

AFM Analysis Results: Comprehensive Surface Characterization

AFM Data Analysis

August 18, 2025

Contents

1 Results	2
1.1 AFM Surface Topography and Particle Size Distribution Analysis	2
1.2 Power Spectral Density Analysis	11

1 Results

1.1 AFM Surface Topography and Particle Size Distribution Analysis

The following figures show the surface topography paired with their corresponding particle size distribution histograms.

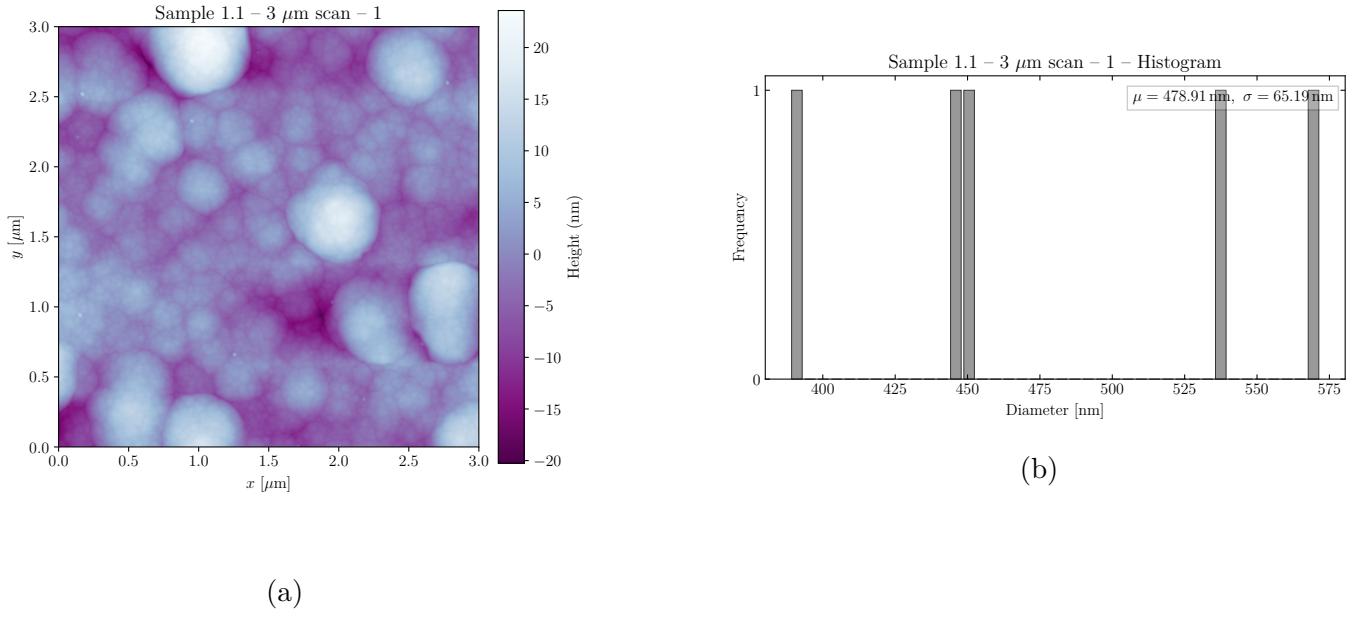


Figure 1: Sample 1.1 — 3 μm scan — 1

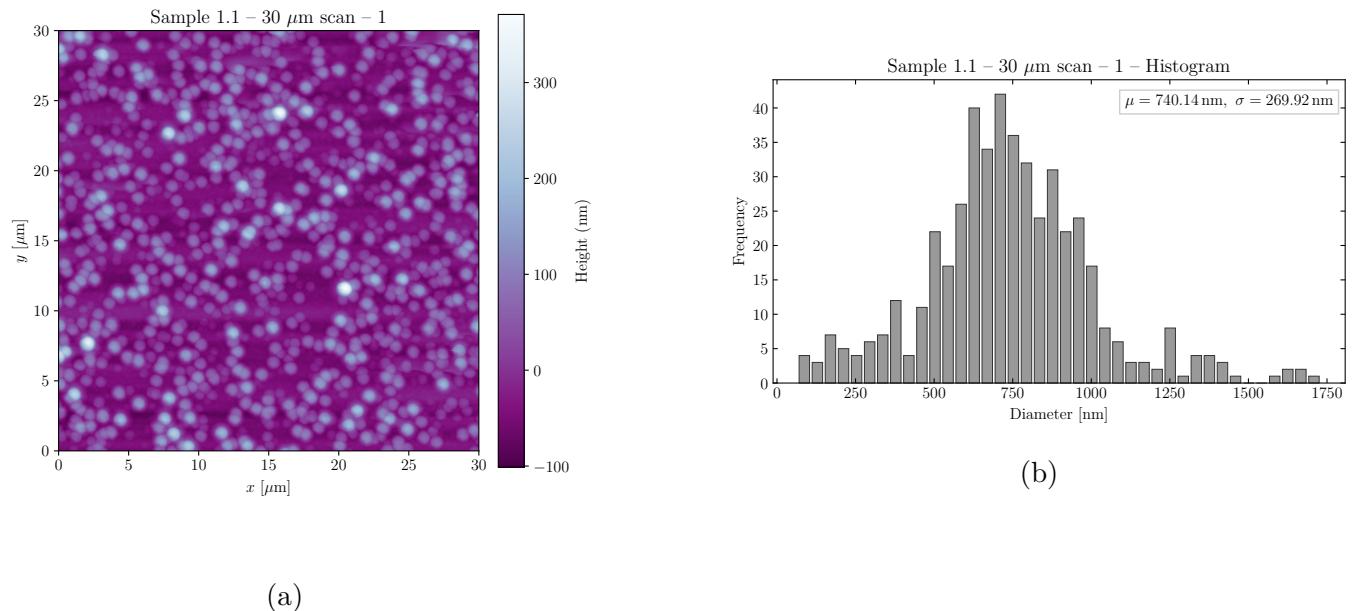
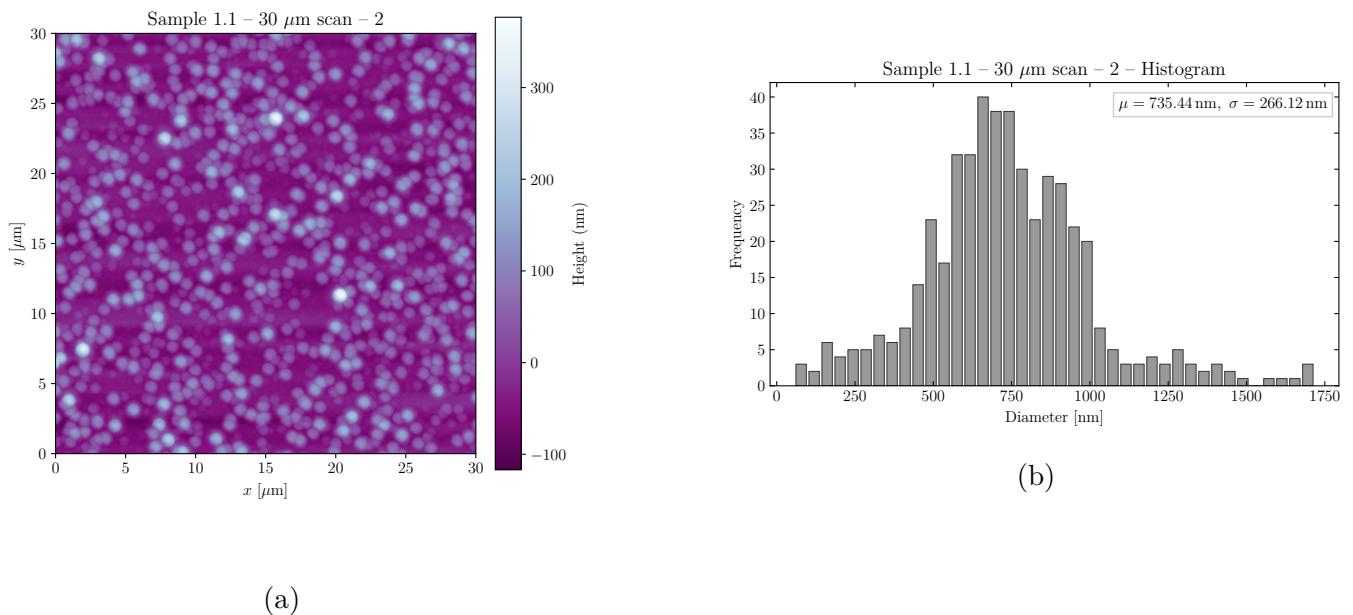
