Olga I Vinogradova

List of Publications by Year
in descending order

121 papers	5,900 citations	53660 45 h-index	79541 73 g-index
124 all docs	124 docs citations	124 times ranked	3461 citing authors

#	Article	IF	Citations
1	Drainage of a Thin Liquid Film Confined between Hydrophobic Surfaces. Langmuir, 1995, 11, 2213-2220.	1.6	527
2	Slippage of water over hydrophobic surfaces. International Journal of Mineral Processing, 1999, 56, 31-60.	2.6	391
3	Tensorial hydrodynamic slip. Journal of Fluid Mechanics, 2008, 613, 125-134.	1.4	172
4	Dynamic Effects on Force Measurements. 2. Lubrication and the Atomic Force Microscope. Langmuir, 2003, 19, 1227-1234.	1.6	171
5	Effective slip in pressure-driven flow past super-hydrophobic stripes. Journal of Fluid Mechanics, 2010, 652, 489-499.	1.4	142
6	Effective Slip over Superhydrophobic Surfaces in Thin Channels. Physical Review Letters, 2009, 102, 026001.	2.9	139
7	Submicrocavity Structure of Water between Hydrophobic and Hydrophilic Walls as Revealed by Optical Cavitation. Journal of Colloid and Interface Science, 1995, 173, 443-447.	5.0	127
8	Wetting, roughness and flow boundary conditions. Journal of Physics Condensed Matter, 2011, 23, 184104.	0.7	122
9	Interaction Forces between Hydrophobic Surfaces. Attractive Jump as an Indication of Formation of â€œStableâ€•Submicrocavities. Journal of Physical Chemistry B, 2000, 104, 3407-3410.	1.2	118
10	Surface roughness and hydrodynamic boundary conditions. Physical Review E, 2006, 73, 045302.	0.8	118
11	Elasticity of polyelectrolyte multilayer microcapsules. Journal of Chemical Physics, 2004, 120, 3822-3826.	1.2	117
12	Direct Measurements of Hydrophobic Slippage Using Double-Focus Fluorescence Cross-Correlation. Physical Review Letters, 2009, 102, 118302.	2.9	112
13	Hydrodynamic slippage inferred from thin film drainage measurements in a solution of nonadsorbing polymer. Journal of Chemical Physics, 2000, 112, 6424-6433.	1.2	106
14	Deformation Properties of Nonadhesive Polyelectrolyte Microcapsules Studied with the Atomic Force Microscope. Journal of Physical Chemistry B, 2003, 107, 2735-2740.	1.2	103
15	Superhydrophobic Textures for Microfluidics. Mendeleev Communications, 2012, 22, 229-236.	0.6	103
16	Anisotropic electro-osmotic flow over super-hydrophobic surfaces. Journal of Fluid Mechanics, 2010, 644, 245-255.	1.4	100
17	Effect of Salts and Dissolved Gas on Optical Cavitation near Hydrophobic and Hydrophilic Surfaces. Langmuir, 1997, 13, 3024-3028.	1.6	95
18	Young's Modulus of Polyelectrolyte Multilayers from Microcapsule Swelling. Macromolecules, 2004, 37, 1113-1117.	2.2	94

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19	Dynamic effects on force measurements. I. Viscous drag on the atomic force microscope cantilever. Review of Scientific Instruments, 2001, 72, 2330-2339.	0.6	88
20	Flow profile near a wall measured by double-focus fluorescence cross-correlation. Physical Review E, 2003, 67, 056313.	0.8	83
21	Mechanical properties of polyelectrolyte multilayer microcapsules. Journal of Physics Condensed Matter, 2004, 16, R1105-R1134.	0.7	83
22	Effect of pH and Salt on the Stiffness of Polyelectrolyte Multilayer Microcapsules. Langmuir, 2004, 20, 2874-2878.	1.6	83
23	Electrohydrodynamics Near Hydrophobic Surfaces. Physical Review Letters, 2015, 114, 118301.	2.9	82
24	Electro-osmosis on Anisotropic Superhydrophobic Surfaces. Physical Review Letters, 2011, 107, 098301.	2.9	76
25	Multilayer DNA/Poly(allylamine hydrochloride) Microcapsules:Â Assembly and Mechanical Properties. Biomacromolecules, 2005, 6, 1495-1502.	2.6	74
26	MECHANICAL BEHAVIOR AND CHARACTERIZATION OF MICROCAPSULES. Annual Review of Materials Research, 2006, 36, 143-178.	4.3	72
27	Mechanical Properties of Polyelectrolyte Microcapsules Filled with a Neutral Polymer. Macromolecules, 2003, 36, 2832-2837.	2.2	69
28	Forces between polystyrene surfaces in waterâ€“electrolyte solutions: Long-range attraction of two types?. Journal of Chemical Physics, 2001, 114, 8124-8131.	1.2	68
29	Manipulation of small particles at solid liquid interface: light driven diffusioosmosis. Scientific Reports, 2016, 6, 36443.	1.6	67
30	Boundary slip as a result of a prewetting transition. Journal of Chemical Physics, 2003, 119, 13106-13112.	1.2	65
31	Inertial focusing of finite-size particles in microchannels. Journal of Fluid Mechanics, 2018, 840, 613-630.	1.4	59
32	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.	2.3	57
33	Hydrophobicity, specific ion adsorption and reactivity. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1997, 123-124, 7-12.	2.3	57
34	Capillary bridging and long-range attractive forces in a mean-field approach. Journal of Chemical Physics, 2004, 121, 4414-4423.	1.2	57
35	Salt softening of polyelectrolyte multilayer microcapsules. Journal of Colloid and Interface Science, 2005, 284, 455-462.	5.0	57
36	Interaction and Adhesion Properties of Polyelectrolyte Multilayers. Langmuir, 2005, 21, 7545-7550.	1.6	56

