Olga I Vinogradova

List of Publications by Citations

121 papers	5,156 citations	42 h-index	68 g-index
124 ext. papers	5,491 ext. citations	4 avg, IF	5.98 L-index

#	Paper	IF	Citations
121	Drainage of a Thin Liquid Film Confined between Hydrophobic Surfaces. *Langmuir*, **1995**, 11, 2213-2220	4	469
120	Slippage of water over hydrophobic surfaces. *International Journal of Mineral Processing*, **1999**, 56, 31-60		330
119	Dynamic Effects on Force Measurements. 2. Lubrication and the Atomic Force Microscope. *Langmuir*, **2003**, 19, 1227-1234	4	161
118	Tensorial hydrodynamic slip. *Journal of Fluid Mechanics*, **2008**, 613, 125-134	3.7	140
117	Effective slip over superhydrophobic surfaces in thin channels. *Physical Review Letters*, **2009**, 102, 026001	7.4	121
116	Effective slip in pressure-driven flow past super-hydrophobic stripes. *Journal of Fluid Mechanics*, **2010**, 652, 489-499	3.7	119
115	Elasticity of polyelectrolyte multilayer microcapsules. *Journal of Chemical Physics*, **2004**, 120, 3822-6	3.9	112
114	Submicrocavity Structure of Water between Hydrophobic and Hydrophilic Walls as Revealed by Optical Cavitation. *Journal of Colloid and Interface Science*, **1995**, 173, 443-447	9.3	109
113	Interaction Forces between Hydrophobic Surfaces. Attractive Jump as an Indication of Formation of Stable Submicrocavities. *Journal of Physical Chemistry B*, **2000**, 104, 3407-3410	3.4	108
112	Wetting, roughness and flow boundary conditions. *Journal of Physics Condensed Matter*, **2011**, 23, 184104	1.8	105
111	Surface roughness and hydrodynamic boundary conditions. *Physical Review E*, **2006**, 73, 045302	2.4	102
110	Superhydrophobic Textures for Microfluidics. *Mendeleev Communications*, **2012**, 22, 229-236	1.9	98
109	Direct measurements of hydrophobic slippage using double-focus fluorescence cross-correlation. *Physical Review Letters*, **2009**, 102, 118302	7.4	97
108	Deformation Properties of Nonadhesive Polyelectrolyte Microcapsules Studied with the Atomic Force Microscope. *Journal of Physical Chemistry B*, **2003**, 107, 2735-2740	3.4	96
107	Young's Modulus of Polyelectrolyte Multilayers from Microcapsule Swelling. *Macromolecules*, **2004**, 37, 1113-1117	5.5	92
106	Hydrodynamic slippage inferred from thin film drainage measurements in a solution of nonadsorbing polymer. *Journal of Chemical Physics*, **2000**, 112, 6424-6433	3.9	92
105	Anisotropic electro-osmotic flow over super-hydrophobic surfaces. *Journal of Fluid Mechanics*, **2010**, 644, 245-255	3.7	88

104	Dynamic effects on force measurements. I. Viscous drag on the atomic force microscope cantilever. *Review of Scientific Instruments*, **2001**, 72, 2330-2339	1.7	83
103	Effect of Salts and Dissolved Gas on Optical Cavitation near Hydrophobic and Hydrophilic Surfaces. *Langmuir*, **1997**, 13, 3024-3028	4	76
102	Mechanical properties of polyelectrolyte multilayer microcapsules. *Journal of Physics Condensed Matter*, **2004**, 16, R1105-R1134	1.8	76
101	Effect of pH and salt on the stiffness of polyelectrolyte multilayer microcapsules. *Langmuir*, **2004**, 20, 2874-8	4	76
100	Multilayer DNA/poly(allylamine hydrochloride) microcapsules: assembly and mechanical properties. *Biomacromolecules*, **2005**, 6, 1495-502	6.9	72
99	Electro-osmosis on anisotropic superhydrophobic surfaces. *Physical Review Letters*, **2011**, 107, 098301	7.4	70
98	MECHANICAL BEHAVIOR AND CHARACTERIZATION OF MICROCAPSULES. *Annual Review of Materials Research*, **2006**, 36, 143-178	12.8	70
97	Flow profile near a wall measured by double-focus fluorescence cross-correlation. *Physical Review E* , **2003**, 67, 056313	2.4	68
96	Electrohydrodynamics near hydrophobic surfaces. *Physical Review Letters*, **2015**, 114, 118301	7.4	66
95	Mechanical Properties of Polyelectrolyte Microcapsules Filled with a Neutral Polymer. *Macromolecules*, **2003**, 36, 2832-2837	5.5	65
94	Forces between polystyrene surfaces in water electrolyte solutions: Long-range attraction of two types?. *Journal of Chemical Physics*, **2001**, 114, 8124-8131	3.9	65
93	Boundary slip as a result of a prewetting transition. *Journal of Chemical Physics*, **2003**, 119, 13106-13112	3.9	58
92	Effect of Organic Solvent on the Permeability and Stiffness of Polyelectrolyte Multilayer Microcapsules. *Macromolecules*, **2005**, 38, 5214-5222	5.5	55
91	Manipulation of small particles at solid liquid interface: light driven diffusioosmosis. *Scientific Reports*, **2016**, 6, 36443	4.9	54
90	Capillary bridging and long-range attractive forces in a mean-field approach. *Journal of Chemical Physics*, **2004**, 121, 4414-23	3.9	54
89	pH-Controlled Swelling of Polyelectrolyte Multilayer Microcapsules. *Journal of Physical Chemistry B*, **2004**, 108, 8161-8165	3.4	54
88	Assembly and mechanical properties of phosphorus dendrimer/polyelectrolyte multilayer microcapsules. *Langmuir*, **2005**, 21, 7200-6	4	52
87	Salt softening of polyelectrolyte multilayer microcapsules. *Journal of Colloid and Interface Science*, **2005**, 284, 455-62	9.3	52

