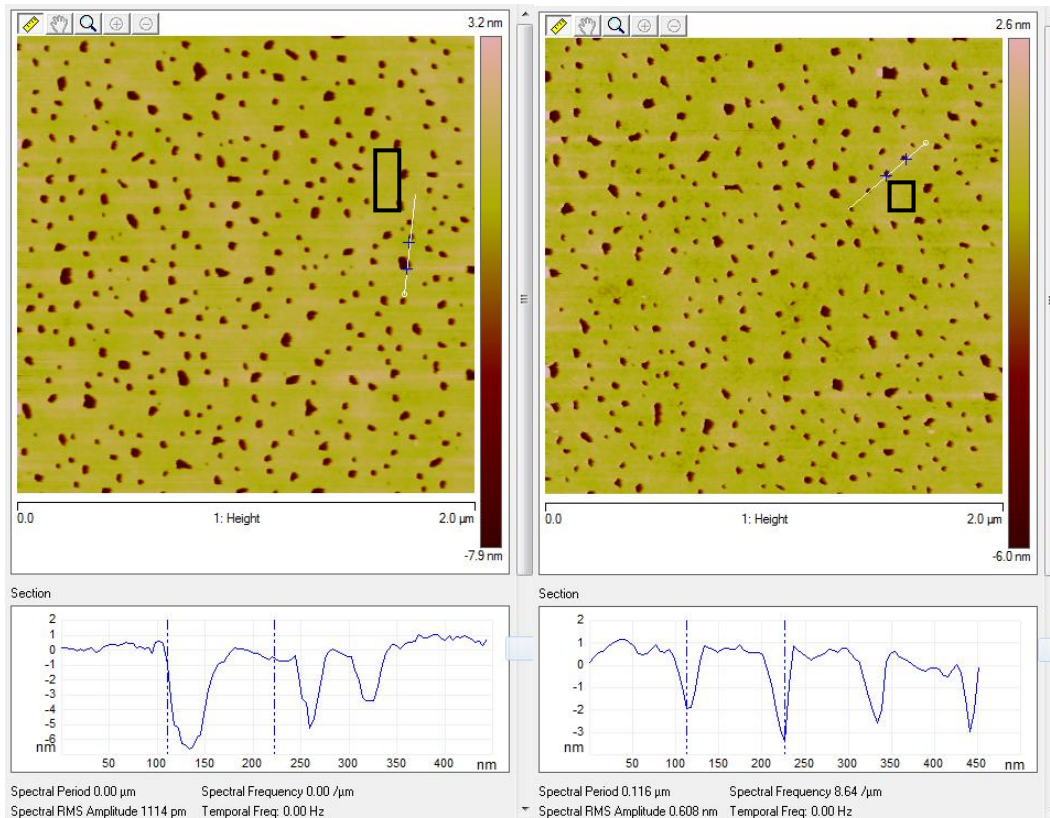


AFM Images on Annealed TEM 3 mm Grids, one 0.5x0.5 mm square window

Roughness, Peak Heights Data

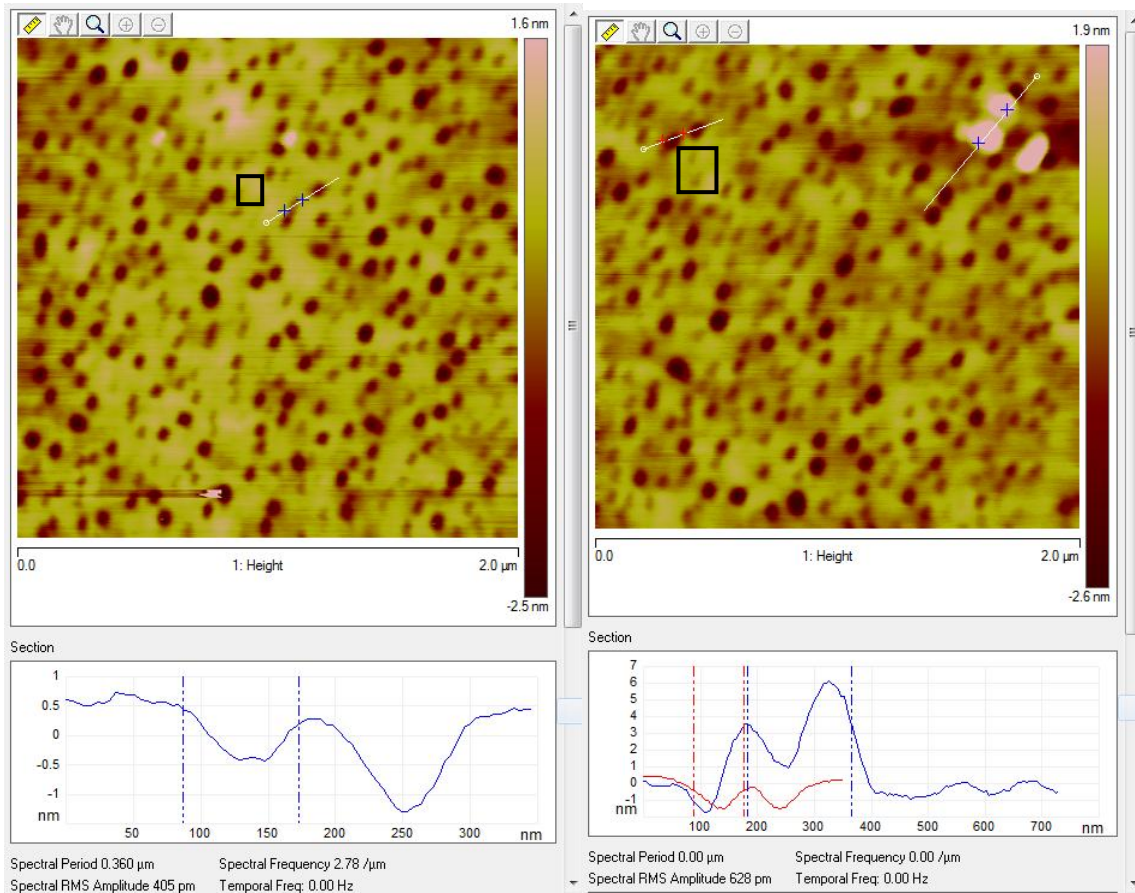
Notes: Images are flattened (some images were very tilted), and automatically plane fit before calculating the surface roughness (standard deviation of the heights within the drawn box). Open areas near the line scan were picked to measure the roughness. It would not be possible to export a combined linescan/roughness image, so small boxes were drawn in the same spot on the images by hand.

Uncoated:



	Filter (nm)	Bulk (nm)
Rq	.291	.201
Ra	.232	.157
Skew	1.660	1.930
Kurtosis	-.023	.643

Poly-L-Lysine (50ug/ml)