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37	pH-Controlled Swelling of Polyelectrolyte Multilayer Microcapsules. Journal of Physical Chemistry B, 2004, 108, 8161-8165.	1.2	55
38	Assembly and Mechanical Properties of Phosphorus Dendrimer/Polyelectrolyte Multilayer Microcapsules. Langmuir, 2005, 21, 7200-7206.	1.6	55
39	Effect of Organic Solvent on the Permeability and Stiffness of Polyelectrolyte Multilayer Microcapsules. Macromolecules, 2005, 38, 5214-5222.	2.2	55
40	Random-Roughness Hydrodynamic Boundary Conditions. Physical Review Letters, 2010, 105, 016001.	2.9	55
41	Contact angles on hydrophobic microparticles at waterâ€“air and waterâ€“hexadecane interfaces. Journal of Adhesion Science and Technology, 2000, 14, 1783-1799.	1.4	54
42	Effective slip boundary conditions for arbitrary one-dimensional surfaces. Journal of Fluid Mechanics, 2012, 706, 108-117.	1.4	52
43	Tensorial slip of superhydrophobic channels. Physical Review E, 2012, 85, 016324.	0.8	51
44	Comparative Analysis of Hollow and Filled Polyelectrolyte Microcapsules Templated on Melamine Formaldehyde and Carbonate Cores. Macromolecular Chemistry and Physics, 2004, 205, 530-535.	1.1	50
45	Implications of Hydrophobic Slippage for the Dynamic Measurements of Hydrophobic Forces. Langmuir, 1998, 14, 2827-2837.	1.6	47
46	Gas cushion model and hydrodynamic boundary conditions for superhydrophobic textures. Physical Review E, 2014, 90, 043017.	0.8	44
47	Hydrodynamic Interaction of Curved Bodies Allowing Slip on Their Surfaces. Langmuir, 1996, 12, 5963-5968.	1.6	42
48	The â€œWimpleâ€•Â Rippled Deformation of a Fluid Drop Caused by Hydrodynamic and Surface Forces during Thin Film Drainage. Langmuir, 2005, 21, 8243-8249.	1.6	41
49	Analysis of plastic deformation in atomic force microscopy: Application to ice. Journal of Chemical Physics, 2000, 113, 1194-1203.	1.2	40
50	Transverse flow in thin superhydrophobic channels. Physical Review E, 2010, 82, 055301.	0.8	39
51	Contact angle hysteresis on superhydrophobic stripes. Journal of Chemical Physics, 2014, 141, 074710.	1.2	38
52	Mechanical Properties of Polyelectrolyte-Filled Multilayer Microcapsules Studied by Atomic Force and Confocal Microscopy. Langmuir, 2004, 20, 10685-10690.	1.6	35
53	Investigation of Molecular Weight and Aging Effects on the Stiffness of Polyelectrolyte Multilayer Microcapsules. Macromolecules, 2004, 37, 7736-7741.	2.2	35
54	Anisotropic flow in striped superhydrophobic channels. Journal of Chemical Physics, 2012, 136, 194706.	1.2	34

