# Yitzhak Rabin

List of Publications by Year
in descending order

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Version: 2024-02-01

| 124 | 5,023 | 156536 | 107981 |
|---|---|---|---|
| papers | citations | 32 | 68 |
| | | h-index | g-index |

| 126 | 126 | 126 | 4557 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Reentrant transitions in a mixture of small and big particles interacting via soft repulsive potential. Physical Review E, 2022, 105, L032604. | 0.8 | 0 |
| 2 | Sequence effects on internal structure of droplets ofÂassociative polymers. Biophysical Journal, 2021, 120, 1210-1218. | 0.2 | 4 |
| 3 | Anomalous Temperature-Controlled Concaveâ€“Convex Switching of Curved Oilâ€“Water Menisci. Journal of Physical Chemistry Letters, 2021, 12, 6834-6839. | 2.1 | 2 |
| 4 | Nanocompartmentalization of the Nuclear Pore Lumen. Biophysical Journal, 2020, 118, 219-231. | 0.2 | 28 |
| 5 | Non-equilibrium interaction between catalytic colloids: boundary conditions and penetration depth. Soft Matter, 2020, 16, 7414-7420. | 1.2 | 0 |
| 6 | Aging of Thermoreversible Gel of Associating Polymers. Macromolecules, 2020, 53, 3883-3890. | 2.2 | 8 |
| 7 | Systems with Size and Energy Polydispersity: From Glasses to Mosaic Crystals. Entropy, 2020, 22, 570. | 1.1 | 1 |
| 8 | Effect of Liquid State Organization on Nanostructure and Strength of Model Multicomponent Solids. Physical Review Letters, 2019, 123, 035502. | 2.9 | 7 |
| 9 | Chemically active nanodroplets in a multi-component fluid. Soft Matter, 2019, 15, 5965-5972. | 1.2 | 4 |
| 10 | Nanorheology of Polymer Solutions: A Scaling Theory. Macromolecules, 2019, 52, 6927-6934. | 2.2 | 5 |
| 11 | Identity ordering and metastable clusters in fluids with random interactions. Journal of Chemical Physics, 2019, 150, 134502. | 1.2 | 3 |
| 12 | Assembly along lines in boundary-driven dynamical system. Scientific Reports, 2019, 9, 17910. | 1.6 | 2 |
| 13 | Effect of Grafting on Aggregation of Intrinsically Disordered Proteins. Biophysical Journal, 2018, 114, 534-538. | 0.2 | 5 |
| 14 | Composition, morphology, and growth of clusters in a gas of particles with random interactions. Journal of Chemical Physics, 2018, 148, 104304. | 1.2 | 3 |
| 15 | Darwinian selection of host and bacteria supports emergence of Lamarckian-like adaptation of the system as a whole. Biology Direct, 2018, 13, 24. | 1.9 | 25 |
| 16 | Dynamics of active Rouse chains. Soft Matter, 2017, 13, 963-968. | 1.2 | 70 |
| 17 | Effect of non-specific interactions on formation and stability of specific complexes. Journal of Chemical Physics, 2016, 144, 205104. | 1.2 | 8 |
| 18 | Particle dynamics in fluids with random interactions. Journal of Chemical Physics, 2016, 144, 194504. | 1.2 | 15 |