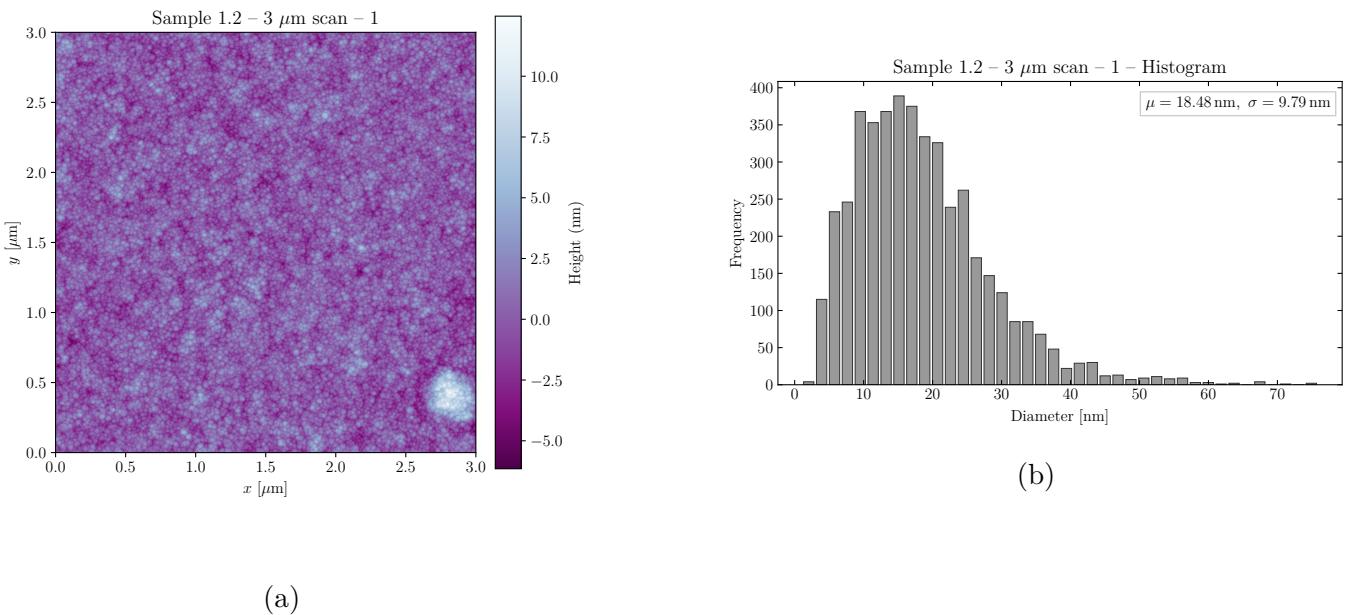
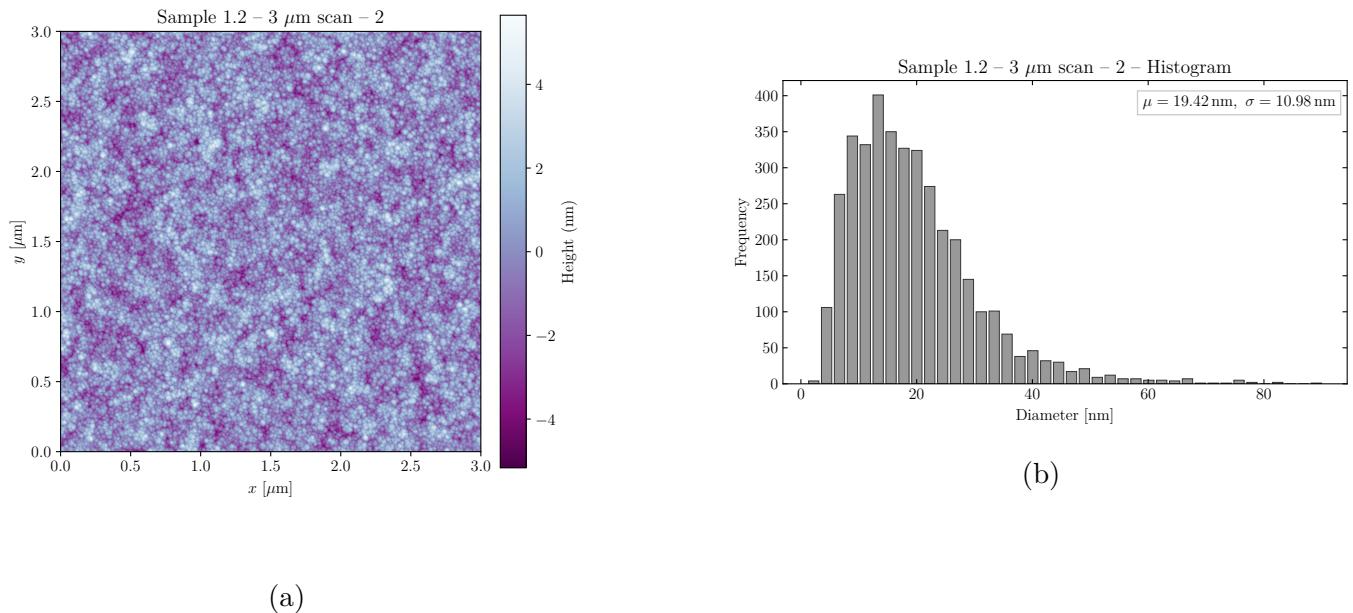
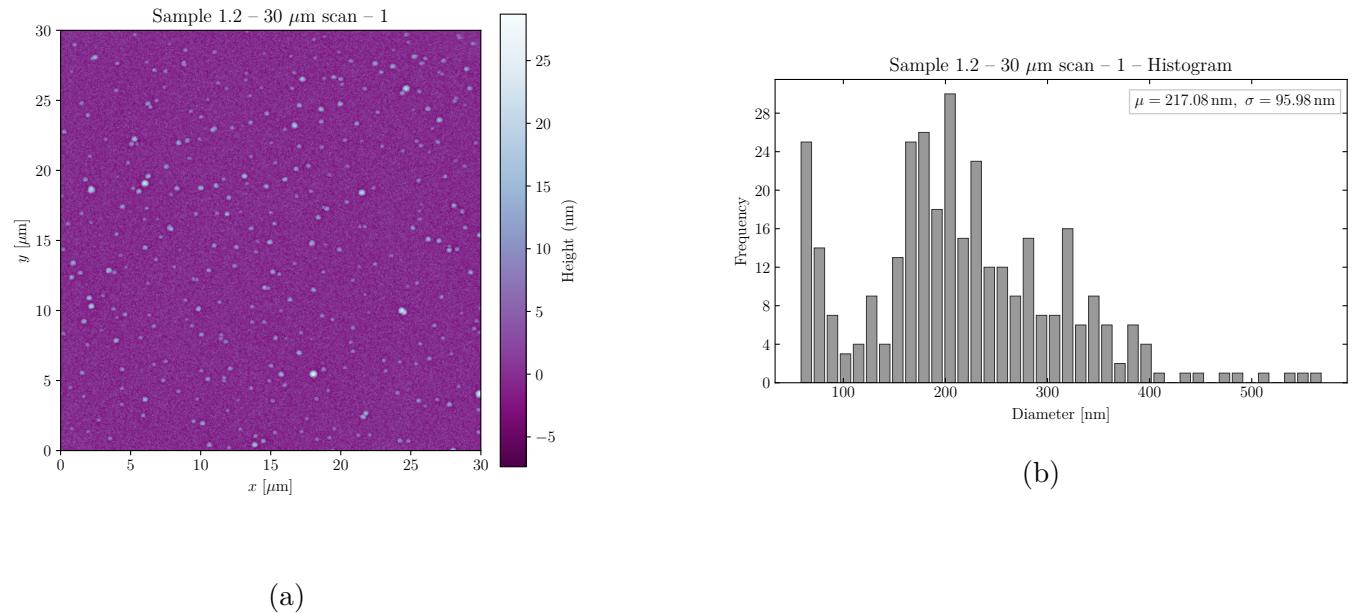
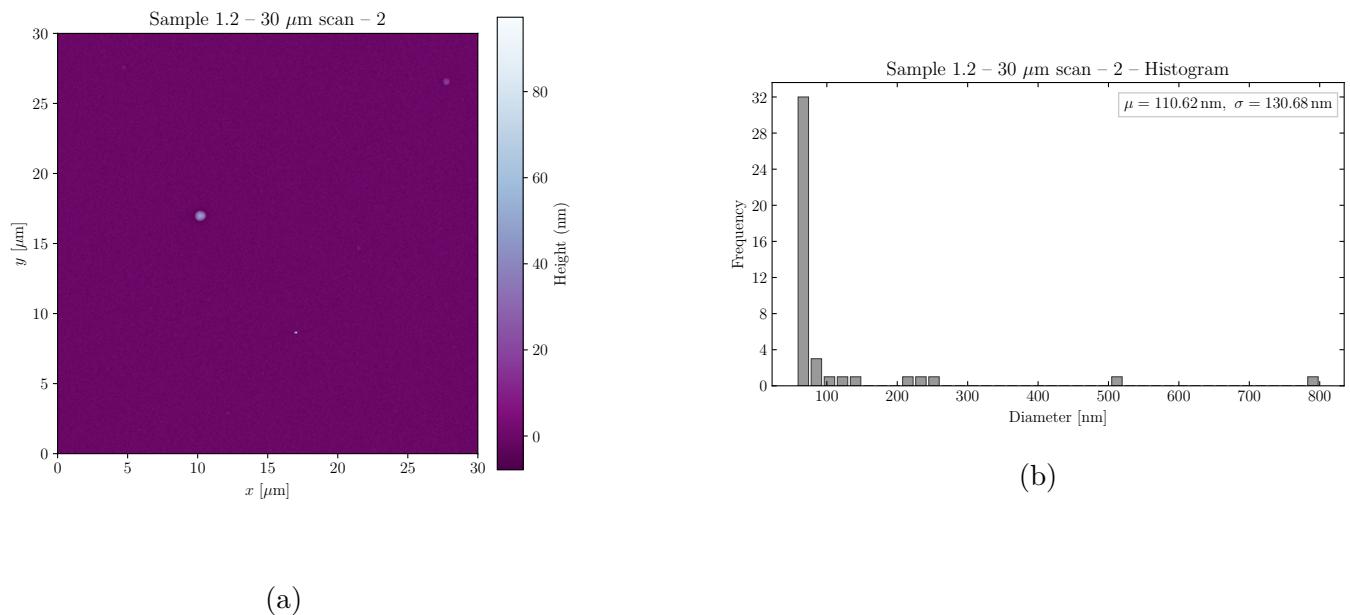
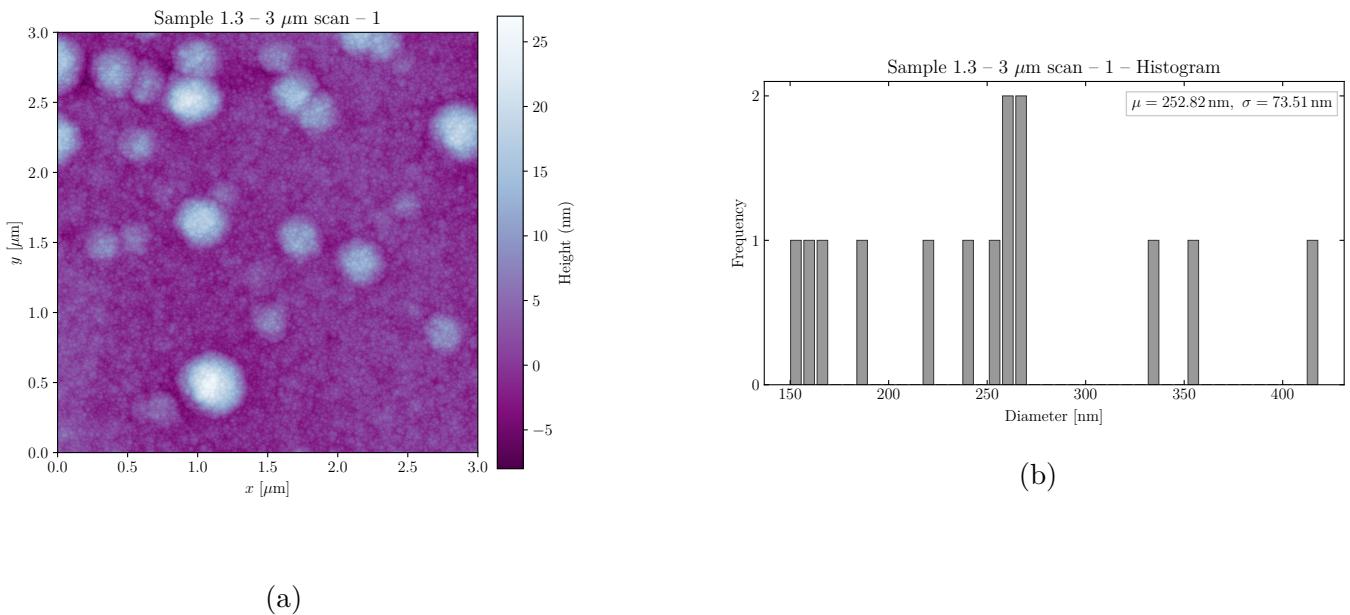
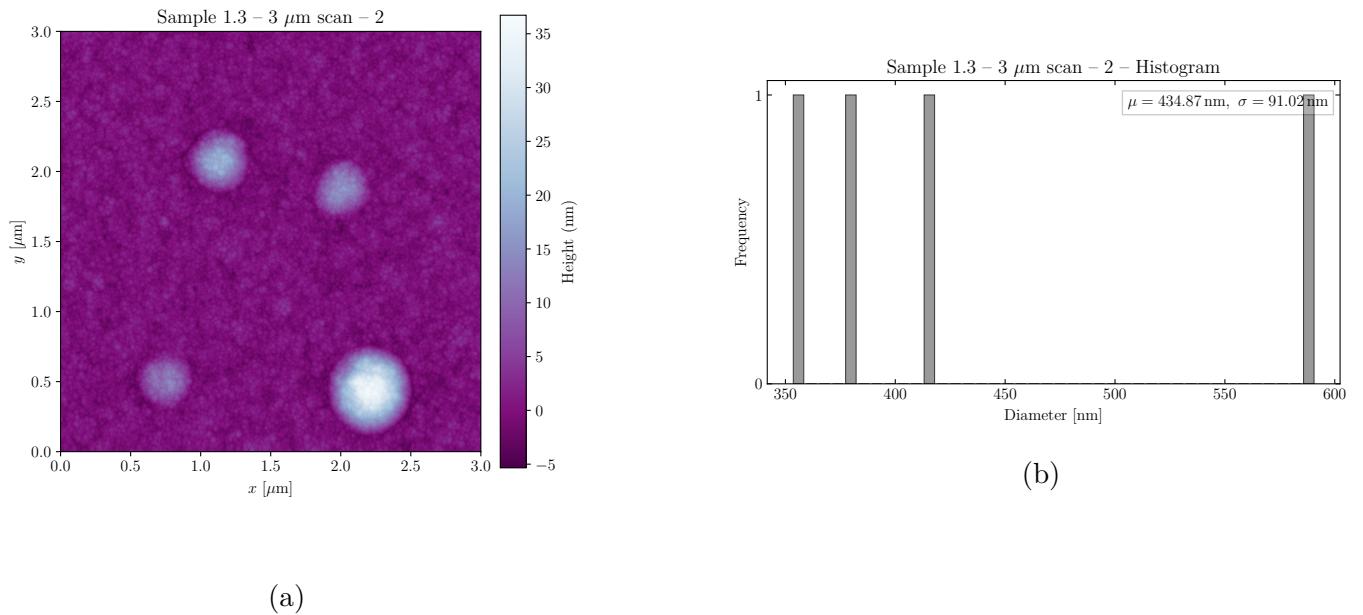
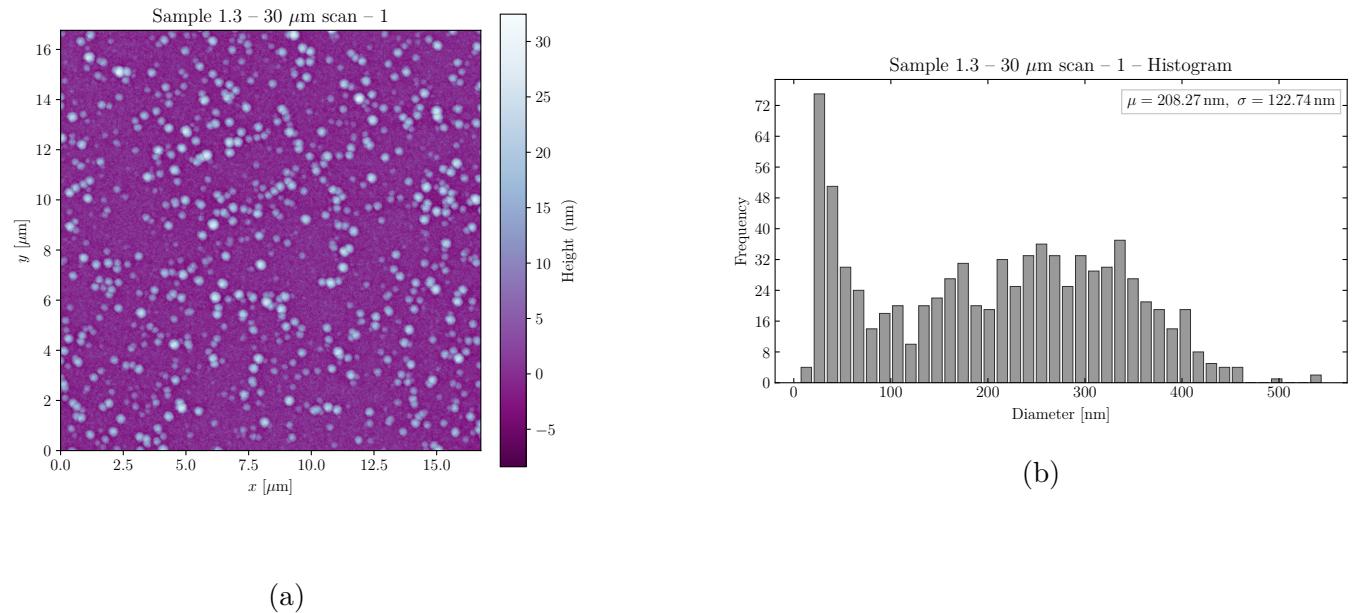


