

Biophysics

Sezgin E, Kaiser HJ, Baumgart T, Schwille P, Simons K, Levental I.
Elucidating membrane structure and protein behavior using giant plasma
membrane vesicles
Nat. Protoc., 7(6) 1042-1051 (2012)

Behrndt M, Salbreux G, Campinho P, Hauschild R, Oswald F, Roensch J, Grill
SW, Heisenberg CP.
Forces driving epithelial spreading in zebrafish gastrulation.
Science 2012 Oct 12;338(6104):257-60

Stewart MP, Helenius JH, Toyoda Y, Ramanathan S, Müller DJ, Hyman AA.
Hydrostatic pressure and the actomyosin cortex drive mitotic cell rounding.
Nature, 469(7329) 226-230 (2011)

Mayer M, Depken M, Bois J, Jülicher F, Grill SW.
Anisotropies in cortical tension reveal the physical basis of
polarizing cortical flows.
Nature, 467(7315) 617-621 (2010)

Brangwynne C, Eckmann CR, Courson DS, Rybarska A, Hoegge C, Gharakhani J,
Jülicher F, Hyman AA.
Germline P granules are liquid droplets that localize by controlled
dissolution/ condensation.
Science, 324(5935) 1729-1732 (2009)

2012

Sezgin E, Levental I, Grzybek M, Schwarzmann G, Mueller V, Honigmann A,
Belov VN, Eggeling C, Coskun U, Simons K, Schwille P.
Partitioning, diffusion, and ligand binding of raft lipid analogs in model
and cellular plasma membranes.
Biochim. Biophys. Acta, 1818(7) 1777-1784 (2012)

Stewart MP, Toyoda Y, Hyman AA, Müller DJ.
Tracking mechanics and volume of globular cells with atomic force
microscopy using a constant-height clamp.
Nat. Protoc., 7(1) 143-154 (2012)

2011

Stewart MP, Helenius JH, Toyoda Y, Ramanathan S, Müller DJ, Hyman AA.
Hydrostatic pressure and the actomyosin cortex drive mitotic cell rounding.
Nature, 469(7329) 226-230 (2011)

2010

Goehring NW, Chowdhury D, Hyman AA, Grill SW.
FRAP analysis of membrane-associated proteins: lateral diffusion

and membrane-cytoplasmic exchange
Biophys. J., 99(8) 2443-2452 (2010)

Klopper A, Krens G, Grill SW, Heisenberg CP.
Finite-size corrections to scaling behavior in sorted cell aggregates.
Eur. Phys. J. E. Soft matter, 33(2) 99-103 (2010)

Vogel S, Pavin N, Maghelli N, Jülicher F, Tolic-Norrelykke IM.
Microtubules and motor proteins: Mechanically regulated self-organization
in vivo
Eur. Phys. J. Spec. Top., 178(1) 57-69 (2010)

2009

Schroth-Diez B, Gerwig S, Ecke M, Hegerl R, Diez S, Gerisch G,
Propagating waves separate two states of actin organization in living cells
HFSP J, 3(6) 412-427 (2009)

Baumgärtner S, Tolic-Norrelykke IM.
Growth pattern of single fission yeast cells is bilinear and depends on
temperature and DNA synthesis.
Biophys. J., 96(10) 4336-4347 (2009)

2008

Lingwood D, Ries J, Schwille P, Simons K.
Plasma membranes are poised for activation of raft phase coalescence at
physiological temperature.
Proc. Natl. Acad. Sci. U.S.A., 105(29) 10005-10010 (2008)