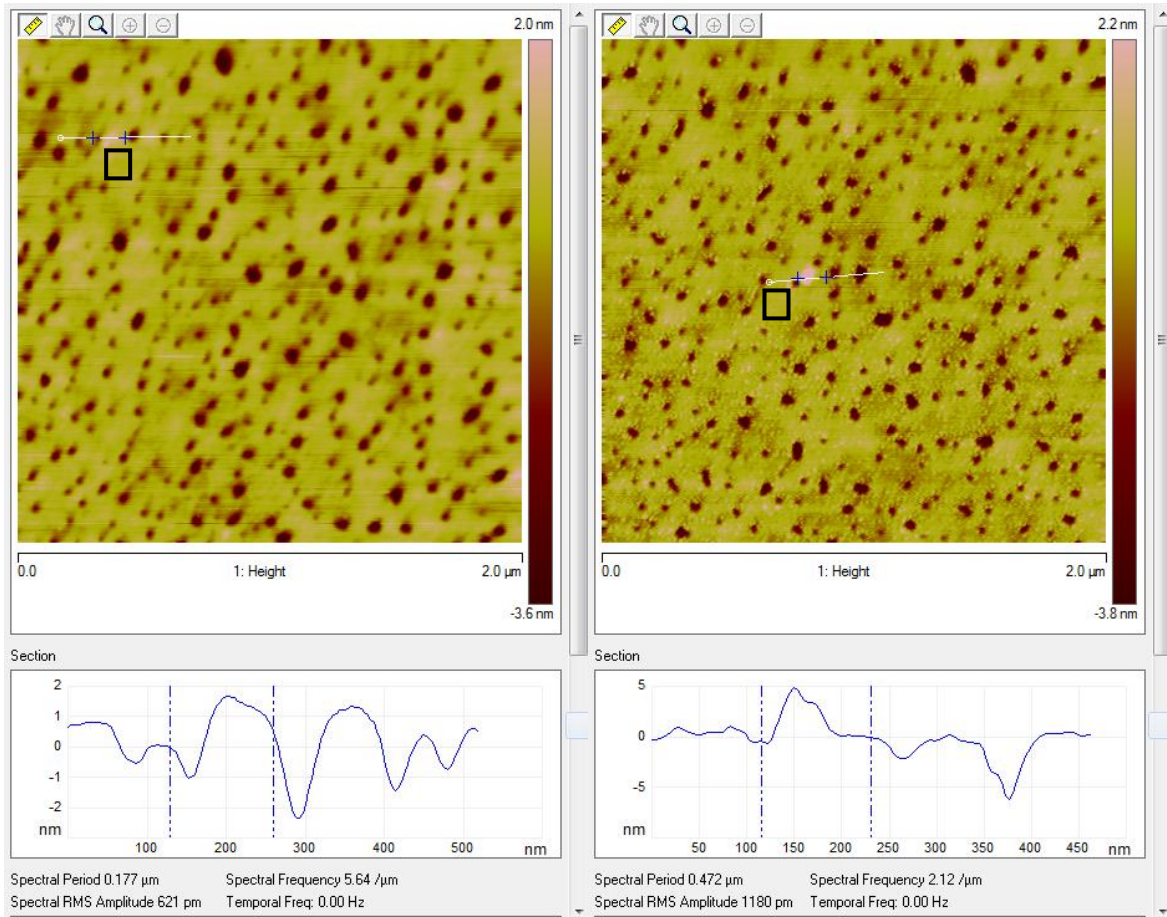


Left – Filter, Right – Bulk

	Filter (nm)	Bulk (nm)
Rq	.158	.190
Ra	.128	.148
Skew	-4.59	1.87
Kurtosis	3.00	3.30

Comments: The Poly-L-lysine treatment is reasonably flat, uniform, and at least as smooth as the plain membrane. The sharpness of the hole features appears to be lost though. Flattening the image may be responsible for some of this smoothing.

Collagen IV (10 ug/cm²)

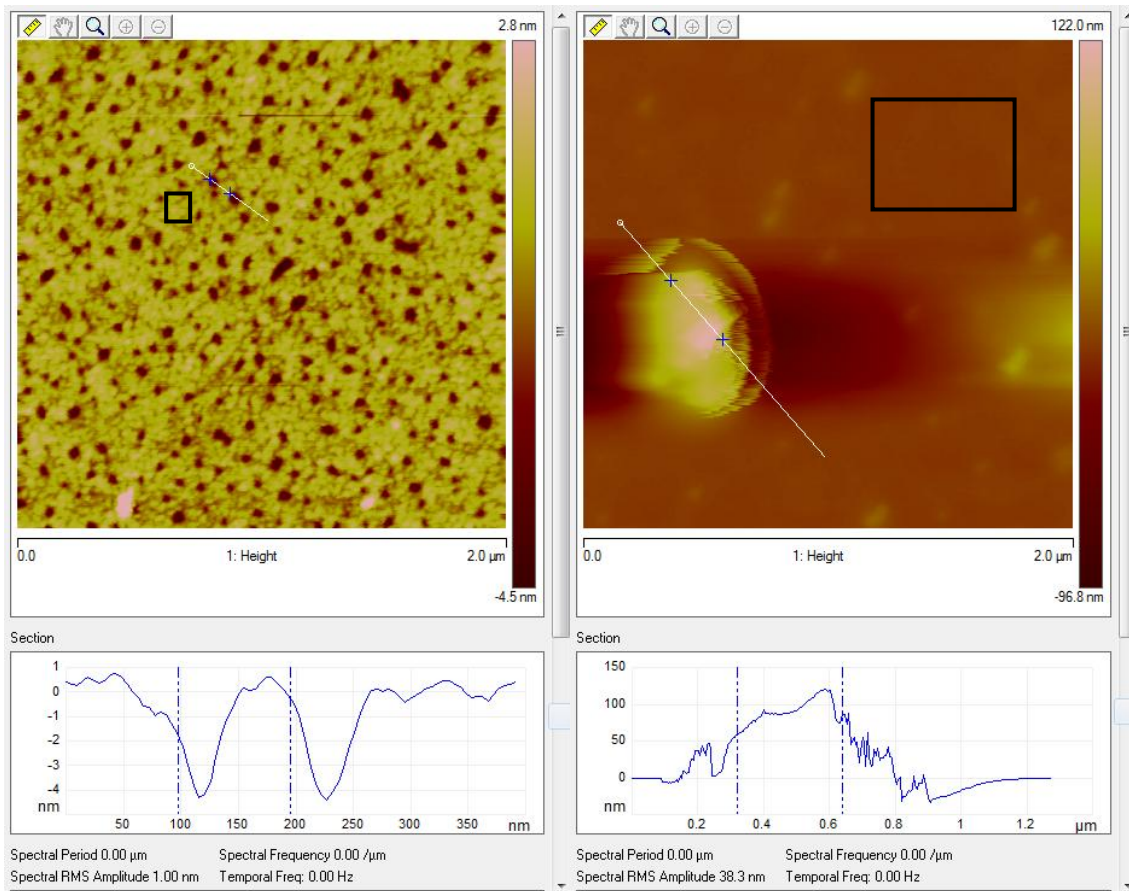


Left – Filter, Right – Bulk

	Filter (nm)	Bulk (nm)
Rq	.252	.175
Ra	.157	.133
Skew	-.318	.591
Kurtosis	4.16	4.87

Comments: The bulk scan of the Collagen IV treatment shows some interesting ring features along the top edge of the nanopores. I'm almost certain that this is an artefact of flattening the treatment, because this AFM recording was much more heavily tilted than the others. Otherwise, this treatment seems to smooth the nanopore structure, rounding out the pores.

