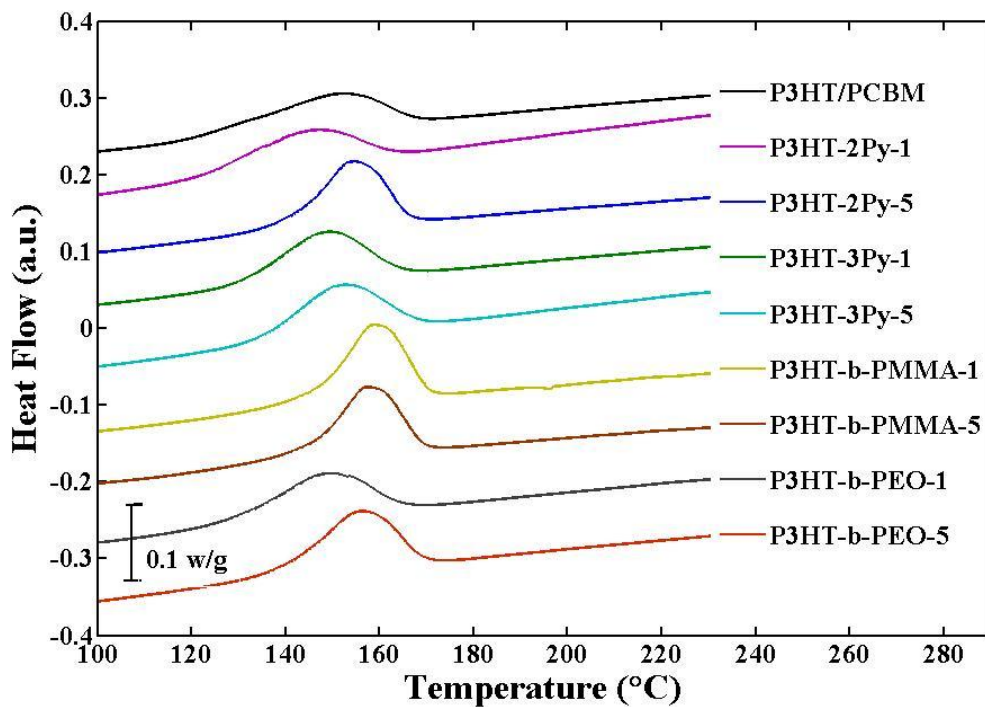


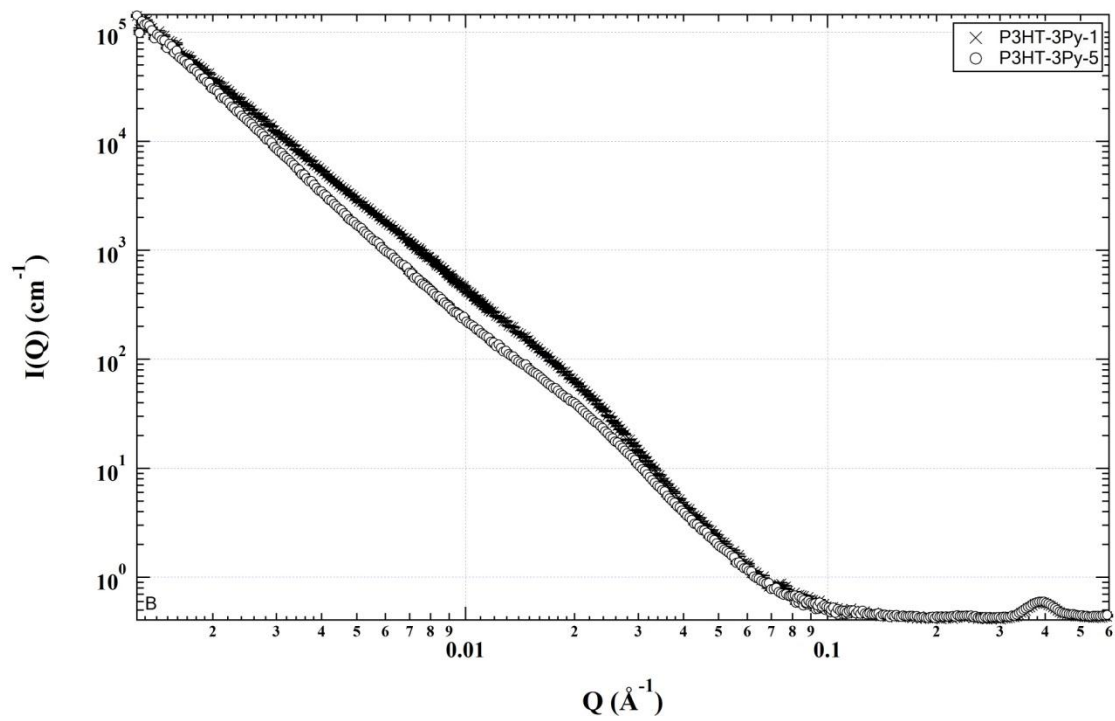