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|---|---|---|---|
| 19 | Effect of sequence-dependent rigidity on plectoneme localization in dsDNA. Journal of Chemical Physics, 2016, 144, 135101. | 1.2 | 5 |
| 20 | Scale-Dependent Viscosity in Polymer Fluids. Journal of Physical Chemistry B, 2016, 120, 6383-6390. | 1.2 | 11 |
| 21 | Direct observation of DNA knots using a solid-state nanopore. Nature Nanotechnology, 2016, 11, 1093-1097. | 15.6 | 214 |
| 22 | Neighborhood Identity Ordering and Quenched to Annealed Transition in Random Bond Models. Journal of Statistical Physics, 2016, 162, 186-198. | 0.5 | 10 |
| 23 | Universal protein distributions in a model of cell growth and division. Physical Review E, 2015, 92, 042713. | 0.8 | 23 |
| 24 | Communication: Pair interaction ordering in fluids with random interactions. Journal of Chemical Physics, 2015, 142, 051104. | 1.2 | 16 |
| 25 | Cross-Linking Patterns and Their Images in Swollen and Deformed Gels. Macromolecules, 2015, 48, 7378-7381. | 2.2 | 3 |
| 26 | Effect of knots on binding of intercalators to DNA. Journal of Chemical Physics, 2014, 140, 205101. | 1.2 | 2 |
| 27 | Network Formation by Cross-Hybridization of Complementary Strands to Grafted ssDNA. ACS Macro Letters, 2014, 3, 191-193. | 2.3 | 3 |
| 28 | Chromatin Hydrodynamics. Biophysical Journal, 2014, 106, 1871-1881. | 0.2 | 112 |
| 29 | Fast Translocation of Proteins through Solid State Nanopores. Nano Letters, 2013, 13, 658-663. | 4.5 | 316 |
| 30 | Transport Rectification in Nanopores with Outer Membranes Modified with Surface Charges and Polyelectrolytes. ACS Nano, 2013, 7, 9085-9097. | 7.3 | 81 |
| 31 | Effect of charge, hydrophobicity, and sequence of nucleoporins on the translocation of model particles through the nuclear pore complex. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3363-3368. | 3.3 | 139 |
| 32 | What about a theory?. Physics of Life Reviews, 2012, 9, 172-173. | 1.5 | 1 |
| 33 | On binding of DNA-bending proteins to DNA minicircles. Journal of Chemical Physics, 2012, 136, 025102. | 1.2 | 2 |
| 34 | Anomalous Swelling of Polymer Monolayers by Water Vapor. Macromolecules, 2012, 45, 9517-9521. | 2.2 | 12 |
| 35 | Reply to Comment on â€˜Modeling the conductance and DNA blockade of solid-state nanoporesâ€™. Nanotechnology, 2012, 23, 088002. | 1.3 | 3 |
| 36 | Effects of the Salt Concentration on Charge Regulation in Tethered Polyacid Monolayers. Langmuir, 2011, 27, 4679-4689. | 1.6 | 21 |

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|---|---|---|---|
| 37 | Modeling the conductance and DNA blockade of solid-state nanopores. Nanotechnology, 2011, 22, 315101. | 1.3 | 380 |
| 38 | Ion Transport and Molecular Organization Are Coupled in Polyelectrolyte-Modified Nanopores. Journal of the American Chemical Society, 2011, 133, 17753-17763. | 6.6 | 88 |
| 39 | Morphology Control of Hairy Nanopores. ACS Nano, 2011, 5, 4737-4747. | 7.3 | 89 |
| 40 | Fundamental Limitation on Applicability of Statistical Methods to Study of Living Organisms and Other Complex Systems. Journal of Statistical Physics, 2011, 144, 213-216. | 0.5 | 3 |
| 41 | Force-free measurements of the conformations of DNA molecules tethered to a wall. Physical Review E, 2011, 83, 011916. | 0.8 | 28 |
| 42 | Electrostatic focusing of unlabelled DNA into nanoscale pores using a salt gradient. Nature Nanotechnology, 2010, 5, 160-165. | 15.6 | 625 |
| 43 | Coupling of twist and writhe in short DNA loops. Journal of Chemical Physics, 2010, 132, 045101. | 1.2 | 9 |
| 44 | Effect of Spontaneous Twist on DNA Minicircles. Biophysical Journal, 2010, 99, 2987-2994. | 0.2 | 3 |
| 45 | DNA capture into a nanopore: Interplay of diffusion and electrohydrodynamics. Journal of Chemical Physics, 2010, 133, 165102. | 1.2 | 127 |
| 46 | Effect of network topology on phase separation in two-dimensional Lennard-Jones networks. Physical Review E, 2009, 79, 040401. | 0.8 | 6 |
| 47 | Bending affects entropy of semiflexible polymers: Application to protein-DNA complexes. Physical Review E, 2009, 80, 052801. | 0.8 | 6 |
| 48 | Protonation-induced transitions in a DNA brush. Soft Matter, 2009, 5, 3010. | 1.2 | 3 |
| 49 | Formation of double helical and filamentous structures in models of physical and chemical gels. Soft Matter, 2008, 4, 18-28. | 1.2 | 26 |
| 50 | Model of Microphase Separation in Two-Dimensional Gels. Macromolecules, 2008, 41, 3267-3275. | 2.2 | 3 |
| 51 | Multiple Stages in the Aging of a Physical Polymer Gel. Macromolecules, 2008, 41, 3983-3994. | 2.2 | 30 |
| 52 | Filamentous networks in phase-separating two-dimensional gels. Europhysics Letters, 2007, 77, 58007. | 0.7 | 17 |
| 53 | Differential geometry of polymer models: worm-like chains, ribbons and Fourier knots. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 4455-4466. | 0.7 | 14 |
| 54 | Metastable Tight Knots in a Wormlike Polymer. Physical Review Letters, 2007, 99, 217801. | 2.9 | 77 |