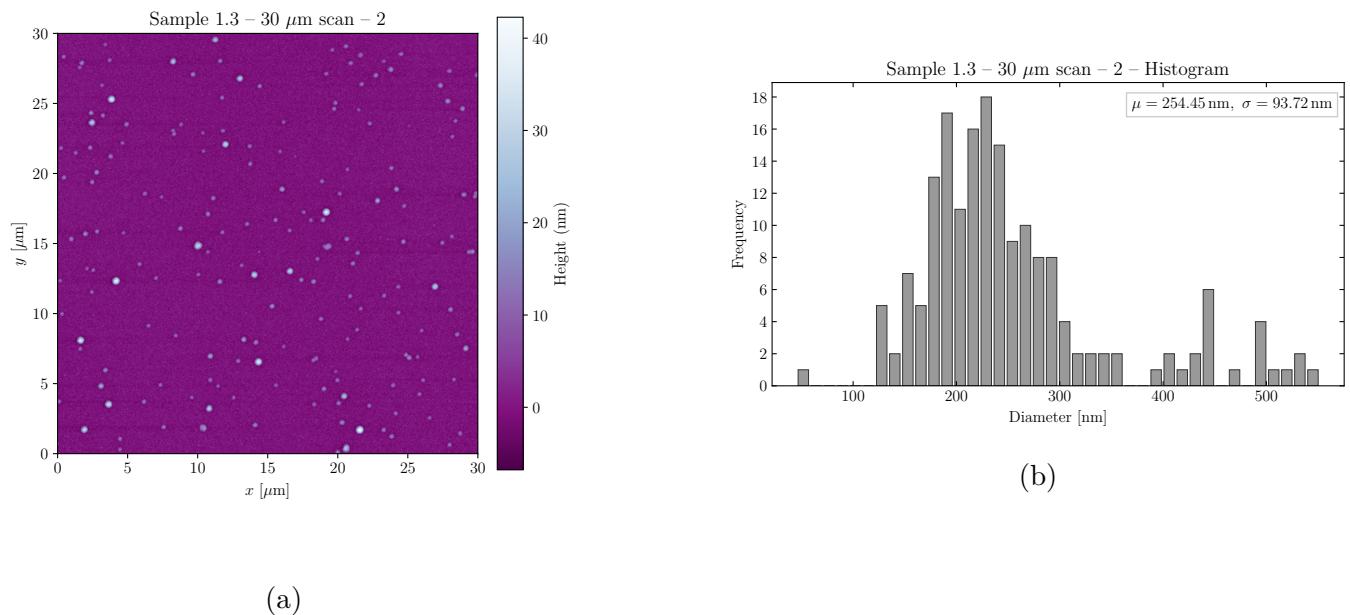
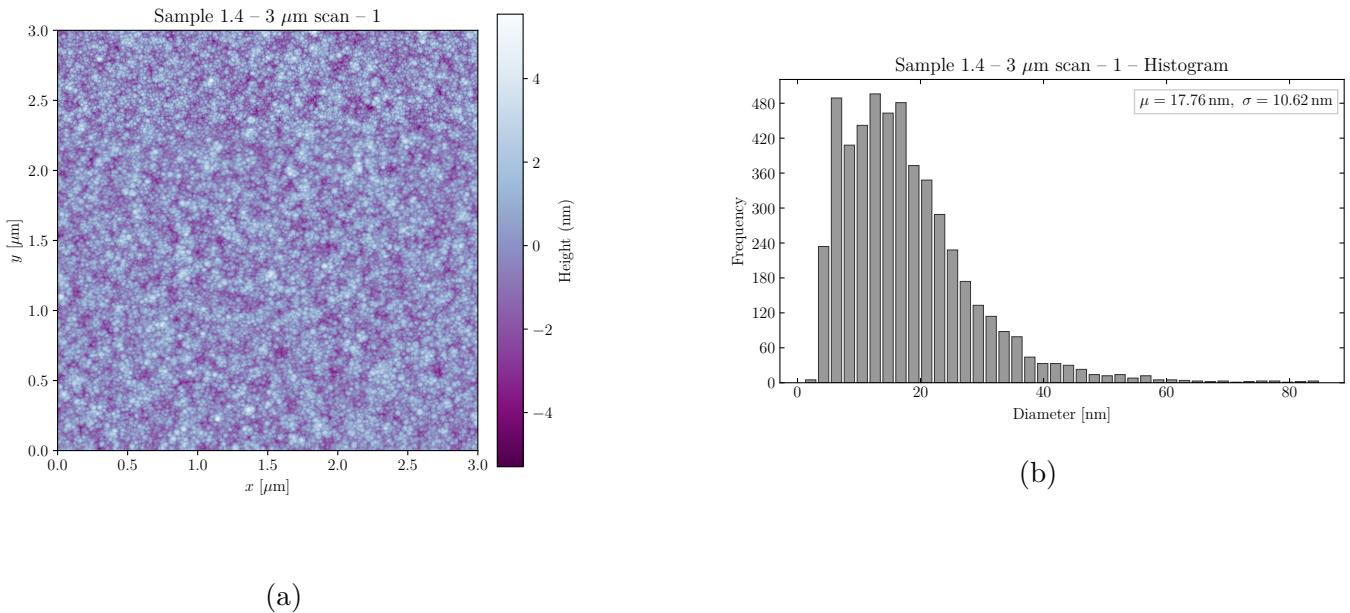
Figure 2: Sample 1.1 — 30 μm scan — 1

