Vincent Ball

List of Publications by Year
in descending order

123 papers	6,738 citations	61857 43 h-index	64668 79 g-index
124 all docs	124 docs citations	124 times ranked	6854 citing authors

#	Article	IF	Citations
1	Polydopamine and Eumelanin: From Structureâ€“Property Relationships to a Unified Tailoring Strategy. Accounts of Chemical Research, 2014, 47, 3541-3550.	7.6	514
2	Dopamineâˆ'Melanin Film Deposition Depends on the Used Oxidant and Buffer Solution. Langmuir, 2011, 27, 2819-2825.	1.6	478
3	Kinetics of polydopamine film deposition as a function of pH and dopamine concentration: Insights in the polydopamine deposition mechanism. Journal of Colloid and Interface Science, 2012, 386, 366-372.	5.0	330
4	Characterization of Dopamineâˆ'Melanin Growth on Silicon Oxide. Journal of Physical Chemistry C, 2009, 113, 8234-8242.	1.5	322
5	From Exponential to Linear Growth in Polyelectrolyte Multilayers. Langmuir, 2006, 22, 4376-4383.	1.6	273
6	Oxidant Control of Polydopamine Surface Chemistry in Acids: A Mechanism-Based Entry to Superhydrophilic-Superoleophobic Coatings. Chemistry of Materials, 2016, 28, 4697-4705.	3.2	255
7	Dynamic Aspects of Films Prepared by a Sequential Deposition of Species: Perspectives for Smart and Responsive Materials. Advanced Materials, 2011, 23, 1191-1221.	11.1	213
8	Buildup of Exponentially Growing Multilayer Polypeptide Films with Internal Secondary Structure. Langmuir, 2003, 19, 440-445.	1.6	181
9	Relationship between the Growth Regime of Polyelectrolyte Multilayers and the Polyanion/Polycation Complexation Enthalpy. Journal of Physical Chemistry B, 2006, 110, 19443-19449.	1.2	180
10	Polydopamine Nanomaterials: Recent Advances in Synthesis Methods and Applications. Frontiers in Bioengineering and Biotechnology, 2018, 6, 109.	2.0	166
11	Self-Assembly of Tetramers of 5,6-Dihydroxyindole Explains the Primary Physical Properties of Eumelanin: Experiment, Simulation, and Design. ACS Nano, 2013, 7, 1524-1532.	7.3	145
12	Buffer dependence of refractive index increments of protein solutions. Biopolymers, 1998, 46, 489-492.	1.2	143
13	Deposition Mechanism and Properties of Thin Polydopamine Films for High Added Value Applications in Surface Science at the Nanoscale. BioNanoScience, 2012, 2, 16-34.	1.5	139
14	Excitonic effects from geometric order and disorder explain broadband optical absorption in eumelanin. Nature Communications, 2014, 5, 3859.	5.8	127
15	Multicompartment Films Made of Alternate Polyelectrolyte Multilayers of Exponential and Linear Growth. Langmuir, 2004, 20, 7298-7302.	1.6	119
16	Protein adsorption on dopamineâ€“melanin films: Role of electrostatic interactions inferred from Î¶-potential measurements versus chemisorption. Journal of Colloid and Interface Science, 2010, 344, 54-60.	5.0	118
17	Complexation of phosphocholine liposomes with polylysine. Stabilization by surface coverage versus aggregation. Biochimica Et Biophysica Acta - Biomembranes, 2007, 1768, 280-290.	1.4	116
18	Diffusion of Polyphosphates into (Poly(allylamine)-montmorillonite) Multilayer Films: Flame Retardant-Intumescent Films with Improved Oxygen Barrier. Langmuir, 2011, 27, 13879-13887.	1.6	104

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19	Structural Basis of Polydopamine Film Formation: Probing 5,6-Dihydroxyindole-Based Eumelanin Type Units and the Porphyrin Issue. ACS Applied Materials & Interfaces, 2018, 10, 7670-7680.	4.0	96
20	Embedded Silver Ions-Containing Liposomes in Polyelectrolyte Multilayers: Cargos Films for Antibacterial Agents. Langmuir, 2008, 24, 10209-10215.	1.6	92
