

Microtubules bending in hydrodynamic flow in the presence of kinesin. For each concentration of T93N, images are sorted according to the microtubule orientation; the marked microtubules in each row (*orange asterisks*) fall into an orientation range depicted by the protractor diagrams (*left*). Microtubules are straight and dynamically unstable at the beginning of the movie. Arrows (*top*) highlight the presence and direction of hydrodynamic flow, which causes microtubule bending. Microtubules depolymerise and quickly re-straighten in the absence of T93N. Low doses of T93N (≤ 30 nM) trap or even increase the curvature over time. Higher concentrations (≥ 50 nM) cause re-straightening.