Leonid Ionov

List of Publications by Year
in descending order

123 papers	7,977 citations	36303 51 h-index	49909 87 g-index
129 all docs	129 docs citations	129 times ranked	8755 citing authors

#	Article	IF	Citations
1	Hydrogel-based actuators: possibilities and limitations. Materials Today, 2014, 17, 494-503.	14.2	544
2	Biomimetic Hydrogelâ€Based Actuating Systems. Advanced Functional Materials, 2013, 23, 4555-4570.	14.9	411
3	4D Biofabrication Using Shapeâ€Morphing Hydrogels. Advanced Materials, 2017, 29, 1703443.	21.0	315
4	Self-folding all-polymer thermoresponsive microcapsules. Soft Matter, 2011, 7, 3277.	2.7	313
5	Unusual and Superfast Temperatureâ€Triggered Actuators. Advanced Materials, 2015, 27, 4865-4870.	21.0	246
6	Shape-Programmed Folding of Stimuli-Responsive Polymer Bilayers. ACS Nano, 2012, 6, 3925-3934.	14.6	236
7	Soft microorigami: self-folding polymer films. Soft Matter, 2011, 7, 6786.	2.7	220
8	Stimuli-Responsive Bicomponent Polymer Janus Particles by â€œGrafting fromâ€/â€œGrafting toâ€• Approaches. Macromolecules, 2008, 41, 9669-9676.	4.8	192
9	Polymeric Actuators. Langmuir, 2015, 31, 5015-5024.	3.5	160
10	Reversible Chemical Patterning on Stimuli-Responsive Polymer Film:â€‰ Environment-Responsive Lithography. Journal of the American Chemical Society, 2003, 125, 8302-8306.	13.7	158
11	Smart Microfluidic Channels. Advanced Functional Materials, 2006, 16, 1153-1160.	14.9	157
12	Hierarchical Multiâ€Step Folding of Polymer Bilayers. Advanced Functional Materials, 2013, 23, 2295-2300.	14.9	144
13	Temperature controlled encapsulation and release using partially biodegradable thermo-magneto-sensitive self-rolling tubes. Soft Matter, 2010, 6, 2633.	2.7	140
14	Stimuliâ€Responsive Microjets with Reconfigurable Shape. Angewandte Chemie - International Edition, 2014, 53, 2673-2677.	13.8	139
15	Materials for Smart Soft Actuator Systems. Chemical Reviews, 2022, 122, 1349-1415.	47.7	131
16	Surface functionalization by smart coatings: Stimuli-responsive binary polymer brushes. Progress in Organic Coatings, 2006, 55, 168-174.	3.9	127
17	Lightâ€Responsive Shapeâ€Changing Polymers. Advanced Optical Materials, 2019, 7, 1900067.	7.3	126
18	Reversible Switching of Microtubule Motility Using Thermoresponsive Polymer Surfaces. Nano Letters, 2006, 6, 1982-1987.	9.1	123