21	Reversible Loading and Unloading of Nanoparticles in â€œExponentiallyâ€•Growing Polyelectrolyte LBL Films. Journal of the American Chemical Society, 2008, 130, 3748-3749.	6.6	85
22	Polydopamine at biological interfaces. Advances in Colloid and Interface Science, 2022, 305, 102689.	7.0	81
23	Step-by-Step Assembly of Self-Patterning Polyelectrolyte Films Violating (Almost) All Rules of Layer-by-Layer Deposition. Journal of the American Chemical Society, 2010, 132, 8264-8265.	6.6	79
24	Comparison of Synthetic Dopamineâ€"Eumelanin Formed in the Presence of Oxygen and Cu²⁺ Cations as Oxidants. Langmuir, 2013, 29, 12754-12761.	1.6	75
25	Different synthesis methods allow to tune the permeability and permselectivity of dopamineâ€"melanin films to electrochemical probes. Electrochimica Acta, 2011, 56, 3914-3919.	2.6	74
26	The reduction of Ag+ in metallic silver on pseudomelanin films allows for antibacterial activity but does not imply unpaired electrons. Journal of Colloid and Interface Science, 2011, 364, 359-365.	5.0	73
27	Effect of the Supporting Electrolyte Anion on the Thickness of PSS/PAH Multilayer Films and on Their Permeability to an Electroactive Probe. Langmuir, 2009, 25, 2282-2289.	1.6	72
28	Polydopamine Films from the Forgotten Air/Water Interface. Journal of Physical Chemistry Letters, 2014, 5, 3436-3440.	2.1	67
29	Hole formation induced by ionic strength increase in exponentially growing multilayer films. Soft Matter, 2009, 5, 2269.	1.2	65
30	Polydopamine films and particles with catalytic activity. Catalysis Today, 2018, 301, 196-203.	2.2	65
31	Melaninâ€Containing Films: Growth from Dopamine Solutions versus Layerâ€byâ€Layer Deposition. ChemPhysChem, 2010, 11, 3299-3305.	1.0	63
32	Use of dopamine polymerisation to produce free-standing membranes from (PLL-HA)n exponentially growing multilayer films. Soft Matter, 2008, 4, 1621.	1.2	62
33	Polyphenols at interfaces. Advances in Colloid and Interface Science, 2018, 257, 31-41.	7.0	62
34	Polydopamine as a stable and functional nanomaterial. Colloids and Surfaces B: Biointerfaces, 2020, 186, 110719.	2.5	62
35	Swelling and Contraction of Ferrocyanide-Containing Polyelectrolyte Multilayers upon Application of an Electric Potential. Langmuir, 2008, 24, 13668-13676.	1.6	60
36	Stiffening of Soft Polyelectrolyte Architectures by Multilayer Capping Evidenced by Viscoelastic Analysis of AFM Indentation Measurements. Journal of Physical Chemistry C, 2007, 111, 8299-8306.	1.5	58

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37	Antibacterial Peptide-Based Gel for Prevention of Medical Implanted-Device Infection. PLoS ONE, 2015, 10, e0145143.	1.1	57
38	Tuning heterogeneous poly(dopamine) structures and mechanics: in silico covalent cross-linking and thin film nanoindentation. Soft Matter, 2014, 10, 457-464.	1.2	55
39	Human serum albumin and other proteins as templating agents for the synthesis of nanosized dopamine-eumelanin. Journal of Colloid and Interface Science, 2014, 414, 97-102.	5.0	52
40	Persistence of dopamine and small oxidation products thereof in oxygenated dopamine solutions and in â€œpolydopamineâ€•films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 443, 540-543.	2.3	46
41	Role of surfactants in the control of dopamineâ€“eumelanin particle size and in the inhibition of film deposition at solidâ€“liquid interfaces. Journal of Colloid and Interface Science, 2014, 431, 176-179.	5.0	46