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55	Drag force on a sphere moving toward an anisotropic superhydrophobic plane. Physical Review E, 2011, 84, 026330.	0.8	32
56	Electro-osmotic flow in hydrophobic nanochannels. Physical Chemistry Chemical Physics, 2019, 21, 23036-23043.	1.3	32
57	Coagulation of Hydrophobic and Hydrophilic Solids under Dynamic Conditions. Journal of Colloid and Interface Science, 1995, 169, 306-312.	5.0	31
58	Effect of Dendrimer Generation on the Assembly and Mechanical Properties of DNA/Phosphorus Dendrimer Multilayer Microcapsules. Macromolecules, 2006, 39, 5479-5483.	2.2	31
59	Enhanced slip properties of lubricant-infused grooves. Physical Review E, 2018, 98, .	0.8	30
60	Principles of transverse flow fractionation of microparticles in superhydrophobic channels. Lab on A Chip, 2015, 15, 2835-2841.	3.1	29
61	Effective slip-length tensor for a flow over weakly slipping stripes. Physical Review E, 2013, 88, 023004.	0.8	28
62	Hydrodynamic interaction with super-hydrophobic surfaces. Soft Matter, 2010, 6, 4563.	1.2	27
63	Flow past superhydrophobic surfaces with cosine variation in local slip length. Physical Review E, 2013, 87, 023005.	0.8	27
64	Superswollen Ultrasoft Polyelectrolyte Microcapsules. Macromolecules, 2005, 38, 8066-8070.	2.2	22
65	Effective hydrodynamic boundary conditions for microtextured surfaces. Physical Review E, 2013, 87, 011002.	0.8	22
66	Elastohydrodynamic Collision of Two Spheres Allowing Slip on Their Surfaces. Journal of Colloid and Interface Science, 2000, 221, 1-12.	5.0	21
67	Regimes of wetting transitions on superhydrophobic textures conditioned by energy of receding contact lines. Applied Physics Letters, 2015, 106, 241601.	1.5	21
68	Flows and mixing in channels with misaligned superhydrophobic walls. Physical Review E, 2015, 91, 033020.	0.8	21
69	Flow of a liquid in a nonuniformly hydrophobized capillary. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1996, 108, 173-179.	2.3	20
70	Spatial distribution of polyelectrolyte and counterions in nanocapsules: A computer simulation study. Physical Review E, 2006, 73, 021801.	0.8	20
71	Dendrimer-encapsulated gold nanoparticles as building blocks for multilayer microshells. Polymer, 2007, 48, 5024-5029.	1.8	20
72	Attractive Forces between Surfaces:â€‰ What Can and Cannot Be Learned from a Jump-In Study with the Surface Forces Apparatus?. Langmuir, 2001, 17, 1604-1607.	1.6	18

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73	Flow in channels with superhydrophobic trapezoidal textures. Soft Matter, 2013, 9, 11671.	1.2	18
74	Electrophoresis of Janus particles: A molecular dynamics simulation study. Journal of Chemical Physics, 2016, 145, 244704.	1.2	18
75	Inertial migration of oblate spheroids in a plane channel. Physics of Fluids, 2020, 32, .	1.6	18
76	Inertial migration of neutrally buoyant particles in superhydrophobic channels. Physical Review Fluids, 2020, 5, .	1.0	18
77	Hydrodynamic resistance of close-approached slip surfaces with a nanoasperity or an entrapped nanobubble. Physical Review E, 2005, 72, 066306.	0.8	17
78	Achieving large zeta-potentials with charged porous surfaces. Physics of Fluids, 2020, 32, .	1.6	17
79	Extremely Long-Range Light-Driven Repulsion of Porous Microparticles. Langmuir, 2020, 36, 6994-7004.	1.6	17
80	A Study of the Linear Tension Effect on the Polystyrene Microsphere Wettability with Water. Colloid Journal, 2001, 63, 518-525.	0.5	15
81	Flow-driven collapse of lubricant-infused surfaces. Journal of Fluid Mechanics, 2020, 901, .	1.4	15
82	Electro-osmotic equilibria for a semipermeable shell filled with a solution of polyions. Journal of Chemical Physics, 2007, 126, 094901.	1.2	14
83	Electrostatic interaction of heterogeneously charged surfaces with semipermeable membranes. Faraday Discussions, 2013, 166, 317.	1.6	14
84	Probing effective slippage on superhydrophobic stripes by atomic force microscopy. Soft Matter, 2016, 12, 6910-6917.	1.2	14
85	Dynamics and stability of dispersions of polyelectrolyte-filled multilayer microcapsules. Journal of Chemical Physics, 2007, 126, 244901.	1.2	13
86	Osmotic pressure acting on a semipermeable shell immersed in a solution of polyions. Journal of Chemical Physics, 2008, 129, 244707.	1.2	13
87	THF-induced stiffening of polyelectrolyte/phosphorus dendrimer multilayer microcapsules. Polymer, 2010, 51, 4525-4529.	1.8	13
88	Light-induced manipulation of passive and active microparticles. European Physical Journal E, 2021, 44, 50.	0.7	13
89	Boundary conditions at the gas sectors of superhydrophobic grooves. Physical Review Fluids, 2018, 3, .	1.0	13
90	Effective slippage on superhydrophobic trapezoidal grooves. Journal of Chemical Physics, 2013, 139, 174708.	1.2	12