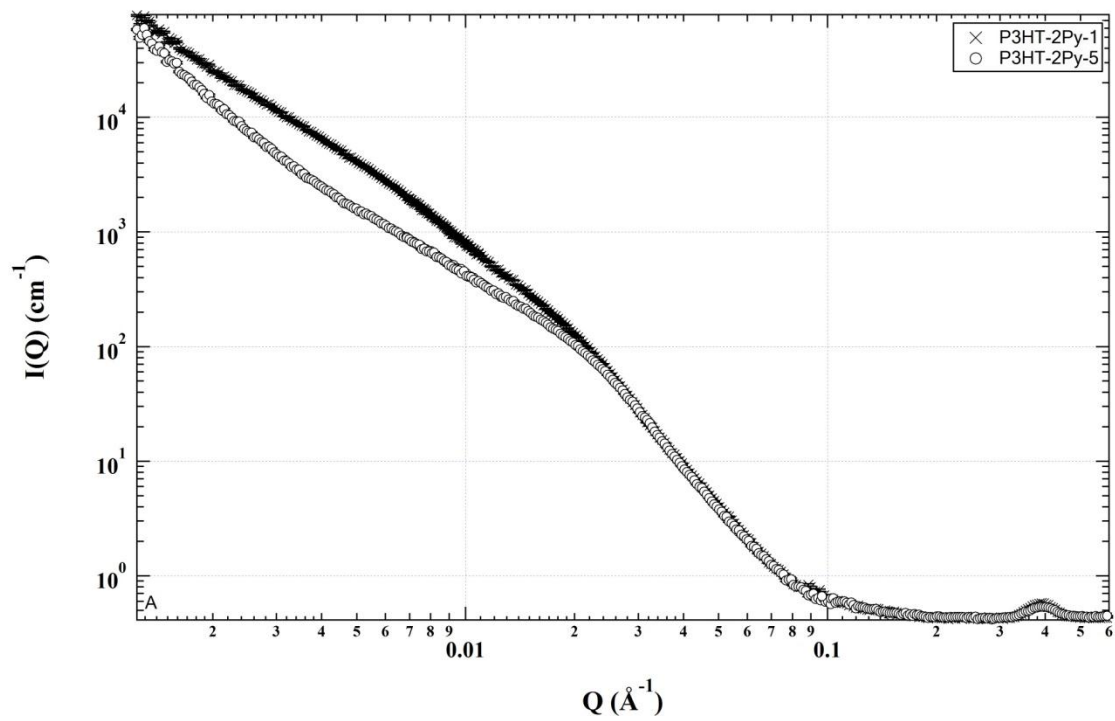
## Supporting Information