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| 55 | N-Level multiple resonance. Advances in Chemical Physics, 2007, , 555-581. | 0.3 | 1 |
| 56 | Nanopores with DNA: Strong Electrostatic Interactions in Cellular Dynamics Processes. AIP Conference Proceedings, 2006, , . | 0.3 | 0 |
| 57 | DNA in Nanopores: Counterion Condensation and Coion Depletion. Physical Review Letters, 2005, 94, 148103. | 2.9 | 51 |
| 58 | Where is the Sodium in Self-Assembled Monolayers of Single-Stranded DNA?. Journal of the American Chemical Society, 2005, 127, 17138-17139. | 6.6 | 28 |
| 59 | Effect of thermal expansion on speckle correlation from surface scattering of a transparent dielectric slab. Optical Engineering, 2004, 43, 398. | 0.5 | 1 |
| 60 | Distribution functions for filaments under tension. Journal of Chemical Physics, 2004, 121, 1155-1164. | 1.2 | 12 |
| 61 | Effect of Spontaneous Curvature and Sequence Disorder on Cyclization of Fluctuating Filaments. Macromolecules, 2004, 37, 7847-7849. | 2.2 | 13 |
| 62 | Nanopore Unzipping of Individual DNA Hairpin Molecules. Biophysical Journal, 2004, 87, 3205-3212. | 0.2 | 273 |
| 63 | Glass does not play dice: observation of non-random organization of atomic bond tensions in glasses. Physica A: Statistical Mechanics and Its Applications, 2003, 330, 271-275. | 1.2 | 4 |
| 64 | Stretching Instability of Helical Springs. Physical Review Letters, 2003, 90, 024301. | 2.9 | 47 |
| 65 | Effect of curvature and twist on the conformations of a fluctuating ribbon. Journal of Chemical Physics, 2003, 118, 897-904. | 1.2 | 14 |
| 66 | Metastable lattice of droplets in phase separating polymer blends. Physical Review E, 2002, 65, 061803. | 0.8 | 1 |
| 67 | Frenet algorithm for simulations of fluctuating continuous elastic filaments. Physical Review E, 2002, 65, 020801. | 0.8 | 14 |
| 68 | On the deformation of fluctuating chiral ribbons. Europhysics Letters, 2002, 57, 512-518. | 0.7 | 22 |
| 69 | Buckling of spontaneously twisted ribbons. Physica A: Statistical Mechanics and Its Applications, 2002, 314, 125-129. | 1.2 | 0 |
| 70 | Kinetics and mechanism of DNA uptake into the cell nucleus. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 7247-7252. | 3.3 | 128 |
| 71 | Fluctuating elastic rings:â€ƒStatics and dynamics. Physical Review E, 2001, 64, 011909. | 0.8 | 33 |
| 72 | An Elastic Analysis of Listeria monocytogenes Propulsion. Biophysical Journal, 2000, 79, 2259-2275. | 0.2 | 191 |