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91	Lattice-Boltzmann simulations of the drag force on a sphere approaching a superhydrophobic striped plane. Journal of Chemical Physics, 2014, 140, 034707.	1.2	12
92	On the attachment of hydrophobic particles to a bubble on their collision. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1994, 82, 247-254.	2.3	11
93	The wimple: A rippled deformation of a wetting film during its drainage. Physics of Fluids, 2007, 19, 061702.	1.6	11
94	Electrostatic interaction of neutral semi-permeable membranes. Journal of Chemical Physics, 2012, 136, 034902.	1.2	11
95	Electrostatic interactions and electro-osmotic properties of semipermeable surfaces. Journal of Chemical Physics, 2016, 145, 164703.	1.2	11
96	Stability of toroid and rodlike globular structures of a single stiff-chain macromolecule for different bending potentials. Physical Review E, 2006, 73, 051804.	0.8	10
97	Continuous electroosmotic sorting of particles in grooved microchannels. Soft Matter, 2017, 13, 7498-7504.	1.2	10
98	Possible implications of hydrophobic slippage on the dynamic measurements of hydrophobic forces. Journal of Physics Condensed Matter, 1996, 8, 9491-9495.	0.7	9
99	Interactions of neutral semipermeable shells in asymmetric electrolyte solutions. Soft Matter, 2012, 8, 9428.	1.2	9
100	Disjoining pressure of an electrolyte film confined between semipermeable membranes. Journal of Chemical Physics, 2014, 141, 074902.	1.2	9
101	Self-diffusiophoresis of Janus particles that release ions. Physics of Fluids, 2022, 34, .	1.6	9
102	Thermal softening of superswollen polyelectrolyte microcapsules. Soft Matter, 2011, 7, 2705.	1.2	8
103	Advective superdiffusion in superhydrophobic microchannels. Physical Review E, 2017, 96, 033109.	0.8	8
104	Surface and zeta potentials of charged permeable nanocoatings. Journal of Chemical Physics, 2021, 154, 164701.	1.2	8
105	Electro-osmotic properties of porous permeable films. Physical Review Fluids, 2020, 5, .	1.0	8
106	Interaction of Elastic Bodies via Surface Forces. 1. Power-Law Attraction. Langmuir, 2002, 18, 5126-5132.	1.6	7
107	A Qualitative Theory of Wimples in Wetting Films. Langmuir, 2005, 21, 12090-12092.	1.6	7
108	Ripples in a wetting film formed by a moving meniscus. Physical Review E, 2008, 78, 031602.	0.8	7

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109	Enhanced transport of ions by tuning surface properties of the nanochannel. Physical Review E, 2021, 104, 035107.	0.8	7
110	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.	0.2	6
111	Ionic equilibria and swelling of soft permeable particles in electrolyte solutions. Soft Matter, 2020, 16, 929-938.	1.2	6
112	Interaction of elastic bodies via surface forces. Journal of Colloid and Interface Science, 2003, 268, 464-475.	5.0	4
113	Electrostatic Stretching of a Charged Vesicle. Langmuir, 2006, 22, 9418-9426.	1.6	4
114	Self-Assembled Monolayers on Mercury Probed in a Modified Surface Force Apparatus. Journal of Physical Chemistry B, 2006, 110, 25931-25940.	1.2	4
115	Star polymers as unit cells for coarse-graining cross-linked networks. Physical Review E, 2018, 97, 032504.	0.8	4
116	Boris Vladimirovich Derjaguin (1902-1994). Journal of Colloid and Interface Science, 1994, 168, 273.	5.0	3
117	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.	0.3	3
118	Instability of particle inertial migration in shear flow. Physics of Fluids, 2021, 33, .	1.6	3
119	Accurate Solutions to Non-Linear PDEs Underlying a Propulsion of Catalytic Microswimmers. Mathematics, 2022, 10, 1503.	1.1	2
120	Charged Semi-Permeable Shell with Encapsulated Polyions: Concentration Profile, Surface Potential, and Electrostatic Pressure. Macromolecular Symposia, 2007, 252, 149-154.	0.4	1
121	Obituary. Boris Vladimirovich Derjaguin. Langmuir, 1994, 10, 4735-4736.	1.6	0