42	Boric Acid as an Efficient Agent for the Control of Polydopamine Self-Assembly and Surface Properties. ACS Applied Materials & Interfaces, 2018, 10, 7574-7580.	4.0	46
43	Layer-by-layer deposition of tannic acid and Fe 3+ cations is of electrostatic nature but almost ionic strength independent at pH 5. Journal of Colloid and Interface Science, 2015, 450, 119-126.	5.0	45
44	Turbidity diagrams of polyanion/polycation complexes in solution as a potential tool to predict the occurrence of polyelectrolyte multilayer deposition. Journal of Colloid and Interface Science, 2010, 346, 163-171.	5.0	44
45	Free standing membranes made of biocompatible polyelectrolytes using the layer by layer method. Journal of Membrane Science, 2005, 253, 49-56.	4.1	43
46	Polymer-free electrospinning of tannic acid and cross-linking in water for hybrid supramolecular nanofibres. Nanoscale, 2018, 10, 9164-9173.	2.8	40
47	Degradation of polydopamine coatings by sodium hypochlorite: A process depending on the substrate and the film synthesis method. Polymer Degradation and Stability, 2012, 97, 1844-1849.	2.7	39
48	Physicochemical perspective on â€œpolydopamineâ€•and â€œpoly(catecholamine)â€•films for their applications in biomaterial coatings (Review). Biointerphases, 2014, 9, 030801.	0.6	39
49	Polyelectrolytes to produce nanosized polydopamine. Journal of Colloid and Interface Science, 2016, 469, 184-190.	5.0	37
50	Effect of the Buffer on the Buildup and Stability of Tannic Acid/Collagen Multilayer Films Applied as Antibacterial Coatings. ACS Applied Materials & Interfaces, 2020, 12, 22601-22612.	4.0	35
51	Tunable Synthesis of Prussian Blue in Exponentially Growing Polyelectrolyte Multilayer Films. Langmuir, 2009, 25, 14030-14036.	1.6	33
52	Polyphenols in Dental Applications. Bioengineering, 2020, 7, 72.	1.6	31
53	Activity of alkaline phosphatase adsorbed and grafted on â€œpolydopamineâ€•films. Journal of Colloid and Interface Science, 2014, 429, 1-7.	5.0	29
54	Astrochemistry and Astrobiology: Materials Sciencein Wonderland?. International Journal of Molecular Sciences, 2019, 20, 4079.	1.8	29

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55	Incorporation of Alkaline Phosphatase into Layer-by-Layer Polyelectrolyte Films on the Surface of Affi-Gel Heparin Beads: Physicochemical Characterization and Evaluation of the Enzyme Stability. Biomacromolecules, 2003, 4, 1255-1263.	2.6	28
56	Slow complexation dynamics between linear short polyphosphates and polyallylamines: analogies with â€œlayer-by-layerâ€• deposits. Physical Chemistry Chemical Physics, 2012, 14, 3048.	1.3	27
57	Deposition of Aminomalononitrile-Based Films: Kinetics, Chemistry, and Morphology. Langmuir, 2019, 35, 9896-9903.	1.6	26
58	Tannic acid speeds up the setting of mineral trioxide aggregate cements and improves its surface and bulk properties. Journal of Colloid and Interface Science, 2021, 589, 318-326.	5.0	26
59	Deposition kinetics and electrochemical properties of tannic acid on gold and silica. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 491, 12-17.	2.3	24
60	Restructuring of exponentially growing polyelectrolyte multilayer films induced by salt concentration variations after film deposition. Journal of Materials Chemistry, 2011, 21, 8416.	6.7	23
61	Polyoxometalates in Polyelectrolyte Multilayer Films: Direct Loading of [H7P8W48O184]33Ã¢Â€Â“vs. Diffusion into the Film. European Journal of Inorganic Chemistry, 2009, 2009, 5115-5124.	1.0	22
62	Nature of the Polyanion Governs the Antimicrobial Properties of Poly(arginine)/Polyanion Multilayer Films. Chemistry of Materials, 2017, 29, 3195-3201.	3.2	22