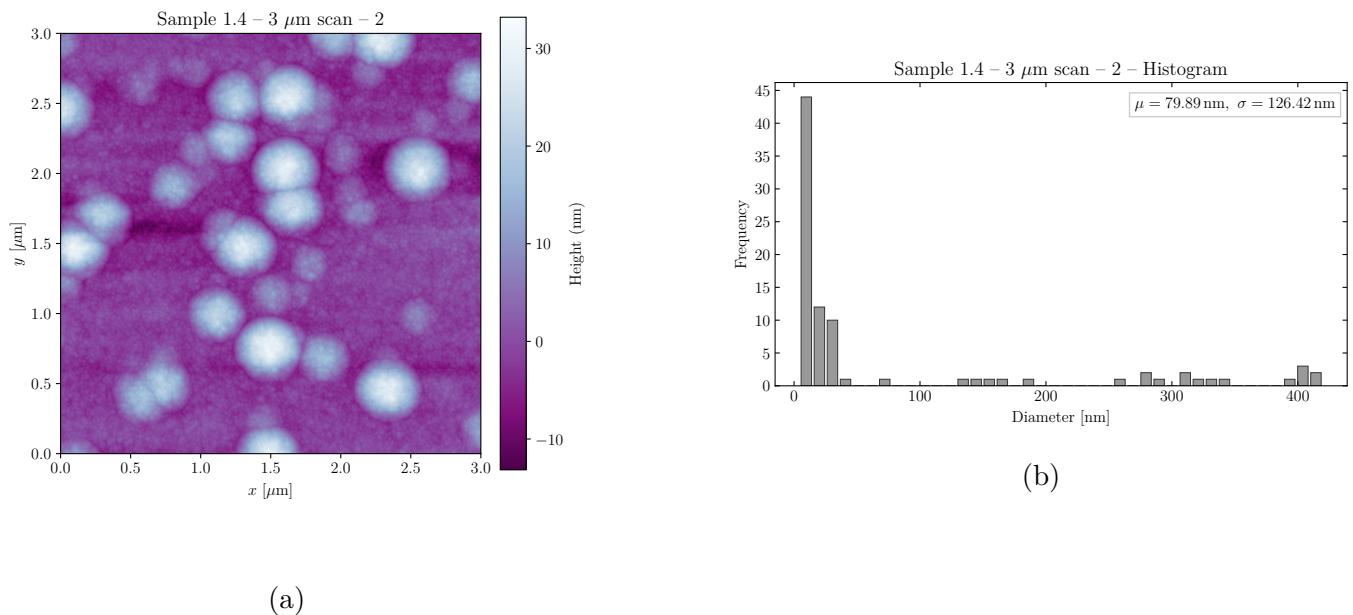
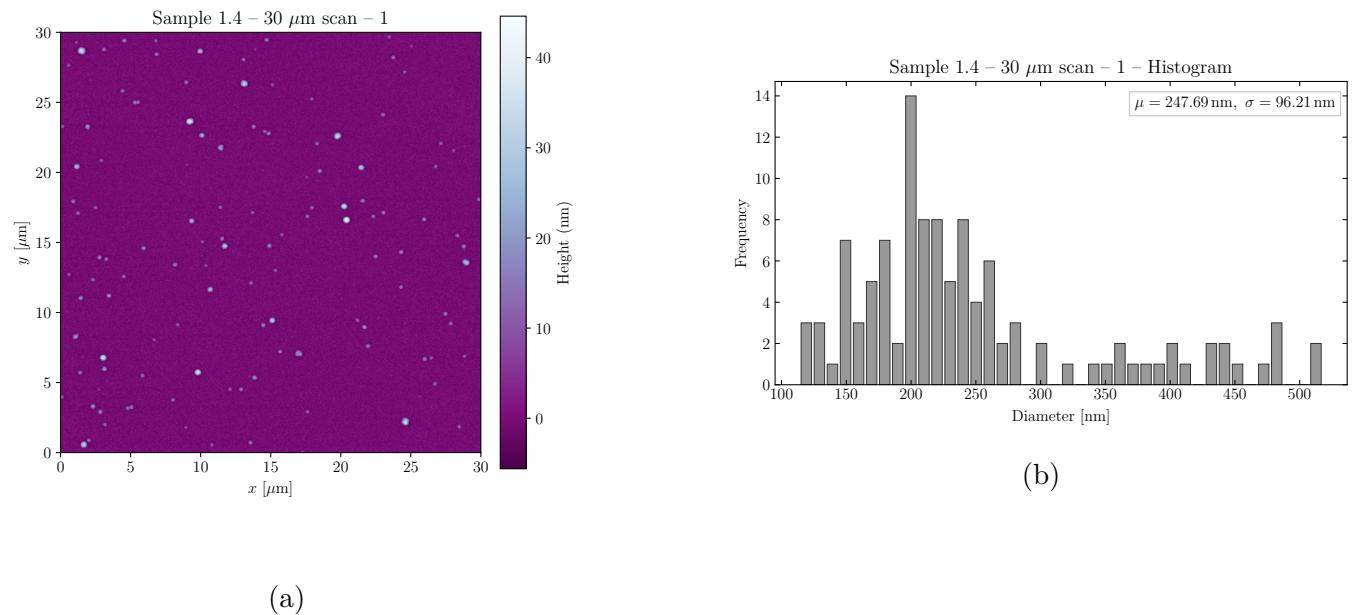
Figure 3: Sample 1.1 — 30 μm scan — 2Figure 4: Sample 1.2 — 3 μm scan — 1

