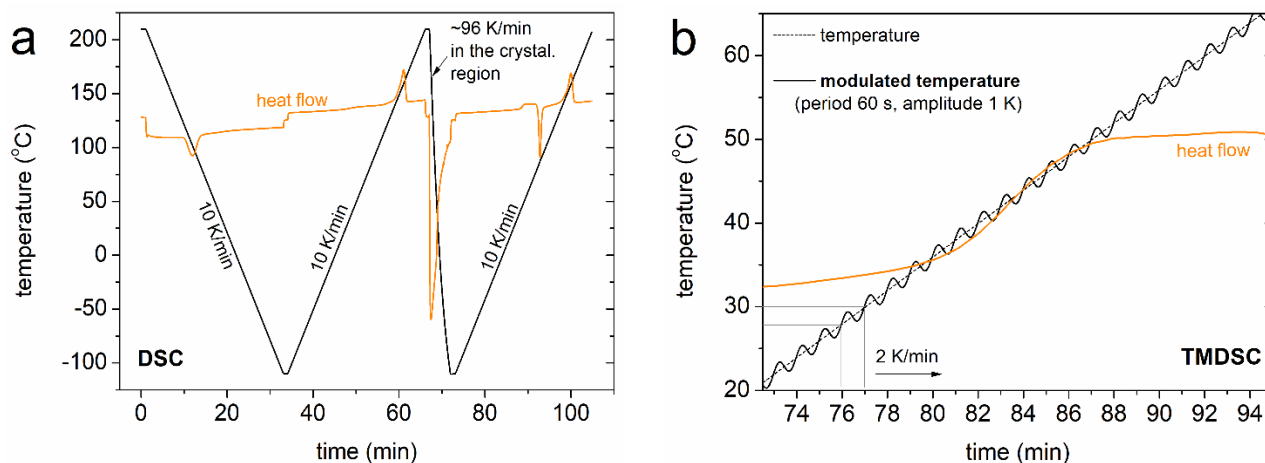


Figure S1. Time-temperature profiles during (a) conventional and (b) temperature modulated DSC. For comparison, selected results for the heat flow response have been included.

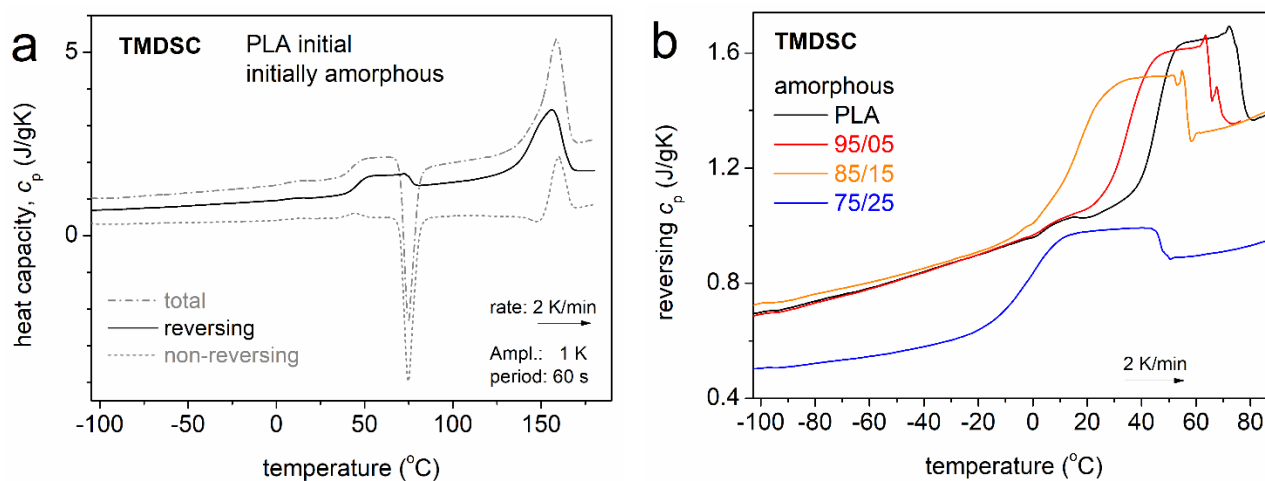


Figure S2. (a) Results by TMDSC for initial PLA in terms of total, reversing and non-reversing heat capacity. (b) Comparative curves of the reversing heat capacity term for all samples, focusing on the glass transition temperature range.

