Shivaprakash N Ramakrishna

List of Publications by Year
in descending order

63 papers	2,078 citations	159358 30 h-index	243296 44 g-index
68 all docs	68 docs citations	68 times ranked	2059 citing authors

#	Article	IF	Citations
1	Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes. Angewandte Chemie - International Edition, 2016, 55, 15583-15588.	7.2	149
2	Roughness-dependent tribology effects on discontinuous shear thickening. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5117-5122.	3.3	116
3	Chemical Design of Nonâ€Ionic Polymer Brushes as Biointerfaces: Poly(2â€oxazine)s Outperform Both Poly(2â€oxazoline)s and PEG. Angewandte Chemie - International Edition, 2018, 57, 11667-11672.	7.2	110
4	Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes. Angewandte Chemie - International Edition, 2017, 56, 4507-4511.	7.2	86
5	Topology Effects on the Structural and Physicochemical Properties of Polymer Brushes. Macromolecules, 2017, 50, 7760-7769.	2.2	86
6	Controlling Adhesion Force by Means of Nanoscale Surface Roughness. Langmuir, 2011, 27, 9972-9978.	1.6	84
7	Functionalized wood with tunable tribopolarity for efficient triboelectric nanogenerators. Matter, 2021, 4, 3049-3066.	5.0	66
8	Fabrication and Interfacial Properties of Polymer Brush Gradients by Surface-Initiated Cu(0)-Mediated Controlled Radical Polymerization. Macromolecules, 2017, 50, 2436-2446.	2.2	61
9	Design and characterization of ultrastable, biopassive and lubricious cyclic poly(2-alkyl-2-oxazoline) brushes. Polymer Chemistry, 2018, 9, 2580-2589.	1.9	56
10	Loops and Cycles at Surfaces: The Unique Properties of Topological Polymer Brushes. Chemistry - A European Journal, 2017, 23, 12433-12442.	1.7	55
11	Crosslinking Polymer Brushes with Ethylene Glycol-Containing Segments: Influence on Physicochemical and Antifouling Properties. Langmuir, 2016, 32, 10317-10327.	1.6	51
12	Layering of ionic liquids on rough surfaces. Nanoscale, 2016, 8, 4094-4106.	2.8	48
13	Controlled Crosslinking Is a Tool To Precisely Modulate the Nanomechanical and Nanotribological Properties of Polymer Brushes. Macromolecules, 2017, 50, 2932-2941.	2.2	45
14	Polymer Topology Determines the Formation of Protein Corona on Coreâ€“Shell Nanoparticles. ACS Nano, 2020, 14, 12708-12718.	7.3	45
15	Stratified Polymer Grafts: Synthesis and Characterization of Layered â€˜Brushâ€™ and â€˜Gelâ€™ Structures. Advanced Materials Interfaces, 2014, 1, 1300007.	1.9	44
16	The Role of Cu⁰ in Surface-Initiated Atom Transfer Radical Polymerization: Tuning Catalyst Dissolution for Tailoring Polymer Interfaces. Macromolecules, 2018, 51, 6825-6835.	2.2	44
17	Topological Polymer Chemistry Enters Materials Science: Expanding the Applicability of Cyclic Polymers. ACS Macro Letters, 2020, 9, 1024-1033.	2.3	44
18	Exploring the roles of roughness, friction and adhesion in discontinuous shear thickening by means of thermo-responsive particles. Nature Communications, 2021, 12, 1477.	5.8	44

