

# Edith M Sevick

## List of Publications by Year in descending order

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Version: 2024-02-01

47  
papers

1,588  
citations

394421

19  
h-index

289244

40  
g-index

48  
all docs

48  
docs citations

48  
times ranked

1203  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Fluctuations and Irreversibility: An Experimental Demonstration of a Second-Law-Like Theorem Using a Colloidal Particle Held in an Optical Trap. <i>Physical Review Letters</i> , 2004, 92, 140601. | 7.8  | 223       |
| 2  | Fluctuation Theorems. <i>Annual Review of Physical Chemistry</i> , 2008, 59, 603-633.   | 10.8 | 218       |
| 3  | Monte Carlo calculations of cluster statistics in continuum models of composite morphology. <i>Journal of Chemical Physics</i> , 1988, 88, 1198-1206.   | 3.0  | 179       |
| 4  | AFM Evidence of Rayleigh Instability in Single Polymer Chains. <i>Langmuir</i> , 2002, 18, 2174-2182.   | 3.5  | 105       |
| 5  | The Detachment of a Polymer Chain from a Weakly Adsorbing Surface Using an AFM Tip. <i>Langmuir</i> , 1999, 15, 3886-3892.  | 3.5  | 83        |
| 6  | A chain of states method for investigating infrequent event processes occurring in multistate, multidimensional systems. <i>Journal of Chemical Physics</i> , 1993, 98, 3196-3212.                  | 3.0  | 75        |
| 7  | End-Tethered Polymer Chains under AFM Tips: Compression and Escape in Theta Solvents. <i>Langmuir</i> , 1997, 13, 5691-5696.  | 3.5  | 55        |
| 8  | Collision of a Field-Driven Polymer with a Post: Electrophoresis in Microlithographic Arrays. <i>Physical Review Letters</i> , 1996, 76, 2595-2598.   | 7.8  | 46        |
| 9  | Shear Swelling of Polymer Brushes Grafted onto Convex and Concave Surfaces. <i>Macromolecules</i> , 1996, 29, 6952-6958.  | 4.8  | 44        |
| 10 | Polymer Brushes as Pressure-Sensitive Automated Microvalves. <i>Macromolecules</i> , 1994, 27, 5285-5290.   | 4.8  | 43        |
| 11 | Hydrodynamic Mobility of an Optically Trapped Colloidal Particle near Fluid-Fluid Interfaces. <i>Physical Review Letters</i> , 2009, 103, 248303.   | 7.8  | 42        |
| 12 | Collision of a Field-Driven Polymer with a Finite-Sized Obstacle: A Brownian Dynamics Simulation. <i>Macromolecules</i> , 1999, 32, 892-899.  | 4.8  | 39        |
| 13 | A unified description of two theorems in non-equilibrium statistical mechanics: The fluctuation theorem and the work relation. <i>Europhysics Letters</i> , 2005, 72, 726-732.                      | 2.0  | 35        |
| 14 | Motion of a polyelectrolyte chain hooked around a post. <i>Physical Review E</i> , 1994, 50, R3357-R3360.   | 2.1  | 34        |
| 15 | Mobile Rings on a Polyrotaxane Lead to a Yield Force. <i>Macromolecules</i> , 2013, 46, 4191-4197.  | 4.8  | 34        |
| 16 | Piston-Rotaxanes as Molecular Shock Absorbers. <i>Langmuir</i> , 2010, 26, 5864-5868.   | 3.5  | 30        |
| 17 | Compression of a polymer chain by a small obstacle: The effect of fluctuations on the escape transition. <i>Physical Review E</i> , 1999, 60, 6906-6918.  | 2.1  | 25        |
| 18 | The Kawasaki identity and the Fluctuation Theorem. <i>Journal of Chemical Physics</i> , 2004, 121, 8179.  | 3.0  | 24        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | A Polymer End-Tethered to a Potential Stripe: A Simple Example of an Escape Transition. <i>Macromolecules</i> , 1999, 32, 6841-6846.  | 4.8 | 21        |
| 20 | Long-lived states in electrophoresis: Collision of a polymer chain with two or more obstacles. <i>Europhysics Letters</i> , 2001, 56, 529-535.  | 2.0 | 18        |
| 21 | Demonstration of the steady-state fluctuation theorem from a single trajectory. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S3239-S3244.   | 1.8 | 18        |
| 22 | Polymers Grafted onto Strongly Adsorbing Surfaces in Poor Solvents: Stretching, Fission, Phase Separation, and Globular Micelles in 2D. <i>Physical Review Letters</i> , 1999, 82, 2701-2704. | 7.8 | 17        |
| 23 | Clustering and percolation in assemblies of anisotropic particles: Perturbation theory and Monte Carlo simulation. <i>Physical Review A</i> , 1988, 38, 5376-5383.                            | 2.5 | 16        |
| 24 | Compression-Induced Phase Transitions in Water-Soluble Polymer Brushes: The n-Cluster Model. <i>Macromolecules</i> , 1998, 31, 3361-3367.   | 4.8 | 16        |
| 25 | Compression and Escape of a Star Polymer. <i>Macromolecules</i> , 2000, 33, 5743-5746.  | 4.8 | 15        |
| 26 | Cluster integrals for square well particles: Application to percolation. <i>Journal of Chemical Physics</i> , 1991, 94, 3070-3082.  | 3.0 | 13        |
| 27 | Piston Rotaxane Monolayers: Shear Swelling and Nanovalue Behavior. <i>Macromolecules</i> , 2010, 43, 7244-7249.   | 4.8 | 11        |
| 28 | Dilute heteroaggregation: A description of critical gelation using a cluster-cluster aggregation model. <i>Journal of Colloid and Interface Science</i> , 1991, 144, 561-570.                 | 9.4 | 10        |
| 29 | Linear Self-Assembled Systems and the Effect of Capping Defects. <i>Langmuir</i> , 1998, 14, 3137-3139.   | 3.5 | 10        |
| 30 | Compression and Escape of Copolymers of Adsorbing and Nonadsorbing Blocks. <i>Macromolecules</i> , 2001, 34, 1908-1916.   | 4.8 | 10        |
| 31 | Conformational isomers of linear rotaxanes. <i>Journal of Chemical Physics</i> , 2014, 141, 114904.   | 3.0 | 9         |
| 32 | Coil-Stretch Transitions for Grafted Polymers in Spatially Varying Flows. <i>Europhysics Letters</i> , 1995, 31, 357-362.   | 2.0 | 8         |
| 33 | Dynamics of molecular shock-absorbers: energy dissipation and the Fluctuation Theorem. <i>Soft Matter</i> , 2011, 7, 5739.  | 2.7 | 8         |
| 34 | A Piston-Rotaxane with Two Potential Stripes: Force Transitions and Yield Stresses. <i>Molecules</i> , 2013, 18, 13398-13409.   | 3.8 | 8         |
| 35 | Fast switching from isotropic liquids to nematic liquid crystals: rotaxanes as smart fluids. <i>Chemical Communications</i> , 2015, 51, 16541-16544.  | 4.1 | 7         |
| 36 | Threading a Ring or Tube onto a Rod: An Entropically Rare Event. <i>Nano Letters</i> , 2016, 16, 671-674.   | 9.1 | 7         |