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| 73 | Thermal Fluctuations of Elastic Filaments with Spontaneous Curvature and Torsion. Physical Review Letters, 2000, 85, 2404-2407. | 2.9 | 49 |
| 74 | Elastic Recovery of Gels on Mesoscopic Length Scales. A Photon Correlation Spectroscopy Study. Macromolecules, 2000, 33, 5757-5759. | 2.2 | 6 |
| 75 | Statistical physics of interacting dislocation loops and their effect on the elastic moduli of isotropic solids. Physical Review B, 1999, 59, 13657-13671. | 1.1 | 6 |
| 76 | Microstructure and phase diagrams of polymer gels. Physica A: Statistical Mechanics and Its Applications, 1998, 249, 239-244. | 1.2 | 2 |
| 77 | Effect of degree of cross-linking on spatial inhomogeneity in charged gels. I. Theoretical predictions and light scattering study. Journal of Chemical Physics, 1997, 107, 5227-5235. | 1.2 | 64 |
| 78 | Interaction between randomly charged rods and plates: Energy landscapes, stick slip, and recognition at a distance. Physical Review E, 1997, 56, 7053-7066. | 0.8 | 17 |
| 79 | Theory of surface freezing of alkanes. Physical Review E, 1997, 55, 778-784. | 0.8 | 41 |
| 80 | Scattering Profiles of Charged Gels:â€‰ Frozen Inhomogeneities, Thermal Fluctuations, and Microphase Separation. Macromolecules, 1997, 30, 301-312. | 2.2 | 93 |
| 81 | Confinement-induced freezing and the Lindemann criterion. Solid State Communications, 1997, 103, 361-364. | 0.9 | 8 |
| 82 | Volume Transitions, Phase Separation, and Anisotropic Surface Phases in Charged Gels. Macromolecules, 1996, 29, 8530-8537. | 2.2 | 40 |
| 83 | Statistical physics of polymer gels. Physics Reports, 1996, 269, 1-131. | 10.3 | 214 |
| 84 | Polymer Gels:Â Frozen Inhomogeneities and Density Fluctuations. Macromolecules, 1996, 29, 7960-7975. | 2.2 | 134 |
| 85 | Recent developments in the theory of polymer gels. Journal of Computer-Aided Materials Design, 1996, 3, 281-288. | 0.7 | 2 |
| 86 | Fluctuation-Stabilized Surface Freezing of Chain Molecules. Physical Review Letters, 1996, 76, 2527-2530. | 2.9 | 85 |
| 87 | Flory-type theory of a knotted ring polymer. Physical Review E, 1996, 54, 6618-6622. | 0.8 | 88 |
| 88 | Mesoscopic physics of swollen polymer networks: Statics and dynamics. Physical Review E, 1994, 49, 554-569. | 0.8 | 16 |
| 89 | Thin liquid layers in shear: non-Newtonian effects. Physica A: Statistical Mechanics and Its Applications, 1993, 200, 708-712. | 1.2 | 35 |
| 90 | Note on â€˜â€˜Scale-dependent enhancement and damping of vorticity disturbances by polymers in elongational flowâ€™â€™. Physical Review A, 1992, 45, 4178-4179. | 1.0 | 2 |