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19	Poly(acrylamide) films at the solvent-induced glass transition: adhesion, tribology, and the influence of crosslinking. Soft Matter, 2012, 8, 9092.	1.2	43
20	Study of Adhesion and Friction Properties on a Nanoparticle Gradient Surface: Transition from JKR to DMT Contact Mechanics. Langmuir, 2013, 29, 175-182.	1.6	42
21	Stemâ€Cell Clinging by a Thread: AFM Measure of Polymerâ€Brush Lateral Deformation. Advanced Materials Interfaces, 2016, 3, 1500456.	1.9	40
22	Ultrathin, freestanding, stimuli-responsive, porous membranes from polymer hydrogel-brushes. Nanoscale, 2015, 7, 13017-13025.	2.8	39
23	Surface Density Variation within Cyclic Polymer Brushes Reveals Topology Effects on Their Nanotribological and Biopassive Properties. ACS Macro Letters, 2018, 7, 1455-1460.	2.3	39
24	Adhesion and Friction Properties of Polymer Brushes on Rough Surfaces: A Gradient Approach. Langmuir, 2013, 29, 15251-15259.	1.6	38
25	Exploring Lubrication Regimes at the Nanoscale: Nanotribological Characterization of Silica and Polymer Brushes in Viscous Solvents. Langmuir, 2013, 29, 10149-10158.	1.6	37
26	Amplified Responsiveness of Multilayered Polymer Grafts: Synergy between Brushes and Hydrogels. Macromolecules, 2015, 48, 7106-7116.	2.2	36
27	Hairy and Slippery Polyoxazoline-Based Copolymers on Model and Cartilage Surfaces. Biomacromolecules, 2018, 19, 680-690.	2.6	36
28	Mixing Poly(ethylene glycol) and Poly(2-alkyl-2-oxazoline)s Enhances Hydration and Viscoelasticity of Polymer Brushes and Determines Their Nanotribological and Antifouling Properties. ACS Applied Materials & Interfaces, 2018, 10, 41839-41848.	4.0	36
29	Understanding the effect of hydrophobic protecting blocks on the stability and biopassivity of polymer brushes in aqueous environments: A TiramisÃ¹ for cell-culture applications. Polymer, 2016, 98, 470-480.	1.8	33
30	Surface-grafted assemblies of cyclic polymers: Shifting between high friction and extreme lubricity. European Polymer Journal, 2019, 110, 301-306.	2.6	33
31	Probing the frictional properties of soft materials at the nanoscale. Nanoscale, 2020, 12, 2292-2308.	2.8	29
32	Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes. Angewandte Chemie, 2016, 128, 15812-15817.	1.6	27
33	Load and Velocity Dependence of Friction Mediated by Dynamics of Interfacial Contacts. Physical Review Letters, 2019, 123, 116102.	2.9	26
34	Lubrication of Si-Based Tribopairs with a Hydrophobic Ionic Liquid: The Multiscale Influence of Water. Journal of Physical Chemistry C, 2018, 122, 7331-7343.	1.5	23
35	Brushes, Graft Copolymers, or Bottlebrushes? The Effect of Polymer Architecture on the Nanotribological Properties of Grafted-from Assemblies. Langmuir, 2019, 35, 11255-11264.	1.6	23
36	Functional Nanoassemblies of Cyclic Polymers Show Amplified Responsiveness and Enhanced Protein-Binding Ability. ACS Nano, 2020, 14, 10054-10067.	7.3	23

