

Ion Structure Controls Ionic Liquid Near-Surface and Interfacial Nanostructure at a Solid Surface

Aaron Elbourne¹, Kislou Voitchovsky², Gregory G. Warr³, and Rob Atkin^{1,*}

¹ Discipline of Chemistry, The University of Newcastle, NSW 2308, Callaghan, Australia.

² Department of Physics, Durham University, Durham, England, United Kingdom.

³ School of Chemistry, The University of Sydney, NSW 2006, Australia.

* Corresponding author

Electronic Supplementary Information

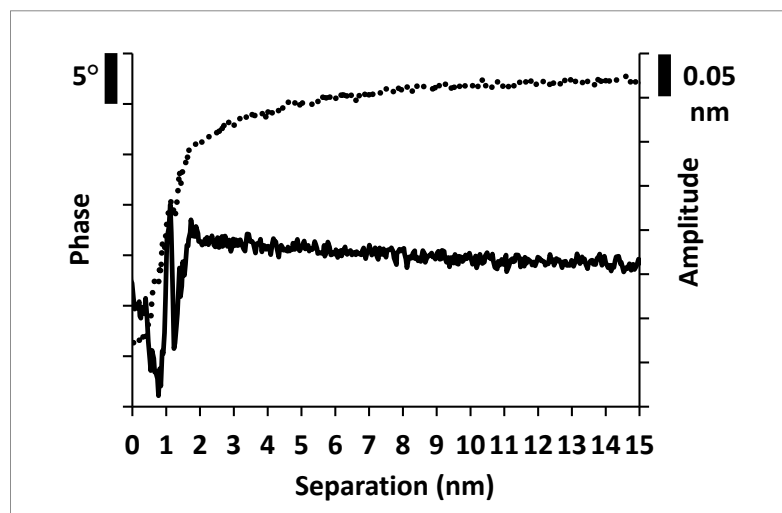


Figure 1. Typical amplitude (Dotted) and phase (Black) data recorded as an oscillating AFM tip approaches a mica substrate immersed in DMEAF. The x-axis measures the extension of the AFM Z piezo. Steps tend to be less clear in the amplitude data.

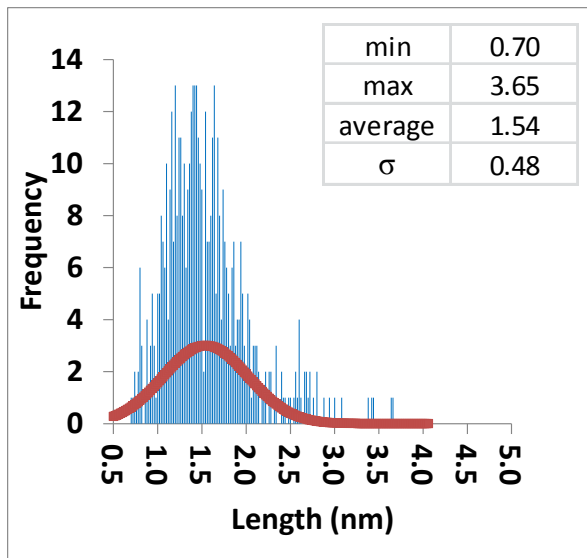


Figure 2. Histogram of the interfacial length of the raised (light) sections for the EAN near-surface image (c.f. Figure 1 Column 3). The frequency is shown in blue and the normal distribution in red. The minimum, maximum, average and standard deviation (σ) for the data is shown as an inset.

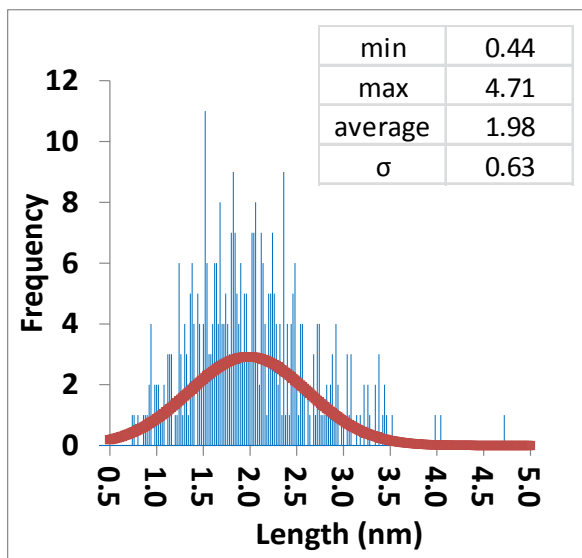


Figure 3. Histogram of the interfacial length of the raised (light) sections for the PAN near-surface image (c.f. Figure 1 Column 3). The frequency is shown in blue and the normal distribution in red. The minimum, maximum, average and standard deviation (σ) for the data is shown as an inset.