63	Polydopamine/Transferrin Hybrid Nanoparticles for Targeted Cell-Killing. Nanomaterials, 2018, 8, 1065.	1.9	22
64	Mimicking the Chemistry of Natural Eumelanin Synthesis: The KE Sequence in Polypeptides and in Proteins Allows for a Specific Control of Nanosized Functional Polydopamine Formation. Biomacromolecules, 2018, 19, 3693-3704.	2.6	22
65	Composite and free standing PANI-PVA membranes as flexible and stable optical pH sensors. Sensors and Actuators B: Chemical, 2014, 192, 769-775.	4.0	21
66	Polydopamine deposition at fluid interfaces. Polymer International, 2016, 65, 1251-1257.	1.6	21
67	Robust Alginate-Catechol@Polydopamine Free-Standing Membranes Obtained from the Water/Air Interface. Langmuir, 2017, 33, 2420-2426.	1.6	21
68	Polydopamine as a promising candidate for the design of high performance and corrosion-tolerant polymer electrolyte fuel cell electrodes. Journal of Power Sources, 2016, 307, 569-577.	4.0	19
69	Multilayered films made from tannic acid and alkaline phosphatase with enzymatic activity and electrochemical behavior. Journal of Colloid and Interface Science, 2018, 512, 722-729.	5.0	18
70	Antibacterial and Bonding Properties of Universal Adhesive Dental Polymers Doped with Pyrogallol. Polymers, 2021, 13, 1538.	2.0	18
71	Associating oriented polyaniline and eumelanin in a reactive layer-by-layer manner: Composites with high electrical conductivity. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 434, 118-125.	2.3	16
72	Determination of the extinction coefficient of â€œpolydopamineâ€• films obtained by using NaIO4 as the oxidant. Materials Chemistry and Physics, 2017, 186, 546-551.	2.0	16

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73	Hexamethylenediamine-Mediated Polydopamine Film Deposition: Inhibition by Resorcinol as a Strategy for Mapping Quinone Targeting Mechanisms. Frontiers in Chemistry, 2019, 7, 407.	1.8	16
74	Films and Materials Derived from Aminomalononitrile. Processes, 2021, 9, 82.	1.3	16
75	Large distribution in the Donnan potential of hexacyanoferrate anions permeating in and partially dissolving (PAH-HA)n polyelectrolyte multilayer films. Soft Matter, 2011, 7, 1819.	1.2	15
76	Organic and Inorganic Dyes in Polyelectrolyte Multilayer Films. Materials, 2012, 5, 2681-2704.	1.3	15
77	Stabilization of [poly(allylamine)â€“tannic acid]_n multilayer films in acidic and basic conditions after crosslinking with NaIO₄. RSC Advances, 2015, 5, 55920-55925.	1.7	15
78	Stable Bioactive Enzyme-Containing Multilayer Films Based on Covalent Cross-Linking from Mussel-Inspired Adhesives. Langmuir, 2015, 31, 12447-12454.	1.6	15
79	Electrochemical deposition of aminomalonitrile based films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 552, 124-129.	2.3	15
80	The Possibility of Obtaining Films by Single Sedimentation of Polyelectrolyte Complexes. Industrial & Engineering Chemistry Research, 2013, 52, 5691-5699.	1.8	14
81	Oxidant-dependent antioxidant activity of polydopamine films: The chemistry-morphology interplay. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 614, 126134.	2.3	14
82	Dual role of tannic acid and pyrogallol incorporated in plaster of Paris: Morphology modification and release for antimicrobial properties. Materials Science and Engineering C, 2021, 127, 112209.	3.8	14
83	Composite Materials and Films Based on Melanins, Polydopamine, and Other Catecholamine-Based Materials. Biomimetics, 2017, 2, 12.	1.5	13
84	Antioxidant activity of films inspired by prebiotic chemistry. Materials Letters, 2021, 285, 129050.	1.3	13
