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The Role of Acid-Base Interactions in Controlling Interfacial Segregation in Polymer Blends[1] HE ZHU, SHISHIR PRASAD, ANISH KURIAN, ILA BADGE, ALI DHINOJWALA, The University of Akron — We have studied segregation of polymethylmethacrylate (PMMA)/polystyrene (PS) blends next to solid surfaces using interface sensitive infrared-visible sum frequency generation (SFG) spectroscopy. We have monitored the SFG spectra as a function of blend compositions and used the shift in the surface hydroxyl peak, due to acid-base interactions, to determine the concentration of PMMA groups next to the sapphire substrate. A quantitative connection between the extent of interfacial segregation and the strength of the acid-base interactions will be discussed.

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