86	Contact angles on hydrophobic microparticles at water–air and water–hexadecane interfaces. *Journal of Adhesion Science and Technology*, **2000**, 14, 1783-1799	2	52
85	Random-roughness hydrodynamic boundary conditions. *Physical Review Letters*, **2010**, 105, 016001	7.4	51
84	Interaction and adhesion properties of polyelectrolyte multilayers. *Langmuir*, **2005**, 21, 7545-50	4	51
83	Comparative Analysis of Hollow and Filled Polyelectrolyte Microcapsules Templated on Melamine Formaldehyde and Carbonate Cores. *Macromolecular Chemistry and Physics*, **2004**, 205, 530-535	2.6	48
82	Hydrophobicity, specific ion adsorption and reactivity. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1997**, 123-124, 7-12	5.1	46
81	Tensorial slip of superhydrophobic channels. *Physical Review E*, **2012**, 85, 016324	2.4	44
80	Hydrodynamic Interaction of Curved Bodies Allowing Slip on Their Surfaces. *Langmuir*, **1996**, 12, 5963-5968	4	42
79	Existence of charged submicrobubble clusters in polar liquids as revealed by correlation between optical cavitation and electrical conductivity. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1996**, 110, 207-212	5.1	42
78	Implications of Hydrophobic Slippage for the Dynamic Measurements of Hydrophobic Forces. *Langmuir*, **1998**, 14, 2827-2837	4	41
77	Inertial focusing of finite-size particles in microchannels. *Journal of Fluid Mechanics*, **2018**, 840, 613-630	3.7	40
76	Effective slip boundary conditions for arbitrary one-dimensional surfaces. *Journal of Fluid Mechanics*, **2012**, 706, 108-117	3.7	39
75	The "Wimple": rippled deformation of a fluid drop caused by hydrodynamic and surface forces during thin film drainage. *Langmuir*, **2005**, 21, 8243-9	4	38
74	Gas cushion model and hydrodynamic boundary conditions for superhydrophobic textures. *Physical Review E*, **2014**, 90, 043017	2.4	37
73	Analysis of plastic deformation in atomic force microscopy: Application to ice. *Journal of Chemical Physics*, **2000**, 113, 1194-1203	3.9	35
72	Transverse flow in thin superhydrophobic channels. *Physical Review E*, **2010**, 82, 055301	2.4	34
71	Mechanical properties of polyelectrolyte-filled multilayer microcapsules studied by atomic force and confocal microscopy. *Langmuir*, **2004**, 20, 10685-90	4	34
70	Contact angle hysteresis on superhydrophobic stripes. *Journal of Chemical Physics*, **2014**, 141, 074710	3.9	33
69	Investigation of Molecular Weight and Aging Effects on the Stiffness of Polyelectrolyte Multilayer Microcapsules. *Macromolecules*, **2004**, 37, 7736-7741	5.5	33

