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Three Dimensional Structure of Sheared Biopolymer Networks

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Abstract: To understand the underlying mechanism which leads to strain stiffening in biopolymer networks, we directly visualize *in-vitro* sheared networks using confocal microscopy. Using image processing we accurately locate fiber position and connectivity and thereby 3D structure. We find individual fiber characteristics such as orientation and distribution of fiber lengths as a function of shear for fibrin, actin bundled with filamin and collagen networks.



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