

Abstract Submitted
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Force generated by polymerization of actin filaments CORALINE BRANGBOUR, OLIVIA DU ROURE, EMMANUELE HELFER, MARC FERMIGIER, MARIE-FRANCE CARLIER, JEROME BIBETTE, JEAN BAUDRY, LABORATOIRE DES COLLOIDES ET MATERIAUX DIVISES, ESPCI FRANCE TEAM, LABORATOIRE PHYSIQUE ET MECANIQUE DES MILIEUX HETEROGENES, ESPCI FRANCE COLLABORATION, LABORATOIRE D'ENZYMOLOGIE ET BIOCHIMIE STRUCTURALES, FRANCE COLLABORATION — Actin polymerization drives protrusions at the cell surface and leads to cell motility. Using magnetic colloids, we measure how the chemical reaction of polymerization generates mechanical forces. We detail in particular the force-velocity relation of growing actin filaments; and discuss how the stalling force is affected by the mean number of filaments between two beads.

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