68	Anisotropic flow in striped superhydrophobic channels. *Journal of Chemical Physics*, **2012**, 136, 194706	3.9	32
67	Coagulation of Hydrophobic and Hydrophilic Solids under Dynamic Conditions. *Journal of Colloid and Interface Science*, **1995**, 169, 306-312	9.3	30
66	Drag force on a sphere moving toward an anisotropic superhydrophobic plane. *Physical Review E*, **2011**, 84, 026330	2.4	29
65	Effect of Dendrimer Generation on the Assembly and Mechanical Properties of DNA/Phosphorus Dendrimer Multilayer Microcapsules. *Macromolecules*, **2006**, 39, 5479-5483	5.5	29
64	Hydrodynamic interaction with super-hydrophobic surfaces. *Soft Matter*, **2010**, 6, 4563	3.6	26
63	Effective slip-length tensor for a flow over weakly slipping stripes. *Physical Review E*, **2013**, 88, 023004	2.4	24
62	Flow past superhydrophobic surfaces with cosine variation in local slip length. *Physical Review E*, **2013**, 87, 023005	2.4	23
61	Superswollen Ultrasoft Polyelectrolyte Microcapsules. *Macromolecules*, **2005**, 38, 8066-8070	5.5	22
60	Electro-osmotic flow in hydrophobic nanochannels. *Physical Chemistry Chemical Physics*, **2019**, 21, 23036-23043	3.6	21
59	Effective hydrodynamic boundary conditions for microtextured surfaces. *Physical Review E*, **2013**, 87, 011002	2.4	21
58	Regimes of wetting transitions on superhydrophobic textures conditioned by energy of receding contact lines. *Applied Physics Letters*, **2015**, 106, 241601	3.4	20
57	Flows and mixing in channels with misaligned superhydrophobic walls. *Physical Review E*, **2015**, 91, 033020	2.4	20
56	Enhanced slip properties of lubricant-infused grooves. *Physical Review E*, **2018**, 98,	2.4	20
55	Dendrimer-encapsulated gold nanoparticles as building blocks for multilayer microshells. *Polymer*, **2007**, 48, 5024-5029	3.9	19
54	Spatial distribution of polyelectrolyte and counterions in nanocapsules: a computer simulation study. *Physical Review E*, **2006**, 73, 021801	2.4	19
53	Elastohydrodynamic Collision of Two Spheres Allowing Slip on Their Surfaces. *Journal of Colloid and Interface Science*, **2000**, 221, 1-12	9.3	19
52	Flow of a liquid in a nonuniformly hydrophobized capillary. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1996**, 108, 173-179	5.1	19
51	Principles of transverse flow fractionation of microparticles in superhydrophobic channels. *Lab on A Chip*, **2015**, 15, 2835-41	7.2	18

50	Hydrodynamic resistance of close-approached slip surfaces with a nanoasperity or an entrapped nanobubble. *Physical Review E*, **2005**, 72, 066306	2.4	17
49	Attractive Forces between Surfaces: What Can and Cannot Be Learned from a Jump-In Study with the Surface Forces Apparatus?. *Langmuir*, **2001**, 17, 1604-1607	4	17
48	Flow in channels with superhydrophobic trapezoidal textures. *Soft Matter*, **2013**, 9, 11671	3.6	16
47	Electrostatic interaction of heterogeneously charged surfaces with semipermeable membranes. *Faraday Discussions*, **2013**, 166, 317-29	3.6	14
46	Electro-osmotic equilibria for a semipermeable shell filled with a solution of polyions. *Journal of Chemical Physics*, **2007**, 126, 094901	3.9	14
45	THF-induced stiffening of polyelectrolyte/phosphorus dendrimer multilayer microcapsules. *Polymer*, **2010**, 51, 4525-4529	3.9	13
44	Osmotic pressure acting on a semipermeable shell immersed in a solution of polyions. *Journal of Chemical Physics*, **2008**, 129, 244707	3.9	13
43	A Study of the Linear Tension Effect on the Polystyrene Microsphere Wettability with Water. *Colloid Journal*, **2001**, 63, 518-525	1.1	13
42	Extremely Long-Range Light-Driven Repulsion of Porous Microparticles. *Langmuir*, **2020**, 36, 6994-7004	4	12
41	Probing effective slippage on superhydrophobic stripes by atomic force microscopy. *Soft Matter*, **2016**, 12, 6910-7	3.6	12
40	Effective slippage on superhydrophobic trapezoidal grooves. *Journal of Chemical Physics*, **2013**, 139, 174708	3.9	12
39	Lattice-Boltzmann simulations of the drag force on a sphere approaching a superhydrophobic striped plane. *Journal of Chemical Physics*, **2014**, 140, 034707	3.9	11
38	Dynamics and stability of dispersions of polyelectrolyte-filled multilayer microcapsules. *Journal of Chemical Physics*, **2007**, 126, 244901	3.9	11
37	On the attachment of hydrophobic particles to a bubble on their collision. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **1994**, 82, 247-254	5.1	11
36	Electrostatic interaction of neutral semi-permeable membranes. *Journal of Chemical Physics*, **2012**, 136, 034902	3.9	10
35	Stability of toroid and rodlike globular structures of a single stiff-chain macromolecule for different bending potentials. *Physical Review E*, **2006**, 73, 051804	2.4	10
34	Electrostatic interactions and electro-osmotic properties of semipermeable surfaces. *Journal of Chemical Physics*, **2016**, 145, 164703	3.9	10
33	Electrophoresis of Janus particles: A molecular dynamics simulation study. *Journal of Chemical Physics*, **2016**, 145, 244704	3.9	10

