

Примери за съществени цитирания на трудовете на доц. В. Виткова:

- **Цитирана публикация:**

Vitkova, J. Genova and I. Bivas, “Permeability and Hidden Area of Lipid Bilayers”, *Eur. Biophys. J.*, 33 (8), pp. 706-714 (2004)

Цитираща публикация:

Wataru Shinoda, Permeability across lipid membranes, *Biochimica et Biophysica Acta*, April 2016, DOI: 10.1016/j.bbamem.2016.03.032;

“...Additionally, no pore formation was noted in the range of stretched membrane area examined, consistent with experimental observations [62].”

[62] V. Vitkova, J. Genova, I. Bivas, **Permeability and the hidden area of lipid bilayers** *Eur. Biophys. J.*, 33 (8) (2004), pp. 706-714

[View Record in Scopus](#) [Google Scholar](#)

- **Цитирана публикация:**

Vitkova, J. Genova, M.D. Mitov, and I. Bivas, “Sugars in the aqueous phase change the mechanical properties of lipid mono- and bilayers”, *Mol. Cryst. Liq. Cryst.* 449, pp. 95–106 (2006)

Цитираща публикация:

Sergey A. Akimov, Pavel E. Volynsky, Timur R. Galimzyanov, Peter I. Kuzmin, Konstantin V. Pavlov, Oleg V. Batishchev, Pore formation in lipid membrane I: Continuous reversible trajectory from intact bilayer through hydrophobic defect to transversal pore, *Scientific Reports* 7, Article number: 12152 (2017), doi:10.1038/s41598-017-12127-7;

<https://www.nature.com/articles/s41598-017-12127-7>

“... It is shown that the presence of 200 mM of sugars in the aqueous solutions can cause a decrease of membrane splay rigidity by a factor of two or more 55; such concentrations are characteristic for experiments with GUVs.”

55. Vitkova, V., Genova, J., Mitov, M. D. & Bivas, I. Sugars in the aqueous phase change the mechanical properties of lipid mono- and bilayers. *Molecular Crystals and Liquid Crystals* 449, 95–106 (2006). [CAS Article](#) [Google Scholar](#)

- **Цитирана публикация:**

V. Vitkova, M. Mader, and T. Podgorski, “Deformation of vesicles flowing through a capillary”, *Europhys. Lett.*, 68 (3), pp. 398-404 (2004)

Цитираща публикация:

Chelakkot, Raghunath; Winkler, Roland G.; Gompper, Gerhard, Semiflexible polymer conformation, distribution and migration in microcapillary flows, *JOURNAL OF PHYSICS-CONDENSED MATTER*, 23, 18, 184117 (2011)

<https://iopscience.iop.org/article/10.1088/0953-8984/23/18/184117/meta>

“...In narrow, homogeneous channels, vesicles assume bullet shapes [34].”

[34] V. Vitkova, M. Mader, and T. Podgorski. Deformation of vesicles flowing through capillaries. *Europhys. Lett.*, 68:398–404, 2004.

- **Цитирана публикация:**

V. Vitkova, M. Mader, and T. Podgorski, “Deformation of vesicles flowing through a capillary”, *Europhys. Lett.*, 68 (3), pp. 398-404 (2004)

Цитираща публикация:

McWhirter, J.L., Noguchi, H., Gompper, G., “Ordering and arrangement of deformed red blood cells in flow through microcapillaries”, *New Journal of Physics* 14 , art. no. 085026 (2012);

<https://iopscience.iop.org/article/10.1088/1367-2630/14/8/085026/meta>

“...Optical microscopy experiments on ... fluid vesicles (giant unilamellar vesicles) [24] have demonstrated that cells deform into slipper and parachute shapes in capillary flow.”

[24] Vitkova V, Mader M and Podgorski T 2004 *Europhys. Lett.* 68 398 [IOPscience](#) [Google Scholar](#)

- **Цитирана публикация:**

V. Vitkova, M. Mader, and T. Podgorski, “Deformation of vesicles flowing through a capillary”, *Europhys. Lett.*, 68 (3), pp. 398-404 (2004)

Цитираща публикация:

Preira, P., Valignat, M.-P., Bico, J., Théodoly, O., Single cell rheometry with a microfluidic constriction: Quantitative control of friction and fluid leaks between cell and channel walls,

Biomicrofluidics 7 (2), art. no. 024111 (2013);

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3651258/>

Pommella, A., Brooks, N.J., Seddon, J.M., Garbin, V., Selective flow-induced vesicle rupture to sort by membrane mechanical properties (Article), Scientific Reports, Volume 5, 25 August 2015, Article number 13163; <https://www.nature.com/articles/srep13163>

“...In Figure [5a](#) (see movie), the contour of the contact zone has a higher radius of curvature at the front of the cell than at the rear, which is reminiscent of the shape of floppy vesicles forced into constrictions.^{[57](#)}”

57. Vitkova V., Mader M., and Podgorski T., Europhys. Lett. 68, 398–404 (2004).10.1209/epl/i2004-10211-9 [[CrossRef](#)] [[Google Scholar](#)]

