

Poster list of the Biomembrane Days in Potsdam

Membrane bending and shapes

1. *Anharmonic membrane bending energies at extreme curvatures from MD simulations*
G. Bubnis, H. J. Risselada, H. Grubmüller
2. *Rigidity of fluid charged membranes - a coarse-grained molecular simulations study.*
Y. Y. Avital, O. Farago
3. *Shape of soft objects and application to gel-phase vesicles*
C. Quilliet
4. *Confined bilayers passively regulate shape and stress*
M. Arroyo, M. Staykova, M. Rahimi, H. A. Stone
5. *Morphogenesis of Cristae-like membrane invaginations*
O. Kahraman, N. Stoop, M. M. Müller
6. *Generation of membrane curvature by COPII on artificial liposomes*
D. Glatte, S. Daum, J. Auerswald, A. Meister, T. Wang, K. Bacia
7. *The role of DOPE and ENTH domain of epsin in the regulation of elastic parameters of the membrane*
P. V. Bashkirov, K. V. Chekashkina, A. V. Shnyrova, E. S. Paryeva, V. A. Frolov
8. *Temperature-dependent spontaneous curvature estimation*
B. Kollmitzer, P. Heftberger, M. Rappolt, G. Pabst
9. *Shape transition of liposomes induced by actin bundles*
F.-C. Tsai, B. Stuhmann, G. H. Koenderink
10. *Tether formation via force spectroscopy on planar and lipid bilayers*
B. Goldenbogen, M. Gensler, J. P. Rabe, A. Herrmann
11. *Unduloid description of membrane tether coalescence*
J. Derganc, B. Božič, S. Svetina, B. Žekš
12. *Self-assembled microtubes from DOPC and cholesteryl-aminouridine*
L. Losensky, J. Appelfeller, D. Huster, P. Pescador, A. Petran, J. Liebscher, A. Arbuzova
13. *Calculating the shape energy from microscopic images exemplified for shmooing yeast*
W. Giese, M. Reis, B. Goldenbogen, E. Klipp

Domains in membranes

14. *Membrane remodeling and domains*
J. Zimmerberg, V. Frolov, S. Hess, P. Blank, V. Lizunov
15. *Translational and rotational diffusion of micrometer-sized solid domains in lipid membranes*
E. P. Petrov, R. Petrosyan, P. Schwille
16. *Large influence of cholesterol on solute partitioning into lipid membranes*
C. L. Wennberg, D. van der Spoel, and J. S. Hub
17. *Temperature behavior of physical properties of coexisting lipid domains*
P. Heftberger, B. Kollmitzer, G. Pabst
18. *Diffusion of raft-like domains in a lipid bilayer membrane*
Laxminarsimharao V, S. Lal Das
19. *Raman microscopy of ternary phase domains in giant unilamellar vesicle membranes*
G. Beltramo, A. Csiszár, M. Giesen

20. *Energy of decoupling of bilayer raft calculated from membrane elastic deformations*
S. A. Akimov, G. V. Stepanov, T. R. Galimzyanov, R. J. Molotkovsky, F. S. Cohen
21. *Controlling lateral partitioning of lipophilic nucleic acids*
M. Schade, A. Knoll, A. Vogel, O. Seitz, J. Liebscher, D. Huster, A. Herrmann, Anna Arbuzova
22. *Multivalent chelator lipids for mimicking lipid raft-dependent receptor assembly*
O. Beutel, D. Paterok, F. Roder, O. Birkholz, J. Nikolaus, A. Herrmann, J. Piehler

Physics of membranes

23. *Molecular dynamic simulations of collective membrane phenomena*
H.J.Risselada, G. Bubnis, H. Grubmüller, M. Müller
24. *Hydration forces between lipid membranes*
Y. Smirnova, V. Knecht, M. Müller
25. *Membrane adhesion via lipid-anchored DNA oligonucleotides*
R. Gurov, R. Lipowsky, R. Dimova
26. *Propagation phenomena in lipid membranes*
L. D. Mosgaard, A. D. Jackson and T. Heimburg
27. *Effects on membrane phase transition studied by molecular dynamics simulation*
L. Sun
28. *Simulation of phase transitions in lipid membranes*
S. Wheeler, M. Orsi, J. Essex
29. *Shear flow transmission through lipid membranes*
A. Honerkamp-Smith, F. G. Woodhouse, V. Kantsler, R. E. Goldstein
30. *Structure formation of biomembranes under shear flow*
H. Shiba, N. Hiroshi, G. Gompper
31. *Studying lipid diffusion in model membranes by interferometric scattering (iSCAT) microscopy*
C.-L. Hsieh, S. Spindler, V. Sandoghdar
32. *Lipid dynamics of the thylakoid membrane*
F. J. van Eerden, D. de Jong, C. Lopez, A. de Vries, X. Periole, S. J. Marrink
33. *Shape dynamics, lipid hydrodynamics and the complex viscoelasticity of bilayer membranes*
M. Rahimi, M. Arroyo
34. *A flow-coupled local elasticity model for lipid bilayers*
S. Aland, A. Voigt
35. *Reparameterization of the OPLS-AA force field for hydrocarbons and lipids*
K. Pluhackova, R. Böckmann
36. *Modelling DNA condensation on free-standing cationic lipid membranes*
A. G. Cherstvy, E. P. Petrov