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19	Inverse and Reversible Switching Gradient Surfaces from Mixed Polyelectrolyte Brushes. Langmuir, 2004, 20, 9916-9919.	3.5	114
20	Water-Repellent Textile via Decorating Fibers with Amphiphilic Janus Particles. ACS Applied Materials & Interfaces, 2011, 3, 1216-1220.	8.0	112
21	Self-healing superhydrophobic materials. Physical Chemistry Chemical Physics, 2012, 14, 10497.	2.8	111
22	Fully Biodegradable Self-Rolled Polymer Tubes: A Candidate for Tissue Engineering Scaffolds. Biomacromolecules, 2011, 12, 2211-2215.	5.4	106
23	Gradient Mixed Brushes:â€‰ â€œGrafting Toâ€• Approach. Macromolecules, 2004, 37, 7421-7423.	4.8	104
24	Shape-changing polymers for biomedical applications. Journal of Materials Chemistry B, 2019, 7, 1597-1624.	5.8	103
25	Gradient Polymer Layers byâ€œGrafting Toâ€• Approach. Macromolecular Rapid Communications, 2004, 25, 360-365.	3.9	100
26	Fast and Spatially Resolved Environmental Probing Using Stimuli-Responsive Polymer Layers and Fluorescent Nanocrystals. Advanced Materials, 2006, 18, 1453-1457.	21.0	99
27	Actuating Fibers: Design and Applications. ACS Applied Materials & Interfaces, 2016, 8, 24281-24294.	8.0	86
28	Actively-moving materials based on stimuli-responsive polymers. Journal of Materials Chemistry, 2010, 20, 3382.	6.7	83
29	Nanoporous Cathodes for High-Energy Liâ€"S Batteries from Gyroid Block Copolymer Templates. ACS Nano, 2015, 9, 6147-6157.	14.6	82
30	4D Biofabrication: Materials, Methods, and Applications. Advanced Healthcare Materials, 2018, 7, e1800412.	7.6	80
31	Holeâ€Programmed Superfast Multistep Folding of Hydrogel Bilayers. Advanced Functional Materials, 2016, 26, 7733-7739.	14.9	77
32	Environment-Friendly Photolithography Using Poly(<i>N</i>-isopropylacrylamide)-Based Thermoresponsive Photoresists. Journal of the American Chemical Society, 2009, 131, 13315-13319.	13.7	73
33	Mixed Polymer Brushes with Locking Switching. ACS Applied Materials & Interfaces, 2012, 4, 483-489.	8.0	72
34	Reversible Thermosensitive Biodegradable Polymeric Actuators Based on Confined Crystallization. Nano Letters, 2015, 15, 1786-1790.	9.1	72
35	Biodegradable Selfâ€Folding Polymer Films with Controlled Thermoâ€Triggered Folding. Advanced Functional Materials, 2014, 24, 4357-4363.	14.9	69
36	Synthesis of Robust Raspberry-like Particles Using Polymer Brushes. Langmuir, 2011, 27, 3006-3011.	3.5	66

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37	Size Sorting of Protein Assemblies Using Polymeric Gradient Surfaces. Nano Letters, 2005, 5, 1910-1914.	9.1	65
38	Biocompatible polymeric materials with switchable adhesion properties. Soft Matter, 2010, 6, 5907.	2.7	64
39	3D Microfabrication using Stimuli-Responsive Self-Folding Polymer Films. Polymer Reviews, 2013, 53, 92-107.	10.9	62
40	4D Biofabrication Using a Combination of 3D Printing and Melt-Electrowriting of Shape-Morphing Polymers. ACS Applied Materials & Interfaces, 2021, 13, 12767-12776.	8.0	62
41	Biomimetic 3D self-assembling biomicroconstructs by spontaneous deformation of thin polymer films. Journal of Materials Chemistry, 2012, 22, 19366.	6.7	60
42	Platelet Janus Particles with Hairy Polymer Shells for Multifunctional Materials. ACS Applied Materials & Interfaces, 2014, 6, 13106-13114.	8.0	59
43	Actuating Porous Polyimide Films. ACS Applied Materials & Interfaces, 2014, 6, 10072-10077.	8.0	59
44	Porous Stimuli-Responsive Self-Folding Electrospun Mats for 4D Biofabrication. Biomacromolecules, 2017, 18, 3178-3184.	5.4	58
45	Engineering of Ultraâ€Hydrophobic Functional Coatings Using Controlled Aggregation of Bicomponent Core/Shell Janus Particles. Advanced Functional Materials, 2011, 21, 2338-2344.	14.9	56
46	4D Biofabrication: 3D Cell Patterning Using Shapeâ€Changing Films. Advanced Functional Materials, 2018, 28, 1706248.	14.9	55
47	In Situ Infrared Ellipsometric Study of Stimuli-Responsive Mixed Polyelectrolyte Brushes. Analytical Chemistry, 2007, 79, 7676-7682.	6.5	54
48	4D biofabrication of skeletal muscle microtissues. Biofabrication, 2020, 12, 015016.	7.1	54
49	A comparative study on switchable adhesion between thermoresponsive polymer brushes on flat and rough surfaces. Soft Matter, 2011, 7, 5691.	2.7	52
50	Highly Efficient Phase Boundary Biocatalysis with Enzymogel Nanoparticles. Angewandte Chemie - International Edition, 2014, 53, 483-487.	13.8	52
51	Chemical and Structural Changes in a pH-Responsive Mixed Polyelectrolyte Brush Studied by Infrared Ellipsometry. Langmuir, 2009, 25, 10987-10991.	3.5	49
52	Surfaces with Self-repairable Ultrahydrophobicity Based on Self-organizing Freely Floating Colloidal Particles. Langmuir, 2012, 28, 3679-3682.	3.5	49
53	Studying Kinesin Motors by Optical 3D-Nanometry in Gliding Motility Assays. Methods in Cell Biology, 2010, 95, 247-271.	1.1	47
54	Temperatureâ€Induced Sizeâ€Control of Bioactive Surface Patterns. Advanced Functional Materials, 2008, 18, 1501-1508.	14.9	44

