Evolution of the Nanostructure and Viscoelastic Properties of Nitrile Rubber upon Mechanical Rejuvenation and Physical Aging

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Supporting Information: Evolution of the Nanostructure and Viscoelastic Properties of Nitrile Rubber upon Mechanical Rejuvenation and Physical Aging

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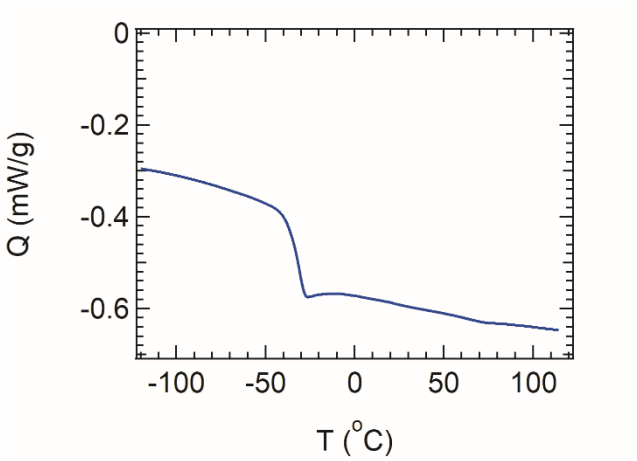

Figure S1. Thermogram of raw NBR. The glass transition temperature T_g is – 31 ^oC as determined from the midpoint method.

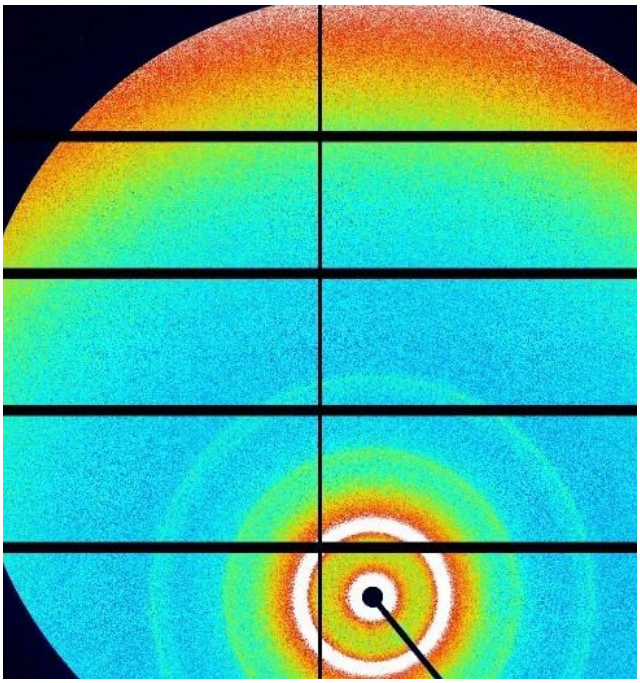

Figure S2. 2D SAXS of solvent cast NBR. Pattern is isotropic and azimuthally integrated to generate 1D scattering profiles

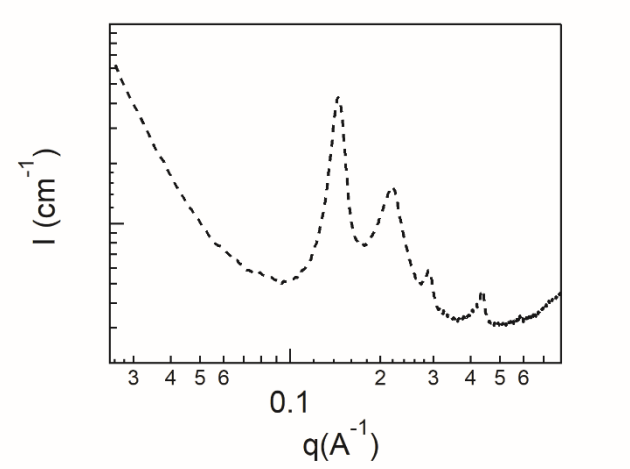

Figure S3 X-ray scattering profile of NBR casted from toluene. Profile is similar to that of NBR casted from cyclohexanone (solid black line in Figure 2), though the higher order peaks are not split.

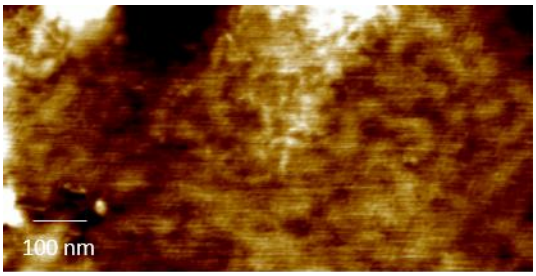

Figure S4. Height image of solvent cast NBR acquired in tapping mode. The vertical height scale ranges from -1 nm to 1 nm.

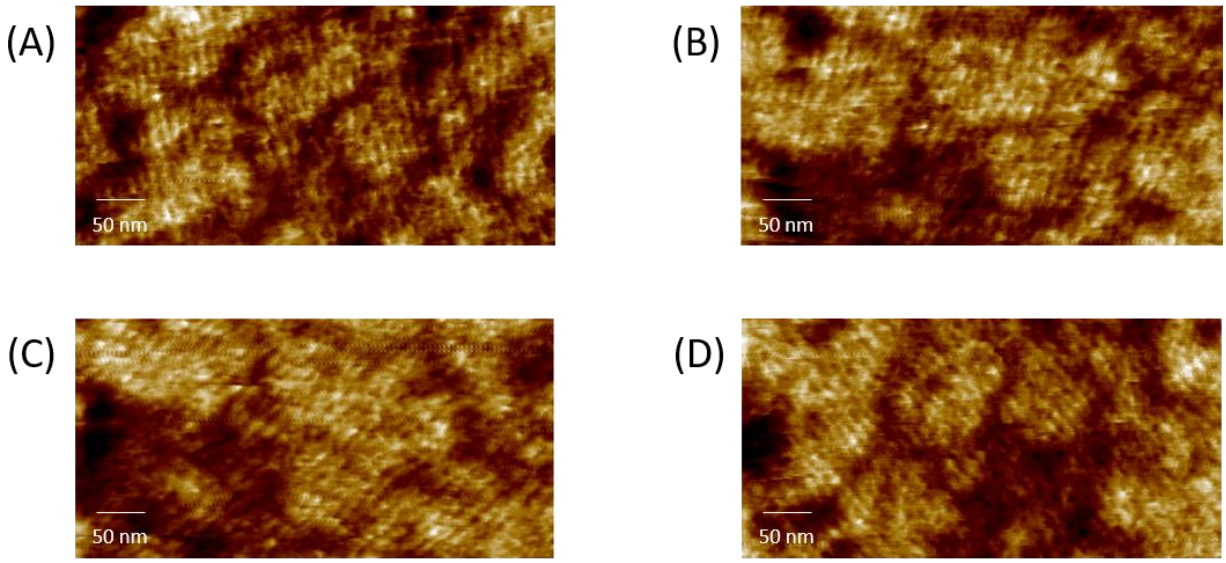

Figure S5. Phase images of raw NBR acquired in tapping mode. These are obtained from the same surface area but with angles of (A) 90° (B) 70° (C) 45° and (D) 110°. The vertical phase scale ranges from -8° to 8°. It is clear that the lamellar nanodomains are intrinsic to the material and not an artifact due to oscillations.