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|----|---|-----|-----------|
| 37 | Isotropic and nematic liquid crystalline phases of adaptive rotaxanes. <i>Journal of Chemical Physics</i> , 2016, 144, 124901.  | 3.0 | 6         |
| 38 | Triangular cyclic rotaxanes: Size, fluctuations, and switching properties. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9367-9372. | 7.1 | 5         |
| 39 | A Piston-Rotaxane with Two Potential Stripes: Force Transitions and Yield Stresses. <i>Molecules</i> , 2013, 18, 13398-13409.   | 3.8 | 4         |
| 40 | A Two-Stroke, Two-Cylinder Piston Rotaxane Motor. <i>ChemPhysChem</i> , 2016, 17, 1927-1933.  | 2.1 | 4         |
| 41 | Morphology and transport using the Ising lattice as a morphology description. <i>Chemical Engineering Science</i> , 1989, 44, 21-32.  | 3.8 | 3         |
| 42 | Rotaxane liquid crystals with variable length: The effect of switching efficiency on the isotropic-nematic transition. <i>Journal of Chemical Physics</i> , 2018, 148, 134905.            | 3.0 | 3         |
| 43 | Anomalous height increases upon bending for an Alexander-de Gennes polymer brush. <i>Journal of Chemical Physics</i> , 1996, 105, 9334-9338.  | 3.0 | 2         |
| 44 | Equilibrium binding energies from fluctuation theorems and force spectroscopy simulations. <i>Soft Matter</i> , 2016, 12, 9803-9820.  | 2.7 | 2         |
| 45 | Polymer Brush-Lined Membranes for Flow and Filtration Control. <i>Materials Research Society Symposia Proceedings</i> , 1995, 385, 213.   | 0.1 | 1         |
| 46 | Mechanical Conformers of Keyring Catenanes. <i>Journal of Physical Chemistry A</i> , 2018, 122, 8923-8930.  | 2.5 | 1         |
| 47 | A Model of a Homopolymer Brush as a Switch. <i>Macromolecules</i> , 2010, 43, 2042-2047.  | 4.8 | 0         |