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37	Effects of Lateral Deformation by Thermoresponsive Polymer Brushes on the Measured Friction Forces. Langmuir, 2017, 33, 4164-4171.	1.6	22
38	Understanding Complex Tribofilms by Means of H₃BO₃â€“B₂O₃ Model Glasses. Langmuir, 2018, 34, 2219-2234.	1.6	22
39	Comblike Polymers with Topologically Different Side Chains for Surface Modification: Assembly Process and Interfacial Physicochemical Properties. Macromolecules, 2019, 52, 1632-1641.	2.2	22
40	Dispersity within Brushes Plays a Major Role in Determining Their Interfacial Properties: The Case of Oligoxazoline-Based Graft Polymers. Journal of the American Chemical Society, 2021, 143, 19067-19077.	6.6	21
41	Bioinert and Lubricious Surfaces by Macromolecular Design. Langmuir, 2019, 35, 13521-13535.	1.6	19
42	Fabrication of Biopassive Surfaces Using Poly(2â€alkylâ€2â€oxazoline)s: Recent Progresses and Applications. Advanced Materials Interfaces, 2020, 7, 2000943.	1.9	15
43	Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes. Angewandte Chemie, 2017, 129, 4578-4582.	1.6	14
44	Tuning Surface Mechanical Properties by Amplified Polyelectrolyte Self-Assembly: Where â€œGrafting-fromâ€• Meets â€œGrafting-toâ€•. ACS Applied Materials & Interfaces, 2013, 5, 4913-4920.	4.0	12
45	Magnetic propulsion of colloidal microrollers controlled by electrically modulated friction. Soft Matter, 2021, 17, 1037-1047.	1.2	12
46	Single-Molecule AFM Study of DNA Damage by ¹O₂ Generated from Photoexcited C₆₀. Journal of Physical Chemistry Letters, 2020, 11, 7819-7826.	2.1	10
47	Versatile method for AFM-tip functionalization with biomolecules: fishing a ligand by means of an in situ click reaction. Nanoscale, 2015, 7, 6599-6606.	2.8	9
48	Gradient nanocomposite printing by dip pen nanolithography. Composites Science and Technology, 2017, 138, 186-200.	3.8	8
49	Indenting polymer brushes of varying grafting density in a viscous fluid: A gradient approach to understanding fluid confinement. Polymer, 2019, 169, 115-123.	1.8	8
50	Topology and Molecular Architecture of Polyelectrolytes Determine Their pH-Responsiveness When Assembled on Surfaces. ACS Macro Letters, 2021, 10, 90-97.	2.3	8
51	Chemical Design of Nonâ€Ionic Polymer Brushes as Biointerfaces: Poly(2â€oxazine)s Outperform Both Poly(2â€oxazoline)s and PEG. Angewandte Chemie, 2018, 130, 11841-11846.	1.6	6
52	Engineering Lubricious, Biopassive Polymer Brushes by Surface-Initiated, Controlled Radical Polymerization. Industrial & Engineering Chemistry Research, 2018, 57, 4600-4606.	1.8	5
53	KAT Ligation for Rapid and Facile Covalent Attachment of Biomolecules to Surfaces. ACS Applied Materials & Interfaces, 2021, 13, 29113-29121.	4.0	5
54	Facile tuning of the mechanical properties of a biocompatible soft material. Scientific Reports, 2019, 9, 7125.	1.6	4

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55	Cell Adhesion: Stemâ€Cell Clinging by a Thread: AFM Measure of Polymerâ€Brush Lateral Deformation (Adv. Mater. Interfaces 3/2016). Advanced Materials Interfaces, 2016, 3, .	1.9	2
56	An Intensive Short Course on Atomic-Force Microscopy. , 0, , .		2
57	Polymeric Thin Films: Stratified Polymer Grafts: Synthesis and Characterization of Layered â€˜Brushâ€™ and â€˜Gelâ€™ Structures (Adv. Mater. Interfaces 1/2014). Advanced Materials Interfaces, 2014, 1, n/a-n/a.	1.9	1
58	Titelbild: Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes (Angew. Chem. 50/2016). Angewandte Chemie, 2016, 128, 15671-15671.	1.6	1
59	Berichtigung: Topological Polymer Chemistry Enters Surface Science: Linear versus Cyclic Polymer Brushes. Angewandte Chemie, 2017, 129, 2272-2272.	1.6	1
60	Lateral Deformability of Polymer Brushes by AFM-Based Method. Chimia, 2015, 69, 709.	0.3	0
61	RÃ¼cktitelbild: Nextâ€Generation Polymer Shells for Inorganic Nanoparticles are Highly Compact, Ultraâ€Dense, and Longâ€Lasting Cyclic Brushes (Angew. Chem. 16/2017). Angewandte Chemie, 2017, 129, 4702-4702.	1.6	0
62	Frontispiece: Loops and Cycles at Surfaces: The Unique Properties of Topological Polymer Brushes. Chemistry - A European Journal, 2017, 23, .	1.7	0
63	Reactive-Oxygen-Species-Mediated Surface Oxidation of Single-Molecule DNA Origami by an Atomic Force Microscope Tip-Mounted C60 Photocatalyst. ACS Nano, 2021, , .	7.3	0