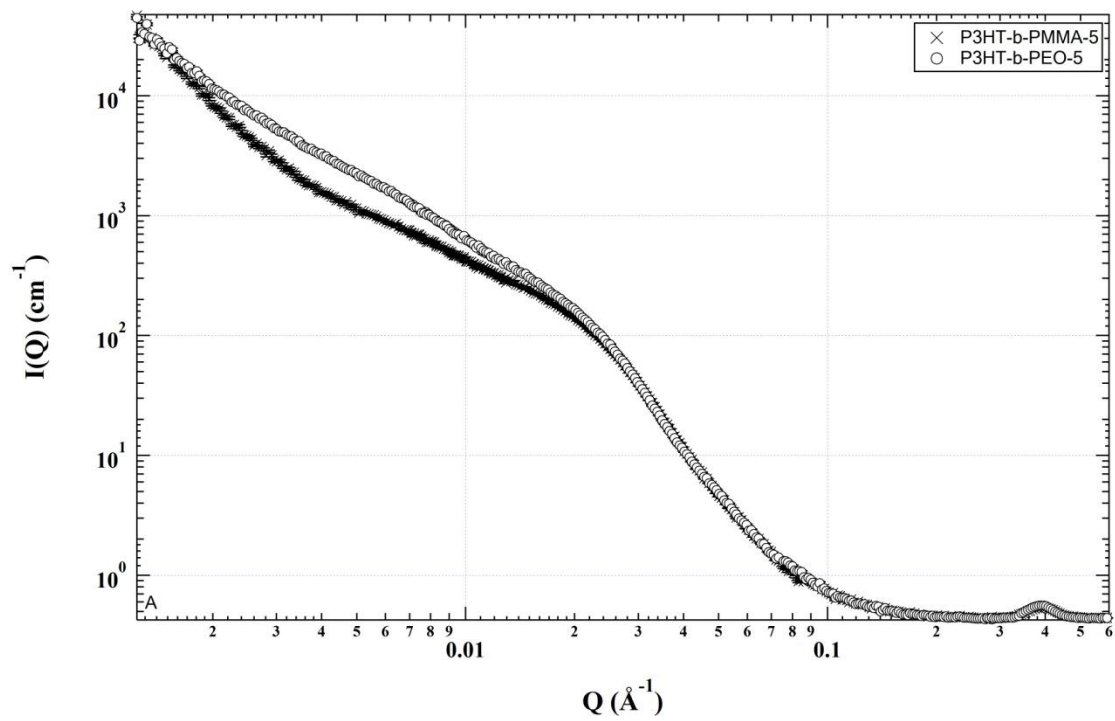
### Correlation of Polymeric Compatibilizer Structure to its Impact on the Morphology and Function of P3HT:PCBM Bulk Heterojunctions

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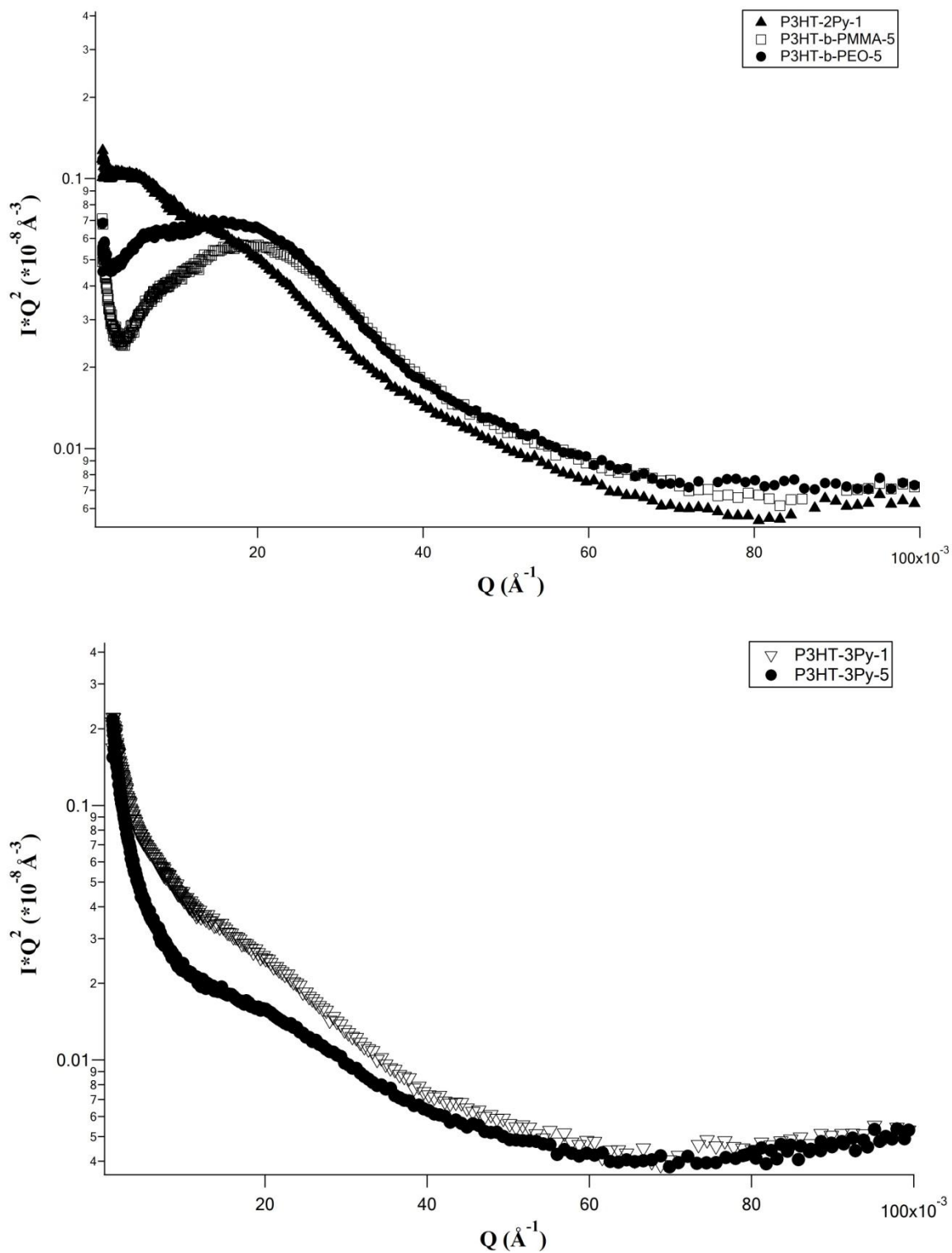