- **Цитирана публикация:**

V. Vitkova, M. Mader, and T. Podgorski, “Deformation of vesicles flowing through a capillary”, *Europhys. Lett.*, 68 (3), pp. 398-404 (2004)

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Pommella, A., Brooks, N.J., Seddon, J.M., Garbin, V., Selective flow-induced vesicle rupture to sort by membrane mechanical properties (Article), Scientific Reports, Volume 5, 25 August 2015, Article number 13163; <https://www.nature.com/articles/srep13163>

“...To fulfill this condition, the capillary number describing the resistance to bending in a Poiseuille flow needs to satisfy [36](#) $Ca_b = \eta UR^2/\kappa_b > 1$, while the capillary number based on the stretching elasticity, $Ca_K = \eta U/K_A$, needs to satisfy...”

36. Vitkova, V., Mader, M. & Podgorski, T. Deformation of vesicles flowing through capillaries. *Europhys. Lett.* **68**, 398 (2004). [Article](#) [Google Scholar](#)

- **Цитирана публикация:**

K. Antonova, V. Vitkova and M. D. Mitov, “Deformation of giant vesicles in AC electric fields —Dependence of the prolate-to-oblate transition frequency on vesicle radius”, *Europhys. Lett. EPL*, 89 (2010) 38004

Цитираща публикация:

P. Peterlin, Frequency-dependent electrodeformation of giant phospholipid vesicles in AC electric field, *J Biol Phys*, 36(4): 339–354; DOI 10.1007/s10867-010-9187-3 (2010); <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2923700/>

“...Transition frequencies are reciprocally related to the vesicle radius, which is consistent with the recently published findings of another group [27].”

27. Antonova, K., Vitkova, V., Mitov, M.D.: Deformation of giant vesicles in AC electric fields-Dependence of the prolate-to-oblate transition frequency on vesicle radius. *EPL* **89**, 38004 (2010). doi:10.1209/0295-5075/89/38004

- **Цитирана публикация:**

Vitkova V., Mitkova D., Stoyanova-Ivanova A., Kozarev N., Bivas I. Bending rigidity of lipid membranes and the pH of aqueous surroundings, *C. R. Acad. Bulg. Sci.*, 65 (3), pp. 329-334 (2012)

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Luka Mesarec, Miha Fošnarič, Samo Penič, Veronika Kralj Iglíč, Samo Kralj, Wojciech Gózdź, and Aleš Iglíč, , Numerical Study of Membrane Configurations, *Advances in Condensed Matter Physics*, Volume 2014 (2014), Article ID 373674, 7 pages, <http://dx.doi.org/10.1155/2014/373674>

“...The bending elasticity modulus was experimentally measured in [23]”

23. V. Vitkova, D. Mitkova, A. Stoyanova-Ivanova, N. Kozarev, and I. Bivas, “Bending rigidity of lipid membranes and the ph of aqueous surroundings,” *Comptes Rendus de L'Academie Bulgare des Sciences*, vol. 65, no. 3, pp. 329–334, 2012. [View at Google Scholar](#) · [View at Scopus](#)

- **Цитирана публикация:**

K. Antonova, V. Vitkova, C. Meyer, Membrane tubulation from giant lipid vesicles in alternating electric fields, *Physical Review E - Statistical, Nonlinear, and Soft Matter Physics* 93, 012413 (2016)

Цитираща публикация:

Dayinta L. Perrier, Lea Rems, Michiel T. Kreutzer & Pouyan E. Boukany, The role of gel-phase domains in electroporation of vesicles, *Scientific Reports*, volume 8, Article number: 4758 (2018); doi:10.1038/s41598-018-23097-9; <https://www.nature.com/articles/s41598-018-23097-9>

“...Antonova *et al.*[33](#) recently have proposed a model, which considers that the electrical tension σ_{el} exerts a force tending to form a small membrane bud and elongate it into a membrane tubule, analogous to the force required to mechanically pull a membrane tubule (tether) from a GUV. This is based on their experimental findings of tubule growth in phosphatidylcholine GUVs subjected to non-electroporative AC fields (1–2 kHz) with a strength of 100 V/cm. They have estimated the force which triggers the tubule formation as [33](#):

Списък на всички забелязани независими цитирания:

Общо – 343

В чужди списания и сборници – 314; в чуждестранни дисертационни трудове –29.

Цитирания в международни издания

I. Bivas, V. Vitkova, M. D. Mitov, M. Winterhalter, R. G. Alargova, P. Meleard, and P. Bothorel, Mechanical properties of lipid bilayers, containing modified lipids, in "Giant Vesicles", P. Walde and P. L. Luisi eds., John Wiley & Sons, p.207 (2000).

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V. Vitkova, J. Genova and I. Bivas, “Permeability and Hidden Area of Lipid Bilayers”, *Eur. Biophys. J.*, 33 (8), pp. 706-714 (2004)

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