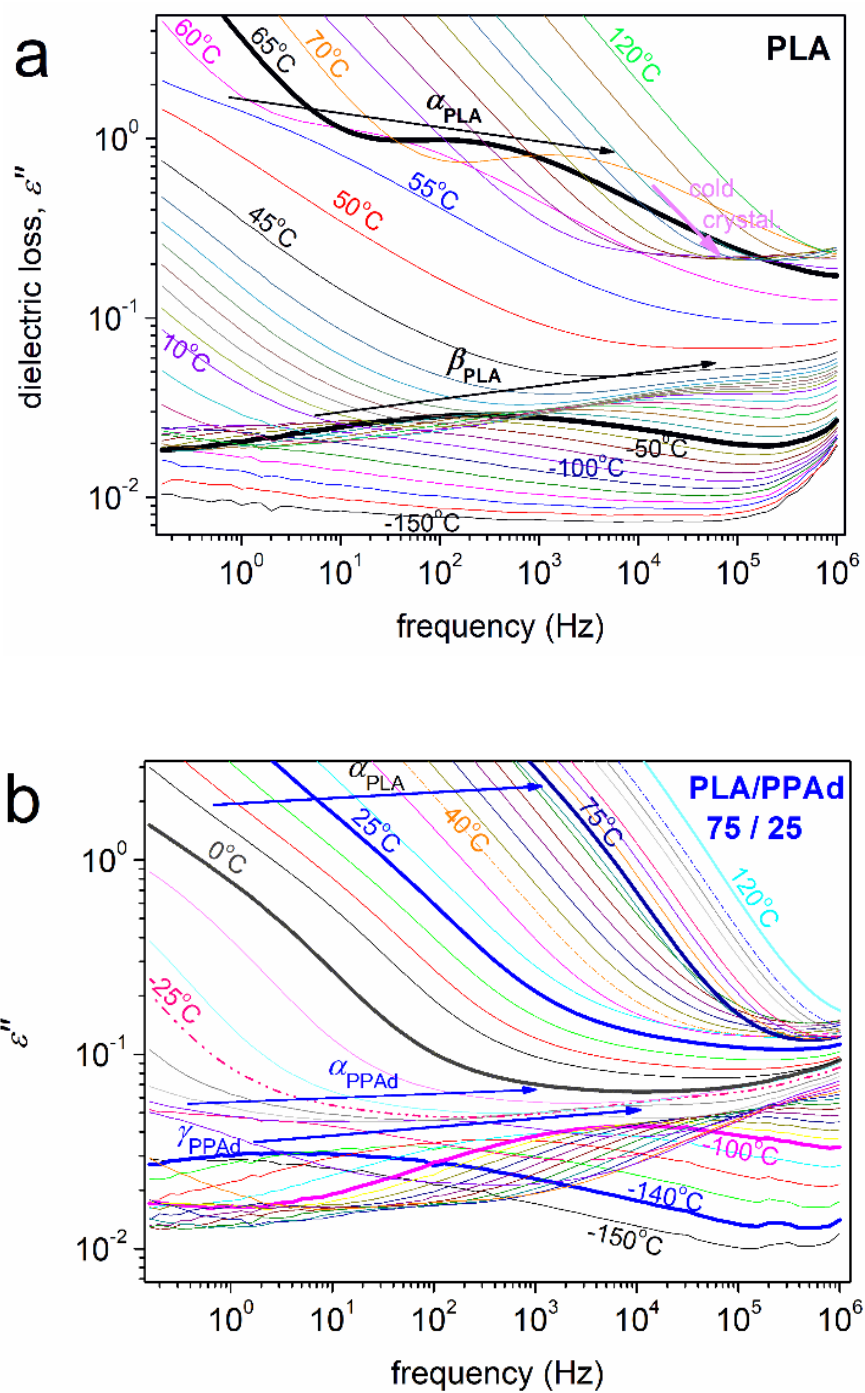


Figure S3. Raw BDS data in terms of isothermal curves of ϵ'' against frequency being shown for (a) initial PLA and (b) the 75/25 copolymer. The corresponding temperatures are indicated for selected isothermal curves, while the main recorded relaxations are arrow-marked.