32	Interactions of neutral semipermeable shells in asymmetric electrolyte solutions. *Soft Matter*, **2012**, 8, 9428	3.6	9
31	The wimple: A rippled deformation of a wetting film during its drainage. *Physics of Fluids*, **2007**, 19, 061702	4.4	9
30	Disjoining pressure of an electrolyte film confined between semipermeable membranes. *Journal of Chemical Physics*, **2014**, 141, 074902	3.9	8
29	Advective superdiffusion in superhydrophobic microchannels. *Physical Review E*, **2017**, 96, 033109	2.4	8
28	Achieving large zeta-potentials with charged porous surfaces. *Physics of Fluids*, **2020**, 32, 102105	4.4	7
27	Thermal softening of superswollen polyelectrolyte microcapsules. *Soft Matter*, **2011**, 7, 2705	3.6	7
26	Possible implications of hydrophobic slippage on the dynamic measurements of hydrophobic forces. *Journal of Physics Condensed Matter*, **1996**, 8, 9491-9495	1.8	7
25	A qualitative theory of wimples in wetting films. *Langmuir*, **2005**, 21, 12090-2	4	7
24	Interaction of Elastic Bodies via Surface Forces. 1. Power-Law Attraction. *Langmuir*, **2002**, 18, 5126-5132	4	7
23	Boundary conditions at the gas sectors of superhydrophobic grooves. *Physical Review Fluids*, **2018**, 3,	2.8	7
22	Inertial migration of oblate spheroids in a plane channel. *Physics of Fluids*, **2020**, 32, 112017	4.4	7
21	Continuous electroosmotic sorting of particles in grooved microchannels. *Soft Matter*, **2017**, 13, 7498-7504	3.6	6
20	Ripples in a wetting film formed by a moving meniscus. *Physical Review E*, **2008**, 78, 031602	2.4	6
19	Studying intermolecular processes in thin surface layers with microcantilever transducers. Formation of protein fibrils on a solid support. *Protection of Metals*, **2008**, 44, 535-541		5
18	Inertial migration of neutrally buoyant particles in superhydrophobic channels. *Physical Review Fluids*, **2020**, 5,	2.8	5
17	Ionic equilibria and swelling of soft permeable particles in electrolyte solutions. *Soft Matter*, **2020**, 16, 929-938	3.6	5
16	Flow-driven collapse of lubricant-infused surfaces. *Journal of Fluid Mechanics*, **2020**, 901,	3.7	5
15	Star polymers as unit cells for coarse-graining cross-linked networks. *Physical Review E*, **2018**, 97, 032504	2.4	4

14	Electrostatic stretching of a charged vesicle. *Langmuir*, **2006**, 22, 9418-26	4	4
13	Self-assembled monolayers on mercury probed in a modified surface force apparatus. *Journal of Physical Chemistry B*, **2006**, 110, 25931-40	3.4	4
12	Interaction of elastic bodies via surface forces. 2. Exponential decay. *Journal of Colloid and Interface Science*, **2003**, 268, 464-75	9.3	4
11	Methods for analysis of the AFM images of thin films of block copolymers. *Protection of Metals and Physical Chemistry of Surfaces*, **2009**, 45, 105-108	0.9	3
10	Electro-osmotic properties of porous permeable films. *Physical Review Fluids*, **2020**, 5,	2.8	3
9	Surface and zeta potentials of charged permeable nanocoatings. *Journal of Chemical Physics*, **2021**, 154, 164701	3.9	3
8	Light-induced manipulation of passive and active microparticles. *European Physical Journal E*, **2021**, 44, 50	1.5	3
7	Boris Vladimirovich Derjaguin (1902-1994). *Journal of Colloid and Interface Science*, **1994**, 168, 273	9.3	2
6	Application of Tunable-Slip Boundary Conditions in Particle-Based Simulations **2015**, 19-30		2
5	Charged Semi-Permeable Shell with Encapsulated Polyions: Concentration Profile, Surface Potential, and Electrostatic Pressure. *Macromolecular Symposia*, **2007**, 252, 149-154	0.8	1
4	Instability of particle inertial migration in shear flow. *Physics of Fluids*, **2021**, 33, 092008	4.4	1
3	Self-diffusiophoresis of Janus particles that release ions. *Physics of Fluids*, **2022**, 34, 032011	4.4	1
2	Enhanced transport of ions by tuning surface properties of the nanochannel. *Physical Review E*, **2021**, 104, 035107	2.4	0
1	Accurate Solutions to Non-Linear PDEs Underlying a Propulsion of Catalytic Microswimmers. *Mathematics*, **2022**, 10, 1503	2.3	0