Fibronectin (5 ug/cm²)

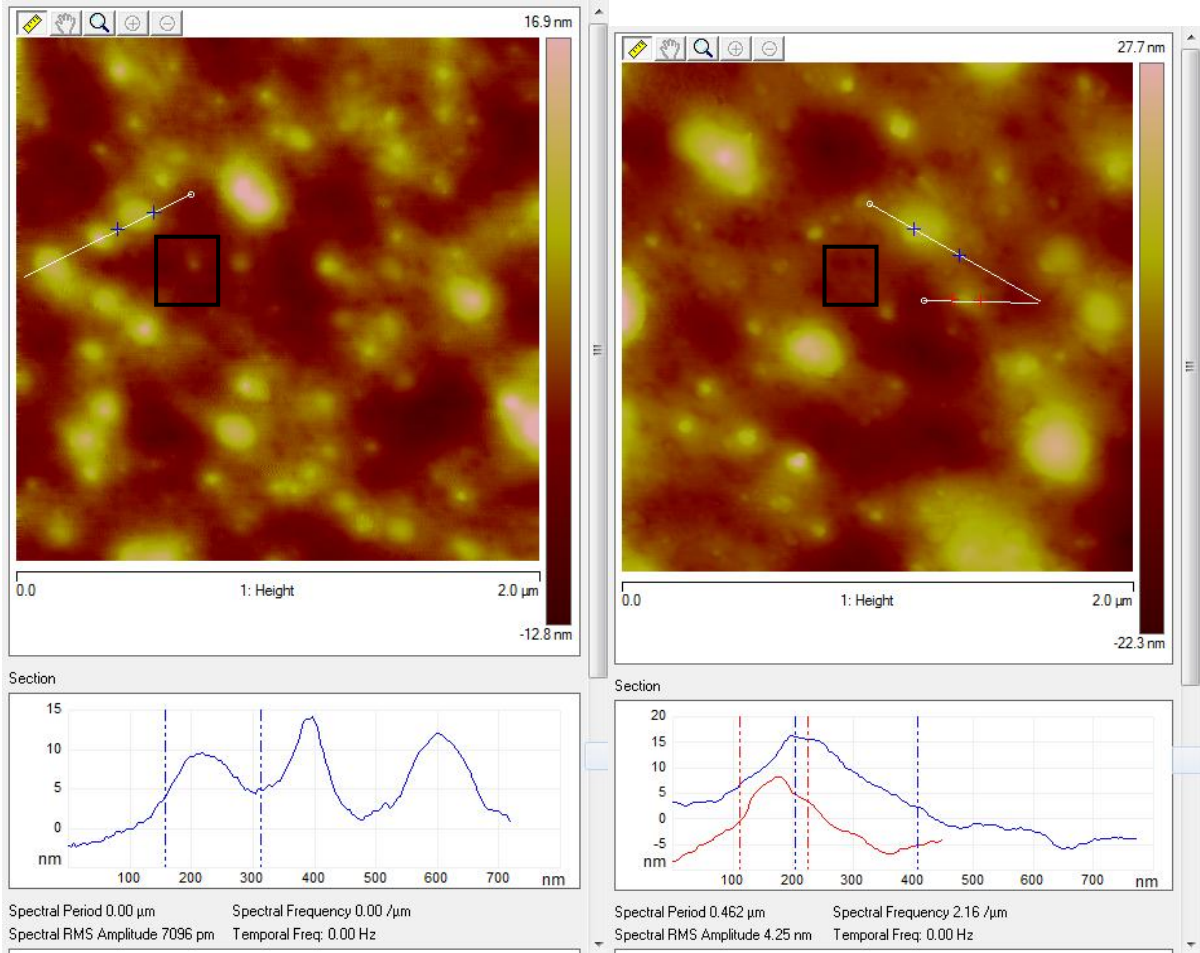


Left – Filter, Right – Bulk

	Filter (nm)	Bulk (nm)
Rq	.363	.575
Ra	.285	.449
Skew	.119	.300
Kurtosis	3.40	.504

Comments: There are a lot of nanofeatures on the filter, a granularity that is not seen on any of the other coating treatments. Could they be aggregates from PBS or is this a feature of the actual coating? The bulk measurement is heavily skewed by a large particle in the area of the scan.

CellTak (3.5 ug/cm²)



Left – Filter, Right – Bulk

	Filter (nm)	Bulk (nm)
Rq	1.17	.958
Ra	.881	.737
Skew	.643	-.171
Kurtosis	4.13	3.30

Comments: The Cell-tak has completely blocked all the nanopores.