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55	Thermophilic films and fibers from photo cross-linkable UCST-type polymers. Polymer Chemistry, 2015, 6, 2769-2776.	3.9	44
56	Hybrid Hairy Janus Particles for Anti-Icing and De-Icing Surfaces: Synergism of Properties and Effects. Chemistry of Materials, 2016, 28, 6995-7005.	6.7	44
57	Stimuli-responsive command polymer surface for generation of protein gradients. Biointerphases, 2009, 4, FA45-FA49.	1.6	43
58	Heavy Meromyosin Molecules Extending More Than 50 nm above Adsorbing Electronegative Surfaces. Langmuir, 2010, 26, 9927-9936.	3.5	43
59	Microfabrication Using Shapeâ€Transforming Soft Materials. Advanced Functional Materials, 2020, 30, 1908028.	14.9	43
60	Stimuli-Responsive Mixed Grafted Polymer Films with Gradually Changing Properties:Â Direct Determination of Chemical Composition. Langmuir, 2005, 21, 8711-8716.	3.5	42
61	Antiâ€Icing Superhydrophobic Surfaces Based on Coreâ€Shell Fossil Particles. Advanced Materials Interfaces, 2015, 2, 1500124.	3.7	42
62	Simple and Fast Method for the Fabrication of Switchable Bicomponent Micropatterned Polymer Surfaces. Langmuir, 2007, 23, 5205-5209.	3.5	41
63	Wetting on Fractal Superhydrophobic Surfaces from â€œCoreâ˜'Shellâ€• Particles: A Comparison of Theory and Experiment. Langmuir, 2009, 25, 3132-3136.	3.5	41
64	Reversibly Cross-Linkable Thermoresponsive Self-Folding Hydrogel Films. Langmuir, 2015, 31, 4552-4557.	3.5	41
65	3D Nanometer Tracking of Motile Microtubules on Reflective Surfaces. Small, 2009, 5, 1732-1737.	10.0	39
66	Protein-Resistant Polymer Coatings Based on Surface-Adsorbed Poly(aminoethyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 Td (methacr	5.4	39
67	Porous carbon materials for Liâ€"S batteries based on resorcinolâ€"formaldehyde resin with inverse opal structure. Journal of Power Sources, 2014, 261, 363-370.	7.8	39
68	4D Biofabrication of fibrous artificial nerve graft for neuron regeneration. Biofabrication, 2020, 12, 035027.	7.1	38
69	Wetting on Regularly Structured Surfaces from â€œCoreâ˜'Shellâ€• Particles: Theoretical Predictions and Experimental Findings. Langmuir, 2008, 24, 11895-11901.	3.5	36
70	Selfâ€Rolled Polymer Tubes: Novel Tools for Microfluidics, Microbiology, and Drugâ€Delivery Systems. Macromolecular Rapid Communications, 2011, 32, 1943-1952.	3.9	34
71	Bioinspired Microorigami by Selfâ€Folding Polymer Films. Macromolecular Chemistry and Physics, 2013, 214, 1178-1183.	2.2	34
72	Bienzymatic Sequential Reaction on Microgel Particles and Their Cofactor Dependent Applications. Biomacromolecules, 2016, 17, 1610-1620.	5.4	34