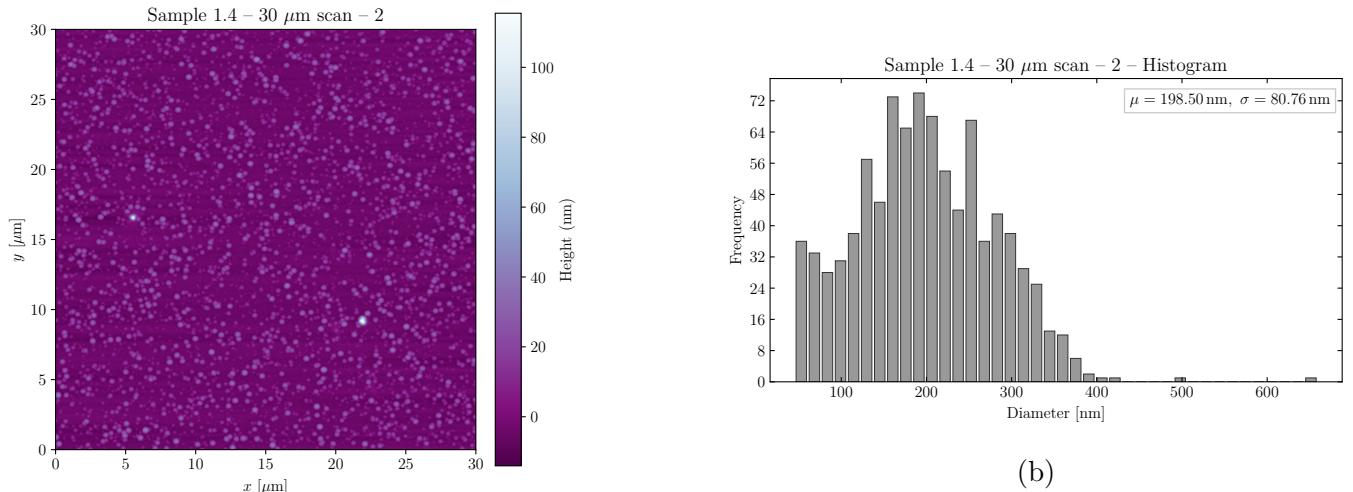
Figure 5: Sample 1.2 — 3 μm scan — 2Figure 6: Sample 1.2 — 30 μm scan — 1

