

Publications of Gregory A. Voth

(As of 06/08/20: 544 total publications, Google Scholar h-index = 105; i10 index = 481; total citations = 42,854; 16,432 since 2015)

Submitted

1. Z. Jarin, A. J. Pak, P. Bassereau, and G. A. Voth, “Membrane-Mediated Forces Can Stabilize Tubular Assemblies of I-BAR Proteins”, *Biophys. J.* (under review).
2. Vilmos Zsolnay, Harshwardhan H. Katkar, Steven Z. Chou, Thomas D. Pollard, and Gregory A. Voth, “Structural Basis for Polarized Elongation of Actin Filaments”, *Proc. Nat. Acad. Sci. USA* (under review).
3. P. B. Calio, G. M. Hocky, and G. A. Voth, “A Minimal Experimental Bias on the Hydrogen Bond Greatly Improves *Ab Initio* Molecular Dynamics Simulations of Water”, *J. Chem. Theory Comp.* (under review).
4. X. Ma, C. Li, A. B. F. Martinson, and G. A. Voth, “Water Assisted Proton Transport in Confined Nanochannels”, *J. Phys. Chem. C* (under review).
5. V. Monje-Galvan and G. A. Voth, “Binding Mechanism of the Matrix Domain of HIV-1 Gag to Lipid Membranes”, *eLife* (under review).
6. A. Yu, E. M.Y. Lee, J. Jin, and Gregory A. Voth, “Atomic-scale Characterization of Mature HIV-1 Capsid Stabilization by Inositol Hexakisphosphate (IP₆)”, *Science Advances* (under review).
7. T. Driscoll, T. C. Bidone, S. Ahn, A. Goisman, G. A. Voth, and M. A. Schwartz, “Integrin-Based Mechanosensing through Conformational Activation”, *Proc. Nat. Acad. Sci. USA* (under review).
8. S. Zhou, S. Dhindwal, P. He, V. L. Grum-Tokars, Y. Li, J. A. Modica, R. Bleher, R. dos Reis, V. P. Dravid, G. A. Voth, B. Roux, and M. Mrksich, “Synthesis, Characterization and Simulation of Four-Armed Megamolecules”, (under review).
9. A. Martyna, B. Bahoun, J. J. Madsen, L. A. Clifton, F. St. J. S. Jackson, M. D. Badham, G. A. Voth, and J. S. Rossman “Cholesterol Alters the Membrane Orientation and Activity of the Influenza Virus M2 Amphipathic Helix”, *J. Phys. Chem. B* (under review)
10. Alexander V. Mironenko and Gregory A. Voth, “Transferable Reactive Potentials Derived from Asymptotic Density Functional Theory”, *J. Chem. Phys.* (to be submitted).
11. K. E. Homa, T. C. Bidone, V. Zsolnay, E. M. Neidt, G. A. Voth, and D. R. Kovar, “Formin Cdc12’s Specific Actin Assembly Properties are Tailored for Cytokinesis in Fission Yeast”, *Biophys. J.* (to be submitted).

Accepted

12. Z. Li, C. Li, Z. Wang, and G. A. Voth, “What Coordinate Best Describes the Affinity of the Hydrated Excess Proton for the Air-Water Interface?”, *J. Phys. Chem. B* (in press). DOI: 10.1021/acs.jpcc.0c03288

13. D. Tong and G. A. Voth, "Microtubule Simulations in Different Nucleotide States Provide Insight into the Molecular Mechanism Underlying Dynamic Instability", *Biophys. J.* (in press)
14. T. G. Flower, Yoshinori Takahashi, Arpa Hudait, Kevin Rose, Nicholas Tjahjono, Alexander J. Pak, Adam L. Yokom, Xinwen Liang, Hong-Gang Wang, Fadila Bouamr, G. A. Voth, and J. H. Hurley, "A Helical Assembly of Human ESCRT-I Scaffolds Reverse-Topology Membrane Scission", *Nat. Struct. Mol. Biol.* (in press)

Published

15. S. Mani, D. J. Cosgrove, and G. A. Voth, "Anisotropic Motions of Fibrils Dictated by Their Orientations in the Lamella: A Coarse-Grained Model of a Plant Cell Wall", *J. Phys. Chem. B* **124**, 3527-3539 (2020).
16. Z. Li and G. A. Voth, "Interfacial Solvation and Slow Transport of Hydrated Excess Protons in Non-ionic Reverse Micelles", *Phys. Chem. Chem. Phys.* **22**, 10753-10763 (2020).
17. T. Dannenhoffer-Lafage, and G. A. Voth, "Reactive Coarse-grained Molecular Dynamics", *J. Chem. Theory Comp.* **16**, 2541-2549 (2020).
18. A. Yu, K. Skorupka, A. J. Pak, B. K. Ganser-Pornillos, O. Pornillos, and G. A. Voth, "TRIM5 α Self-Assembly and Compartmentalization of the HIV-1 Viral Capsid", *Nature Comm.* **11**, 1307(1-10) (2020). PMID: PMC7066149
19. Z. Wang, J. M. J. Swanson, and G. A. Voth, "Local Conformational Dynamics Regulating Transport Properties of a Cl⁻/H⁺ Antiporter", *J. Comput. Chem.* **41**, 513-519 (2020). PMID: PMC7184886
20. T. Dannenhoffer-Lafage,* J. W. Wagner,* A. E. P. Durumeric, and G. A. Voth, "Compatible Observable Decompositions for Coarse-grained Representations of Real Molecular Systems", *J. Chem. Phys.* **151**, 134115(1-14) (2019). (*Authors contributed equally)
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24. S. L. Freedman, C. Suarez,* J. D. Winkelman,* D. R. Kovar, G.A. Voth, A. R. Dinner, and G.M. Hocky, "Mechanical and Kinetic Factors Drive Sorting of F-Actin Crosslinkers on Bundles", *Proc. Nat. Acad. Sci. USA* **116**, 16192-16197 (2019). (*Authors contributed equally) PMID: PMC6697872

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26. Z. Jarin, F.-C. Tsai, A. Davtyan, A. J. Pak, P. Bassereau, and G. A. Voth, “Unusual Organization of I-BAR Proteins on Tubular and Vesicular Membranes”, *Biophys. J.* **117**, 553-562 (2019). PMID: PMC6697384
27. A. C. Schramm, G. M. Hocky, G. A. Voth, J.-L. Martiel, and E. M. De La Cruz, “Plastic Deformation and Fragmentation of Strained Actin Filaments”, *Biophys. J.* **117**, 453-463 (2019). PMID: PMC6697348
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34. T. C. Bidone, A. Polley,* J. Jin,* T. Driscoll, D. Iwamoto, D. Calderwood, M. A. Schwartz, and G. A. Voth, “New Insights into the Conformational Activation of Full-Length Integrin”, *Biophys. J.* **116**, 1000-1010 (2019). (*Authors contributed equally)
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1. *Coarse-graining of Condensed Phase and Biomolecular Systems*, G. A. Voth, Editor (CRC Press/Taylor and Francis Group, Boca Raton, FL, 2009).
2. *Methods in Enzymology Volume 577: Computational Approaches for Studying Enzyme Mechanism Part A*, G. A. Voth, Editor (Academic Press/Elsevier, Oxford, United Kingdom, 2016).
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