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73	Intelligent Materials with Adaptive Adhesion Properties Based on Comb-like Polymer Brushes. Langmuir, 2012, 28, 16444-16454.	3.5	33
74	Digital Light Processing Bioprinting Advances for Microtissue Models. ACS Biomaterials Science and Engineering, 2022, 8, 1381-1395.	5.2	33
75	Stimuli-responsive hierarchically self-assembled 3D porous polymer-based structures with aligned pores. Journal of Materials Chemistry B, 2013, 1, 1786.	5.8	31
76	Enhanced Activity of Acetyl CoA Synthetase Adsorbed on Smart Microgel: an Implication for Precursor Biosynthesis. ACS Applied Materials & Interfaces, 2015, 7, 1500-1507.	8.0	29
77	Reversibly Actuating Solid Janus Polymeric Fibers. ACS Applied Materials & Interfaces, 2017, 9, 4873-4881.	8.0	29
78	New insight into icing and de-icing properties of hydrophobic and hydrophilic structured surfaces based on coreâ€"shell particles. Soft Matter, 2015, 11, 9126-9134.	2.7	27
79	Biotemplated synthesis of stimuli-responsive nanopatterned polymer brushes on microtubules. Soft Matter, 2009, 5, 67-71.	2.7	25
80	Shape-Morphing Fibrous Hydrogel/Elastomer Bilayers Fabricated by a Combination of 3D Printing and Melt Electrowriting for Muscle Tissue Regeneration. ACS Applied Bio Materials, 2021, 4, 1720-1730.	4.6	24
81	Stimuliâ€Responsive Janus Particles. Particle and Particle Systems Characterization, 2013, 30, 922-930.	2.3	23
82	In-situ ATR-FTIR for characterization of thin biorelated polymer films. Thin Solid Films, 2014, 556, 1-8.	1.8	22
83	Anisotropic Liquid Microcapsules from Biomimetic Self-Folding Polymer Films. ACS Applied Materials & Interfaces, 2015, 7, 12367-12372.	8.0	22
84	Smart Coreâ€"Shell Microgel Support for Acetyl Coenzyme A Synthetase: A Step Toward Efficient Synthesis of Polyketide-Based Drugs. Biomacromolecules, 2014, 15, 2776-2783.	5.4	21
85	Separator for lithium-sulfur battery based on polymer blend membrane. Journal of Power Sources, 2017, 363, 384-391.	7.8	21
86	Switching and structuring of binary reactive polymer brush layers. Macromolecular Symposia, 2004, 210, 229-235.	0.7	20
87	Ultrathin responsive polyelectrolyte brushes studied by infrared synchrotron mapping ellipsometry. Applied Physics Letters, 2008, 92, .	3.3	20
88	Regular Patterned Surfaces from Core-Shell Particles. Preparation and Characterization. , 0, , 72-81.		19
89	Programmable Patterning of Protein Bioactivity by Visible Light. Nano Letters, 2014, 14, 4050-4057.	9.1	19
90	Effect of fibrous separators on the performance of lithiumâ€"sulfur batteries. Physical Chemistry Chemical Physics, 2017, 19, 11239-11248.	2.8	19