**Figure S1.** Heat flow vs. temperature of all the samples during cooling from the melt (300°C) at 10°C/min. Curves are displaced vertically for clarity.

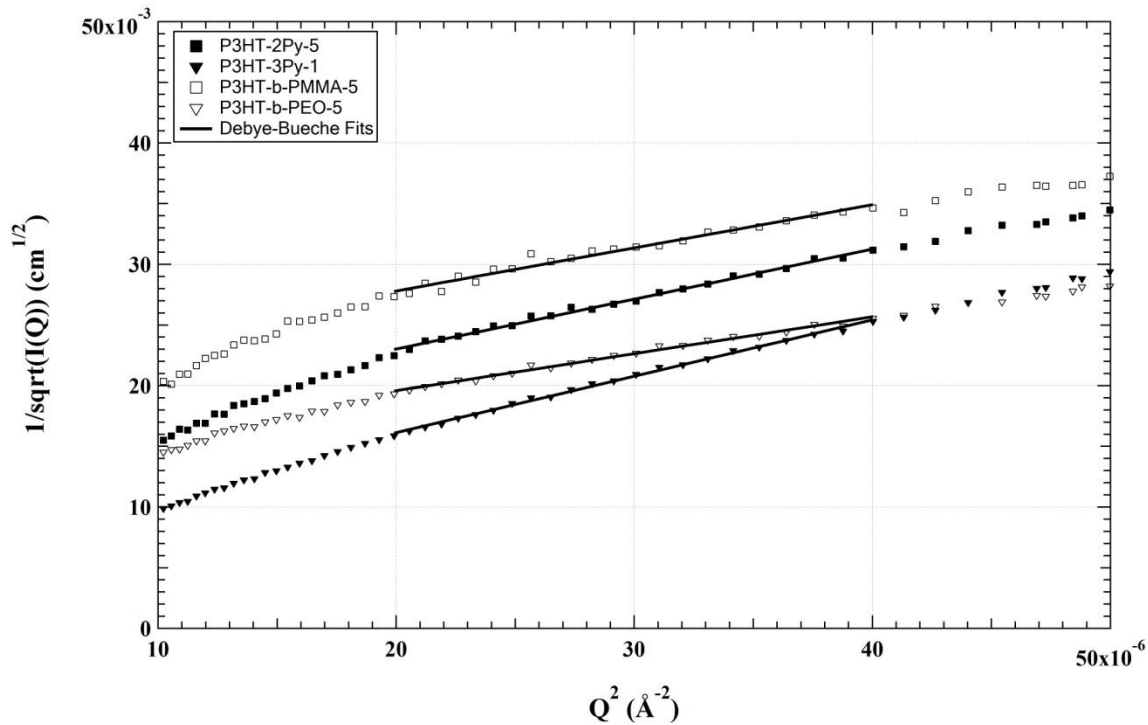




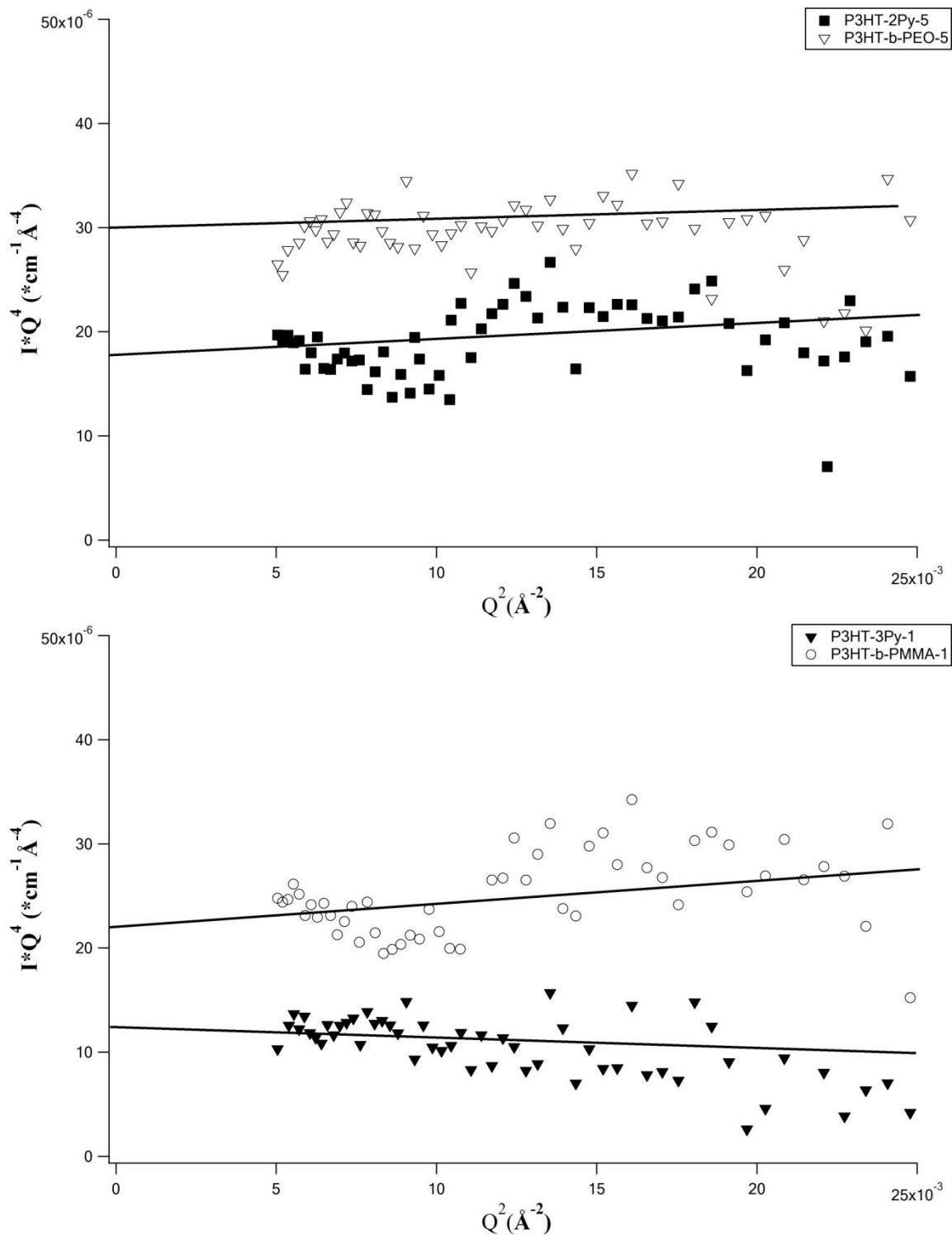
**Figure S2** The absolute SANS intensity of P3HT-2Py-1, P3HT-2Py-5, P3HT-3Py-1, P3HT-3Py-5, P3HT-*b*-PMMA-5, and P3HT-*b*-PEO-5.



**Figure S3.** Lorentz-corrected scattering pattern of P3HT-2Py-1, P3HT-*b*-PMMA-5, P3HT-*b*-PEO-5, P3HT-3Py-1, and P3HT-3Py-5.



**Figure S4.** Debye-Bueche fits of P3HT-2Py-5, P3HT-3Py-1, P3HT-*b*-PMMA-5, and P3HT-*b*-PEO-5.



**Figure S5.**  $IQ^4$  vs.  $Q^2$  for P3HT:PCBM, P3HT-2Py-5, P3HT-*b*-PEO-5, P3HT-3Py-1, and P3HT-*b*-PMMA-1. The intercept (A) is used to determine the SLDC,  $\Delta b$ , between the two phases.