Figure 7: Sample 1.2 — 30 μm scan — 2Figure 8: Sample 1.3 — 3 μm scan — 1

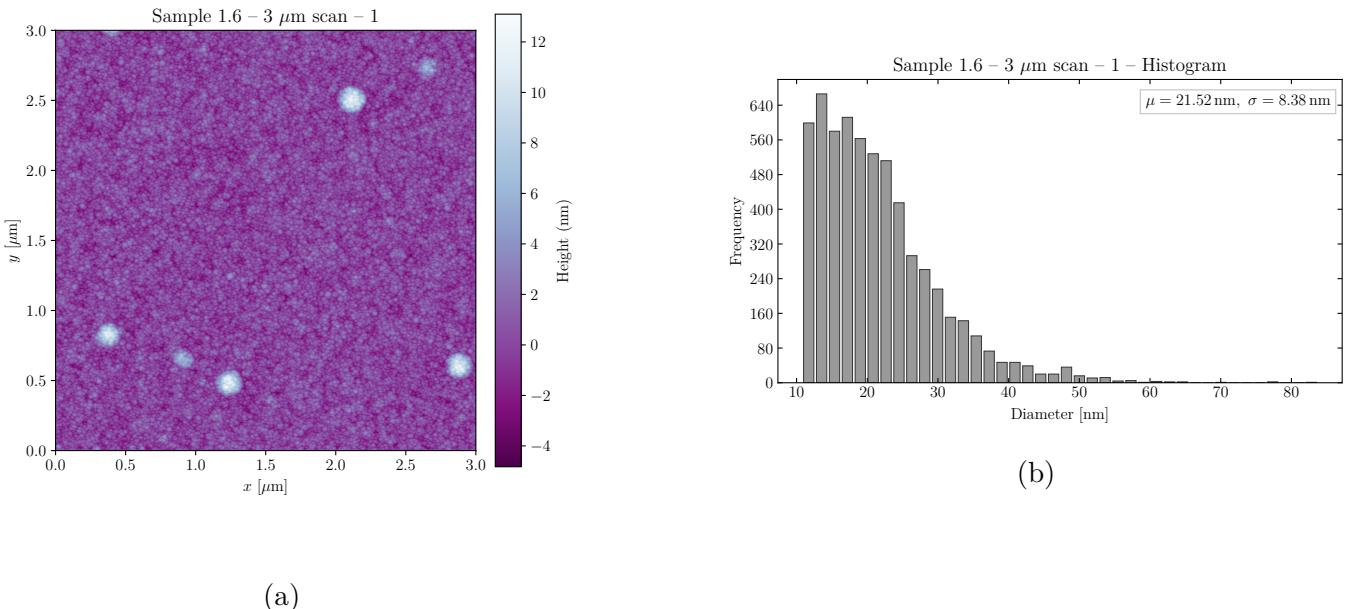
Figure 9: Sample 1.3 — 3 μm scan — 2Figure 10: Sample 1.3 — 30 μm scan — 1

Figure 11: Sample 1.3 — 30 μm scan — 2Figure 12: Sample 1.4 — 3 μm scan — 1

Figure 13: Sample 1.4 — 3 μm scan — 2Figure 14: Sample 1.4 — 30 μm scan — 1

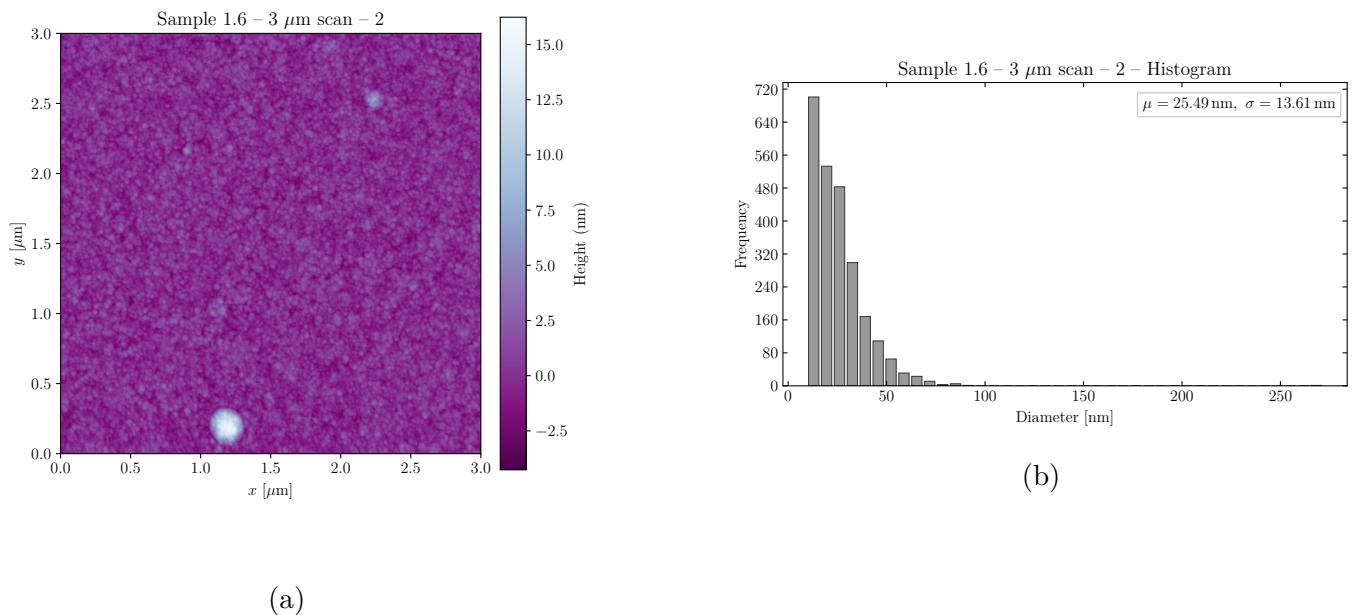
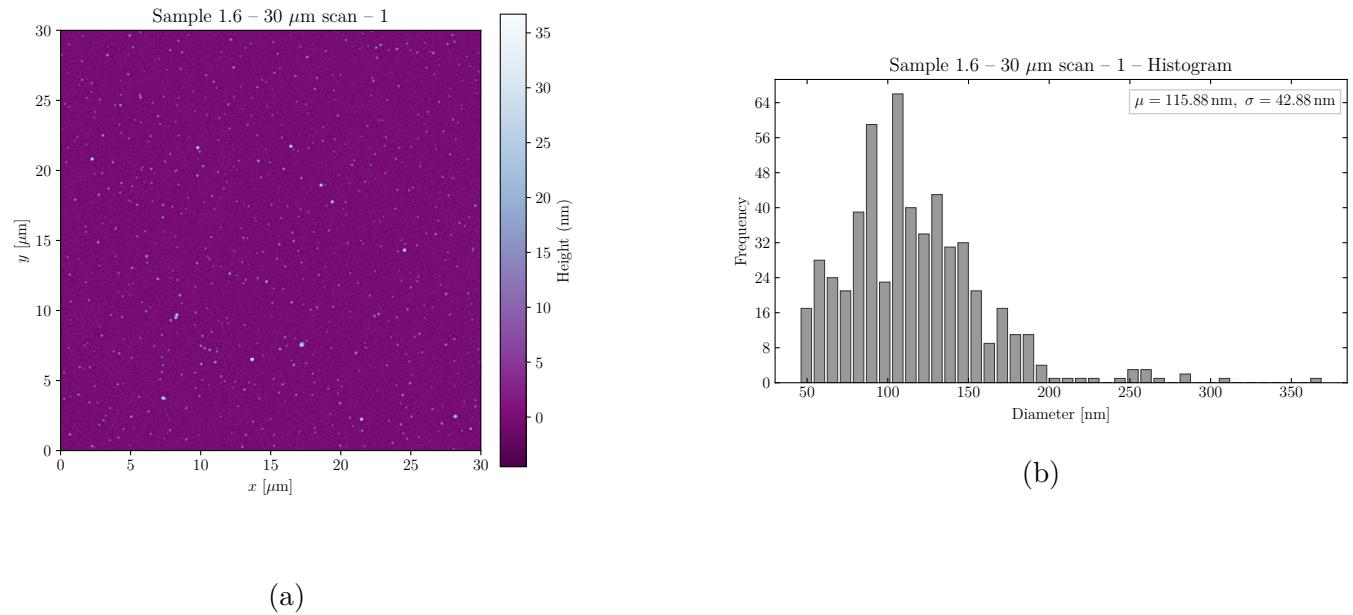