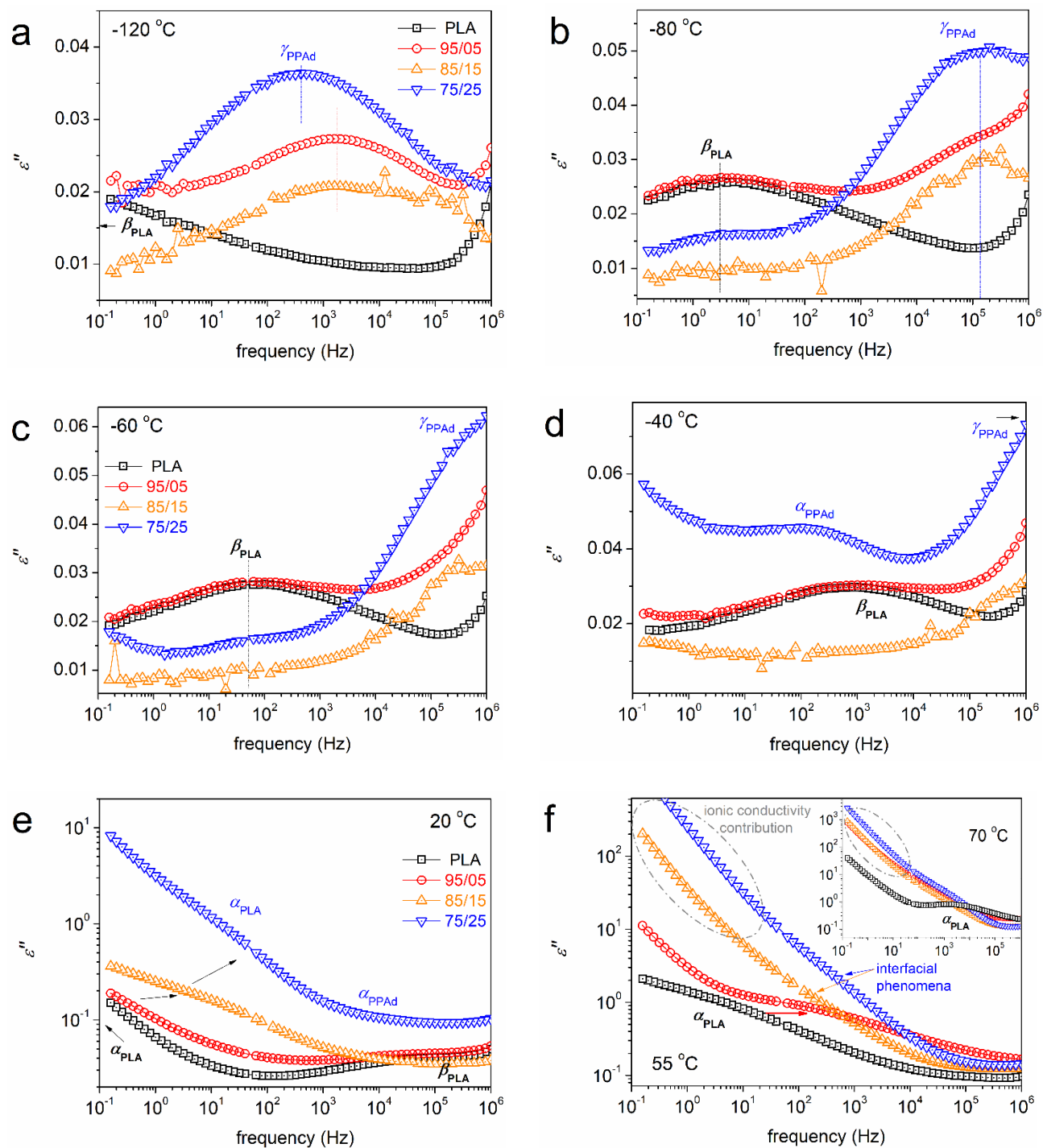


Figure S4. Comparative isothermal curves of ϵ'' for all compositions at various selected temperatures indicated on the plots.

The inset to (f) shows the isothermals of ϵ'' at the higher temperature of 70 °C, to point further on the ionic conductivity effects at the lower frequencies.