85	A Clean and Tunable Mussel-Inspired Coating Technology by Enzymatic Deposition of Pseudo-Polydopamine (Ïˆ-PDA) Thin Films from Tyramine. International Journal of Molecular Sciences, 2020, 21, 4873.	1.8	12
86	Enzymatically Active Polydopamine @ Alkaline Phosphatase Nanoparticles Produced by NaIO4 Oxidation of Dopamine. Biomimetics, 2018, 3, 36.	1.5	11
87	Polyarginine Decorated Polydopamine Nanoparticles With Antimicrobial Properties for Functionalization of Hydrogels. Frontiers in Bioengineering and Biotechnology, 2020, 8, 982.	2.0	11
88	Polyelectrolyte multilayer films made from polyallylamine and short polyphosphates: Influence of the surface treatment, ionic strength and nature of the electrolyte solution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 415, 274-280.	2.3	10
89	Multilayer films made from poly(allylamine) and phosphorous containing polyoxometalates: Focus on the zeta potential. Journal of Colloid and Interface Science, 2013, 409, 166-173.	5.0	10
90	Polydopamine Functionalization: A Smart and Efficient Way to Improve Host Responses to e-PTFE Implants. Frontiers in Chemistry, 2019, 7, 482.	1.8	10

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91	Exothermicâ€"Endothermic Transition in the Titration of Poly(allylamine chloride) with Sodium Hexametaphoshate Associated with a Change in the Proton Release Regime. Journal of Physical Chemistry B, 2016, 120, 4732-4741.	1.2	9
92	Electrodeposition of pyrocatechol based films: Influence of potential scan rate, pyrocatechol concentration and pH. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 518, 109-115.	2.3	9
93	Impacts of Resveratrol and Pyrogallol on Physicochemical, Mechanical and Biological Properties of Epoxy-Resin Sealers. Bioengineering, 2022, 9, 85.	1.6	9
94	Hofmeister Effects of Monovalent Sodium Salts in the Gelation Kinetics of Gelatin. Journal of Physical Chemistry B, 2019, 123, 8405-8410.	1.2	8
95	Reactive Layer-by-Layer Deposition of Poly(ethylene imine) and a Precursor of TiO2: Influence of the Sodium Chloride Concentration on the Film Growth, Interaction with Hexacyanoferrate Anions, and Particle Distribution in the Film. Langmuir, 2011, 27, 7934-7943.	1.6	7
96	Anomalous permeation of the [P5W30O110]15âˆ' polyoxoanion in polyelectrolyte multilayer films. RSC Advances, 2012, 2, 3700.	1.7	7
97	Step-by-step deposition of synthetic dopamine-eumelanin and metal cations. Journal of Colloid and Interface Science, 2013, 405, 331-335.	5.0	7
98	Shear induced changes in the streaming potential of polyelectrolyte multilayer films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 464, 41-45.	2.3	7
99	Composite films of poly(allylamine)-capped polydopamine nanoparticles and P8W48 polyoxometalates with electroactive properties. Journal of Colloid and Interface Science, 2016, 481, 125-130.	5.0	7
100	Electrodeposition of coatings made from catecholamines, polyphenols and aminimalonitrile: Common features, perspectives and challenges. Progress in Organic Coatings, 2019, 131, 441-447.	1.9	7
101	Composite films of polydopamineâ€"Alcian Blue for colored coating with new physical properties. Journal of Colloid and Interface Science, 2015, 459, 29-35.	5.0	6
102	Changes in Permeability and in Mechanical Properties of Layer-by-Layer Films Made from Poly(allylamine) and Montmorillonite Postmodified upon Reaction with Dopamine. Biointerphases, 2012, 7, 59.	0.6	5