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| 91 | Shear-flow enhancement and suppression of fluctuations in smectic liquid crystals. Physical Review A, 1992, 45, 994-1008. | 1.0 | 79 |
| 92 | Hydrodynamic changes of the depletion layer of dilute polymer solutions near a wall. AICHE Journal, 1992, 38, 273-283. | 1.8 | 35 |
| 93 | Polymers in plane Poiseuille flow: Dynamic Monte Carlo simulation. Journal of Rheology, 1991, 35, 213-219. | 1.3 | 14 |
| 94 | Polymer gels in uniaxial deformation. Journal of Physics Condensed Matter, 1990, 2, SA313-SA315. | 0.7 | 7 |
| 95 | Polymers in shear flow near repulsive boundaries. Macromolecules, 1990, 23, 2232-2237. | 2.2 | 27 |
| 96 | Slowing down of polymer diffusion near a wall. Macromolecules, 1990, 23, 3194-3196. | 2.2 | 2 |
| 97 | Suppression of excluded-volume exponents in shear flow of dilute polymer solutions. Physical Review Letters, 1989, 62, 2281-2284. | 2.9 | 16 |
| 98 | Scale-dependent enhancement and damping of vorticity disturbances by polymers in elongational flow. Physical Review Letters, 1989, 63, 512-515. | 2.9 | 13 |
| 99 | Renormalization-group calculation of viscometric functions based on conventional polymer kinetic theory. Journal of Non-Newtonian Fluid Mechanics, 1989, 33, 53-93. | 1.0 | 39 |
| 100 | Dilute polymer solutions in flow: derivation of hydrodynamic equations. Macromolecules, 1989, 22, 2420-2426. | 2.2 | 10 |
| 101 | Diffusion Equation versus Coupled Langevin Equations Approach to Hydrodynamics of Dilute Polymer Solutions. Journal of Rheology, 1989, 33, 725-743. | 1.3 | 20 |
| 102 | On Shear Thinning in Dilute Polymer Solutions. Materials Research Society Symposia Proceedings, 1989, 177, 181. | 0.1 | 0 |
| 103 | On the mechanism of stretching and breaking of polymers in elongational flows. Journal of Non-Newtonian Fluid Mechanics, 1988, 30, 119-123. | 1.0 | 23 |
| 104 | Polymer fracture in steady and transient elongational flows. Journal of Chemical Physics, 1987, 86, 5215-5216. | 1.2 | 32 |
| 105 | Anomalous viscosity of polyelectrolyte solutions. Physical Review A, 1987, 35, 3579-3581. | 1.0 | 20 |
| 106 | Macromolecules in Elongational Flows: Metastability and Hysteresis. The IMA Volumes in Mathematics and Its Applications, 1987, , 153-159. | 0.5 | 0 |
| 107 | Flow modification by polymers in strong elongational flows. Journal of Chemical Physics, 1986, 85, 4696-4701. | 1.2 | 19 |
| 108 | Statistical thermodynamics of polyalkaneâ€like chains in a uniaxial environment. Journal of Chemical Physics, 1986, 84, 476-484. | 1.2 | 7 |

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| 109 | On the universality of ideal Zimm dynamics of polymers in extensional flows. Journal of Polymer Science, Polymer Letters Edition, 1985, 23, 11-13. | 0.4 | 14 |
| 110 | Scaling behavior of dilute polymer solutions in elongational flows. Physical Review Letters, 1985, 55, 201-203. | 2.9 | 21 |
| 111 | Conformational energy contributions to energy storage in deformed macromolecules. Macromolecules, 1985, 18, 301-302. | 2.2 | 3 |
| 112 | Dynamics of stretched polymer chains. 2. Macromolecules, 1985, 18, 442-447. | 2.2 | 6 |
| 113 | Time-dependent effects in nucleation near the critical point. Physical Review A, 1984, 29, 1496-1505. | 1.0 | 32 |
| 114 | Surface tension of polymer melts: Nonlocal entropy effects. Journal of Polymer Science, Polymer Letters Edition, 1984, 22, 335-338. | 0.4 | 8 |
| 115 | Density profiles of polymer-containing nuclei. Macromolecules, 1984, 17, 2450-2451. | 2.2 | 3 |
| 116 | The second virial coefficient of polymeric globules. A simple model. Journal of Chemical Physics, 1983, 79, 3988-3990. | 1.2 | 2 |
| 117 | On the stretching of alkyl chains by nematics. Journal of Chemical Physics, 1983, 78, 4303-4308. | 1.2 | 14 |
| 118 | Nonimpact theory of absorption line broadening in strong radiation fields. Physical Review A, 1982, 26, 271-281. | 1.0 | 12 |
| 119 | Nonimpact theory of resonance Raman line shapes in strong radiation fields. Physical Review A, 1982, 26, 341-355. | 1.0 | 17 |
| 120 | Non-impact collisional broadening of resonance Raman spectra in strong radiation fields. Optics Communications, 1982, 40, 185-189. | 1.0 | 5 |
| 121 | On the self-shift and broadening of doppler-free Rydberg 2S spectral lines in alkali atoms. Optics Communications, 1982, 40, 257-262. | 1.0 | 15 |
| 122 | Atom-molecule radiative collisions. The inelastic case. Chemical Physics Letters, 1981, 77, 506-510. | 1.2 | 5 |
| 123 | Theory of resonance excitation ofN-level atomic systems by strong coherent radiation. Physical Review A, 1979, 19, 1697-1707. | 1.0 | 13 |
| 124 | Theory of resonance scattering and absorption of strong coherent radiation by thermally relaxing multilevel atomic systems. Physical Review A, 1979, 19, 2056-2073. | 1.0 | 47 |