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91	Porous carbon prepared from polyacrylonitrile for lithium-sulfur battery cathodes using phase inversion technique. Polymer, 2018, 151, 171-178.	3.8	19
92	Self-Assembly Behavior of Hairy Colloidal Particles with Different Architectures: Mixed versus Janus. Langmuir, 2014, 30, 12765-12774.	3.5	18
93	Phase Inversion Strategy to Fabricate Porous Carbon for Liâ€S Batteries via Block Copolymer Selfâ€Assembly. Advanced Materials Interfaces, 2018, 5, 1701116.	3.7	18
94	Hierarchical Porous Carbon Cathode for Lithiumâ€"Sulfur Batteries Using Carbon Derived from Hybrid Materials Synthesized by Twin Polymerization. Particle and Particle Systems Characterization, 2018, 35, 1800364.	2.3	18
95	Ionically conductive polymer/ceramic separator for lithium-sulfur batteries. Energy Storage Materials, 2017, 9, 105-111.	18.0	17
96	Switchable Surfaces Based on Freely Floating Colloidal Particles. ACS Applied Materials & Interfaces, 2010, 2, 2944-2948.	8.0	15
97	Effect of Current Collector on Performance of Liâ€S Batteries. Advanced Materials Interfaces, 2017, 4, 1600811.	3.7	14
98	Two-Way Shape Memory Polymers: Evolution of Stress <i>vs</i> Evolution of Elongation. Macromolecules, 2021, 54, 5838-5847.	4.8	14
99	Polymer origami: programming the folding with shape. E-Polymers, 2014, 14, 109-114.	3.0	12
100	Controlled Retention and Release of Biomolecular Transport Systems Using Shapeâ€Changing Polymer Bilayers. Angewandte Chemie - International Edition, 2016, 55, 16106-16109.	13.8	12
101	Adaptive PEGâ€"PDMS Brushes: Effect of Architecture on Adhesiveness in Air and under Water. Macromolecules, 2014, 47, 8377-8385.	4.8	11
102	4D Origami by Smart Embroidery. Macromolecular Rapid Communications, 2017, 38, 1700213.	3.9	11
103	Soft Elastic Fibrous Scaffolds for Muscle Tissue Engineering by Touch Spinning. ACS Applied Bio Materials, 2021, 4, 5585-5597.	4.6	10
104	Mechanism of Behavior of Two-Way Shape Memory Polymer under Constant Strain Conditions. Macromolecules, 2022, 55, 1680-1689.	4.8	10
105	Single molecule investigation of complexes of oppositely charged bottle brushes. Soft Matter, 2013, 9, 359-364.	2.7	8
106	A thermo-, near-infrared light- and water-induced shape memory polymer with healing fatigued shape memory performance. Materials Chemistry Frontiers, 2022, 6, 1218-1227.	5.9	7
107	Sulfur X-ray absorption fine structure in porous Liâ€"S cathode films measured under argon atmospheric conditions. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 94-95, 22-26.	2.9	6
108	Mixed Polymer Brushes: Switching of Surface Behavior and Chemical Patterning at the Nanoscale. , 2005, , 403-425.		5

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109	Conductive Nanowires Templated by Molecular Brushes. ACS Applied Materials & Interfaces, 2015, 7, 23305-23309.	8.0	5
110	Smart Mechanically Tunable Surfaces with Shape Memory Behavior and Wetting-Programmable Topography. ACS Applied Materials & Interfaces, 2022, 14, 20208-20219.	8.0	5
111	Gradient Stimuli-Responsive Polymer Grafted Layers. ACS Symposium Series, 2005, , 68-83.	0.5	4
112	Controllable self-rolling of polyurethane/SiO2 film with differential density. European Polymer Journal, 2019, 119, 32-36.	5.4	4
113	Fibrous Scaffolds for Muscle Tissue Engineering Based on Touchâ€Spun Poly(Esterâ€Urethane) Elastomer. Macromolecular Bioscience, 2022, 22, e2100427.	4.1	4
114	Selfâ€Healing and Electrical Properties of Viscoelastic Polymerâ€"Carbon Blends. Macromolecular Rapid Communications, 2022, 43, e2200307.	3.9	4
115	Polymer Tubes by Rolling of Polymer Bilayers. Materials Research Society Symposia Proceedings, 2010, 1272, 1.	0.1	3
116	Shape-morphing architectures actuated by Janus fibers. Soft Matter, 2020, 16, 2086-2092.	2.7	3
117	Controlled Retention and Release of Biomolecular Transport Systems Using Shapeâ€Changing Polymer Bilayers. Angewandte Chemie, 2016, 128, 16340-16343.	2.0	2
118	Effect of Architecture of Thermoresponsive Copolymer Brushes on Switching of Their Adsorption Properties. Macromolecular Chemistry and Physics, 2019, 220, 1900030.	2.2	2
119	Chemical and Biological-Ecological Aspects of Risk Assessment for Lewisite Destruction. , 2006, , 217-221.		1
120	Preface: Forum on Novel Stimuli-Responsive Materials for 3D Printing. ACS Applied Materials & Interfaces, 2021, 13, 12637-12638.	8.0	1
121	Heavy Meromyosin Head-Surface Distance and Geometrical Arrangement on a Silanized Surface. Biophysical Journal, 2010, 98, 146a.	0.5	0
122	Soft Microorigami: Stimuli-Responsive Self-Folding Polymer Films. Advances in Science and Technology, 2012, 77, 348-353.	0.2	0
123	Soft Microorigami: Stimuli-Responsive Self-Folding Polymer Films. Materials Research Society Symposia Proceedings, 2012, 1403, 202.	0.1	0