(a)

Figure 15: Sample 1.4 — 30 μm scan — 2

(a)

Figure 16: Sample 1.6 — 3 μm scan — 1

Figure 17: Sample 1.6 — 3 μm scan — 2Figure 18: Sample 1.6 — 30 μm scan — 1

1.2 Power Spectral Density Analysis

The PSD analysis provides insights into surface roughness characteristics across all samples:

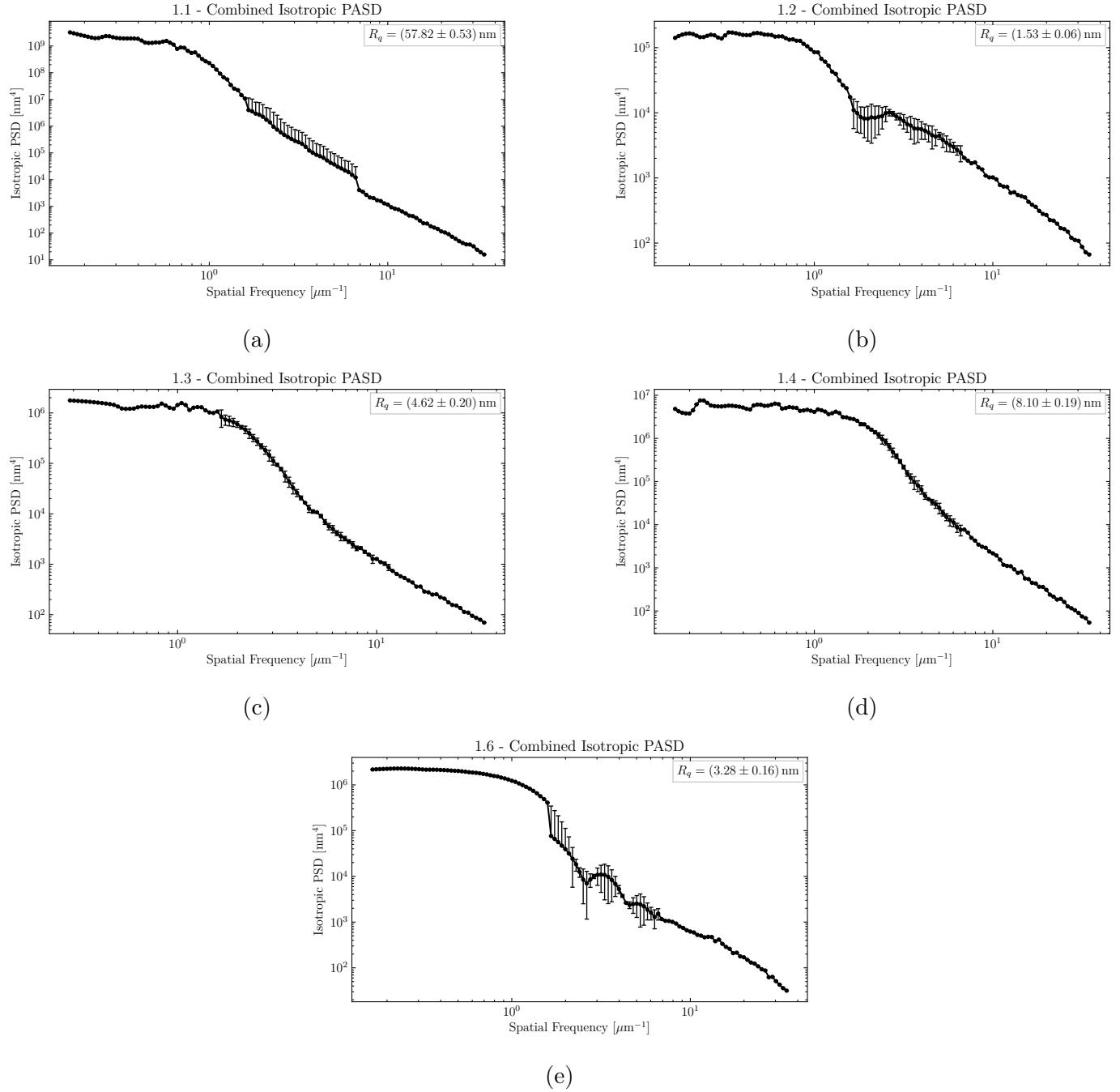


Figure 19: Combined Isotropic Power Spectral Density Analysis for All Samples