103	Deposition of polyelectrolyte multilayer films made from poly(diallyldimethyl ammonium chloride) and poly(4-styrene sulfonate): Influence of the NaCl concentration for films obtained by alternated spraying and alternated dipping. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 415, 77-85.	2.3	5
104	Donnan potential of polyelectrolyte multilayer films made from poly-l-glutamic/polyallylamine hydrochloride and the stability of hexacyanoferrate retained in the films. Physical Chemistry Chemical Physics, 2013, 15, 16249.	1.3	5
105	Optimization of the Elasticity and Adhesion of Catechol- or Dopamine-Loaded Gelatin Gels under Oxidative Conditions. Gels, 2022, 8, 210.	2.1	5
106	Electrodeposition of pyrogallol versus pyrocatechol using cyclic voltammetry and chronoamperometry. Journal of Electroanalytical Chemistry, 2022, 909, 116142.	1.9	5
107	Interaction of polyoxometalates with linear polyamines. Colloid and Polymer Science, 2013, 291, 1219-1226.	1.0	4
108	Polydopamine Coating To Stabilize a Free-Standing Lipid Bilayer for Channel Sensing. Langmuir, 2017, 33, 7256-7262.	1.6	4

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109	Electrodeposition from Tannic acid-polyamine blends at pHâ€¯=â€¯5.0 is due to aggregate deposition and oxidation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 578, 123530.	2.3	4
110	Buffer dependence of refractive index increments of protein solutions. , 1998, 46, 489.		4
111	Correlative Microscopy Insight on Electrodeposited Ultrathin Graphite Oxide Films. Journal of Physical Chemistry Letters, 2020, 11, 9117-9122.	2.1	3
112	Influence of the NaIO4 Concentration on the Gelation and the Adhesive Strength of Pyrocatechol/Pyrogallol Containing Gelatin Hydrogels. Frontiers in Materials, 2021, 8, .	1.2	3
113	Polydopamine Particles Effect on Melanoma Cells Proliferation and Melanin Secretion. Advances in Chemical Engineering and Science, 2013, 03, 1-10.	0.2	3
114	Non-covalent small molecule partnership for redox-active films: Beyond polydopamine technology. Journal of Colloid and Interface Science, 2022, 624, 400-410.	5.0	3
115	Phase Diagram of Sodium Hexametaphosphate and Poly(allylamine hydrochloride) Mixtures and In Situ Monitoring of Stepâ€byâ€Step Deposition in This Polyelectrolyte System. Macromolecular Chemistry and Physics, 2015, 216, 85-94.	1.1	2
116	Uniform trend in layer-by-layer deposition of heteropolytungstates. Journal of Colloid and Interface Science, 2019, 533, 771-778.	5.0	2
117	Adhesion of Resin to Lithium Disilicate with Different Surface Treatments before and after Salivary Contaminationâ€"An In-Vitro Study. Bioengineering, 2022, 9, 286.	1.6	2
118	Ionic Strength and Temperature Dependence of the Dilution Heat of Hexametaphosphate Sodium Salt. Journal of Solution Chemistry, 2016, 45, 840-848.	0.6	1
119	Kinetics of deposition and stability of pyrocatechol â€"FeIII coordinated films. Materials Science and Engineering C, 2017, 72, 620-624.	3.8	1
120	Ultra-slow diffusion of hexacyanoferrate anions in poly(diallyldimethyl ammonium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td (chlorid 2019, 539, 306-314.	5.0	1
121	One pot protein assisted deposition of pyrocatechol based functional films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 593, 124624.	2.3	1
122	Structure-controlled electrodeposition and electrochemical behavior of films from isomeric diphenols at the solid-liquid interface. Surfaces and Interfaces, 2022, 30, 101841.	1.5	1
123	Enzymatically active free standing membranes based on an easy two step preparation from alginate catechol and glucose oxidase/peroxidase. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 529, 508-512.	2.3	0