Membrane pores and permeation

37. *Fluorescence-sensing of pico-litre cavities to monitor proton transport across pore spanning membranes*
D. Frese, M. Gleisner, C. Steinem
38. *Electroporation of giant unilamellar vesicles: Pore resealing vs. vesicle bursting in anionic membranes*
R. B. Lira, R. J. Melo, R. Dimova, K. A. Riske

39. *Polymer-induced permeability of lipid bilayer membranes*
M. Werner, J.-U. Sommer
40. *Ab initio molecular dynamics simulation of proton transport in a biological ion channel*
J. Dreyer, C. Zhang, E. Ippoliti, P. Carloni
41. *Simulation of nanotube penetration through a phospholipid bilayer*
S. Pogodin, V. Baulin

Membranes in contact with nanoparticles

42. *Receptor-mediated endocytosis of nanoparticles of various shapes*
R. Vacha, Francisco J. Martinez-Veracoechea, and D. Frenkel
43. *Wrapping of ellipsoidal particles by membranes*
S. Dasgupta, T. Auth, G. Gompper
44. *Tubulation and aggregation of spherical nanoparticles adsorbed on vesicles*
A. H. Bahrami, R. Lipowsky, T. R Weikl

Membranes and proteins

45. *Membrane curvature regulates the structure, function and oligomeric state of transmembrane proteins*
A. Tonnesen, S. Mathiasen, S.M. Christensen, V. Tkach, J.J. Fung, S.G.F. Rasmusen, J. Vary, R. Langen, B. Kobilka, D. Stamou
46. *Organization of protein complexes on biological membranes*
H. Kusumaatmaja, R. N. Frese, D. Frenkel
47. *Bcl-2 protein interactions in membranes and solution*
S. Bleicken, A. J. García-Sáez
48. *Ion channels as transmembrane signaling devices - structure, function and modulation*
U. Breitingner, K. Raafat, H.-G. Breitingner
49. *Membrane fusion intermediates via directional and full assembly of the SNARE complex*
M. Hernandez, R. Jahn
50. *Cluster formation of SNARE proteins*
A. Ullrich, J. Schöneberg, F. Noe
51. *Role of hopanoids in the mechanics of bacterial membranes and structure of the mechanosensitive channel MscL*
J. M. Vanegas, M. Arroyo
52. *Minimalistic models for thinning of lipid membranes by transmembrane proteins*
G. Marelli, Marcus Müller
53. *Protein/peptide interaction with lipid monolayers at the air-water interface by infrared reflection-absorption spectroscopy*
A. Kerth, A. Erbe, K. Brandenburg, A. Blume
54. *Interaction of the antimicrobial peptide gomesin with membrane model investigated by fluorescence spectroscopy and ITC*
T. M. Domingues, B. Mattei, K. R. Perez, A. de Miranda, K. A. Riske
55. *The conformation of amyloidogenic peptides is governed by (transient) interfaces and influenced by metal ion complexation*
M. Hoernke, B. Kokschi, G. Brezesinski

56. *Curvature sorting of proteins in a cylindrical lipid membrane*
P. Singh, P. Mahata, T. Baumgart, S. Lal Das
57. *Molecular Crowding on Rod Cell Disk Membranes*
J. Schöneberg, M. Heck, K. P. Hofmann, F. Noé
58. *Orientation of membrane bound Sar1 studied by infrared absorption reflection spectroscopy*
C. Schwieger, A. Meister, K. Bacia, A. Blume
59. *The bacterial translocon SecY lacks ion selectivity*
D. Knyazev, A. Lents, P. Pohl
60. *Self-aggregation of fusion proteins in biomembranes mediated by the elastic deformations*
R. J. Molotkovskiy, S. A. Akimov, F. S. Cohen

Vesicle formation

61. *Growth of fatty acid vesicles studied by light microscopy*
C. Hentrich, J. W. Szostak
62. *Electroformation of vesicles: A possible mechanism*
P. Gambhire, R. Thakkar
63. *Self reproduction of lipid vesicles*
Y. Sakuma, M. Imai
64. *On the matrix effect of vesicle replication*
A. J. Markvoort, N. Pflieger, B. van Hoof, R. A. van Santen, J.A. Killian, P. A. J. Hilbers
65. *Continuous droplet interface crossing encapsulation (cDICE): from vesicles to artificial cells*
E. Loiseau, C. Claudet, M. In, T. Lopez-Leon, M. Abkarian, G. Massiera

Biomolecules, self-assembly, and cellular processes

66. *2D structural study of fragments of GlycosylPhosphatidylinositols (GPIs)*
C. Stefaniu, I. Vilotijevic, D. Varón Silva, M. Santer, G. Brezesinski, P. H. Seeberger
67. *Depolymerization of actin filaments*
T. Niedermayer, A. Jégou, M.-F. Carlier, G. Romet-Lemonne, R. Lipowsky
68. *Molecular self-assembly into hollow nanospheres and microrings*
W. Sung, M.-J. Kim, K. Kim
69. *Signaling networks and cell motility - a computational approach using a phase field description*
W. Marth, A. Voigt
70. *Gene expression and the cell division cycle*
V. Bierbaum, S. Klumpp
71. *Dynamics of water of hydration near disaccharides strongly depends on solute topology*
A. Vila Verde, R. Kramer Campen