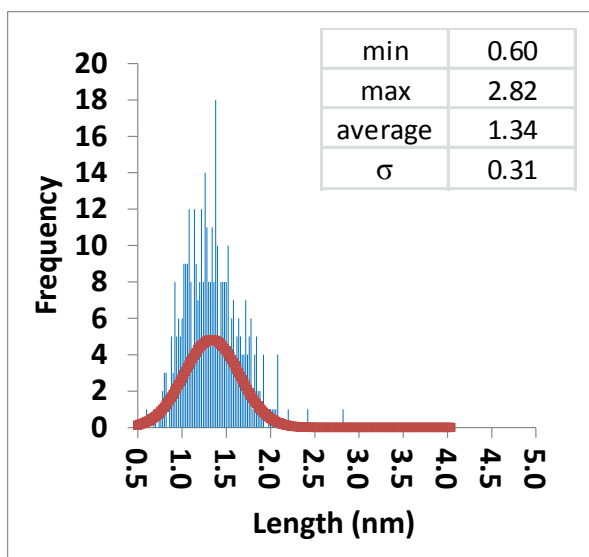


Figure 4. Histogram of the interfacial length of the raised (light) sections for the EtAN near-surface image (c.f. Figure 1 Column 3). The frequency is shown in blue and the normal distribution in red. The minimum, maximum, average and standard deviation (σ) for the data is shown as an inset.

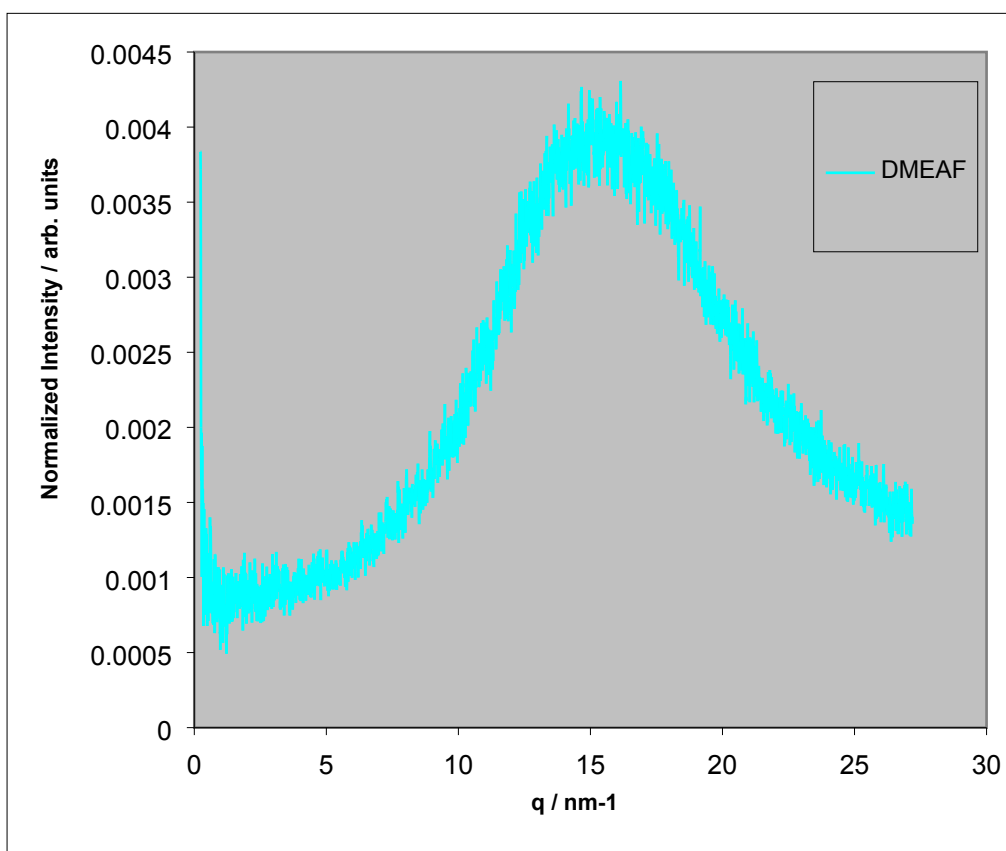


Figure 5. Small angle x-ray scattering data for DMEAF.