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Looking Down at Adsorption Dynamics: Filament Height Measurements with TIRFM DAVID WELCH, ZVONIMIR DOGIC, Brandeis University — Polymer adsorption is important in several contexts such as chromatography, colloid stabilization, and bio-fouling. Despite a cross-disciplinary interest in the subject, there are not many techniques to observe single-molecule absorption events in real time. We use TIRF microscopy to accomplish this using the biological polymer f-actin adsorbed to a microscope slide via the well-known depletion interaction. We find TIRFM is able to quantitatively measure filament height, and we compare our results to theoretical predictions and previous results obtained from other systems.

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