Ivan Donati

List of Publications by Year in descending order

99 papers	4,635 citations	117625 34 h-index	102487 66 g-index
101 all docs	101 docs citations	101 times ranked	6109 citing authors

#	Article	IF	Citations
1	Effect of Ca2+, Ba2+, and Sr2+ on Alginate Microbeads. Biomacromolecules, 2006, 7, 1471-1480.	5.4	696
2	Non-cytotoxic Silver Nanoparticle-Polysaccharide Nanocomposites with Antimicrobial Activity. Biomacromolecules, 2009, 10, 1429-1435.	5.4	377
3	New Hypothesis on the Role of Alternating Sequences in Calciumâ^'Alginate Gels. Biomacromolecules, 2005, 6, 1031-1040.	5.4	328
4	Alginate/Hydroxyapatite Biocomposite For Bone Ingrowth: A Trabecular Structure With High And Isotropic Connectivity. Biomacromolecules, 2009, 10, 1575-1583.	5.4	183
5	The aggregation of pig articular chondrocyte and synthesis of extracellular matrix by a lactose-modified chitosan. Biomaterials, 2005, 26, 987-998.	11.4	136
6	Adhesive and sealant interfaces for general surgery applications. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 626-639.	3.4	122
7	Silverâ€“polysaccharide nanocomposite antimicrobial coatings for methacrylic thermosets. Acta Biomaterialia, 2011, 7, 337-346.	8.3	120
8	Nano-composite scaffolds for bone tissue engineering containing silver nanoparticles: preparation, characterization and biological properties. Journal of Materials Science: Materials in Medicine, 2013, 24, 1799-1807.	3.6	114
9	Alginate/lactoseâ€modified chitosan hydrogels: A bioactive biomaterial for chondrocyte encapsulation. Journal of Biomedical Materials Research - Part A, 2008, 84A, 364-376.	4.0	103
10	On the Initial Binding of Alginate by Calcium Ions. The Tilted Egg-Box Hypothesis. Journal of Physical Chemistry B, 2013, 117, 7277-7282.	2.6	102
11	Concepts for Developing Physical Gels of Chitosan and of Chitosan Derivatives. Gels, 2018, 4, 67.	4.5	85
12	Material Properties of Alginates. Microbiology Monographs, 2009, , 1-53.	0.6	76
13	Mechanical Spectroscopy and Relaxometry on Alginate Hydrogels: A Comparative Analysis for Structural Characterization and Network Mesh Size Determination. Biomacromolecules, 2011, 12, 1272-1282.	5.4	73
14	Polysaccharide-Based Networks from Homogeneous Chitosan-Tripolyphosphate Hydrogels: Synthesis and Characterization. Biomacromolecules, 2014, 15, 3396-3405.	5.4	73
15	Synthesis, Characterization, and Preliminary Biological Study of Glycoconjugates of Poly(styrene-co-maleic acid). Biomacromolecules, 2002, 3, 805-812.	5.4	69
16	Use of Methacrylate-Modified Chitosan to Increase the Durability of Dentine Bonding Systems. Biomacromolecules, 2014, 15, 4606-4613.	5.4	65
17	Biological response of hydrogels embedding gold nanoparticles. Colloids and Surfaces B: Biointerfaces, 2011, 83, 331-339.	5.0	63
18	Cell-compatible covalently reinforced beads obtained from a chemoenzymatically engineered alginate. Biomaterials, 2006, 27, 4726-4737.	11.4	61

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19	Biological responses of silver-coated thermosets: An in vitro and in vivo study. Acta Biomaterialia, 2013, 9, 5088-5099.	8.3	60
20	Experimental Evidence of Counterion Affinity in Alginates: The Case of Nongelling Ion Mg²⁺. Journal of Physical Chemistry B, 2009, 113, 12877-12886.	2.6	57
21	Insight into the ionotropic gelation of chitosan using tripolyphosphate and pyrophosphate as cross-linkers. International Journal of Biological Macromolecules, 2016, 92, 476-483.	7.5	56
22	Polyol Synthesis of Silver Nanoparticles: Mechanism of Reduction by Alditol Bearing Polysaccharides. Biomacromolecules, 2009, 10, 210-213.	5.4	54
23	Alginate Polymerization and Modification Are Linked in Pseudomonas aeruginosa. MBio, 2015, 6, e00453-15.	4.1	53
24	Enhanced bioadhesivity of dopamine-functionalized polysaccharidic membranes for general surgery applications. Acta Biomaterialia, 2016, 44, 232-242.	8.3	53
25	Effect of Elongation of Alternating Sequences on Swelling Behavior and Large Deformation Properties of Natural Alginate Gels. Journal of Physical Chemistry B, 2009, 113, 12916-12922.	2.6	50
26	The role of Galectin-1 in the interaction between chondrocytes and a lactose-modified chitosan. Biomaterials, 2005, 26, 4975-4984.	11.4	49
27	Specific Interactions versus Counterion Condensation. 1. Nongelling Ions/Polyuronate Systems. Biomacromolecules, 2006, 7, 281-287.	5.4	45
28	Synergistic Effects in Semidilute Mixed Solutions of Alginate and Lactose-Modified Chitosan (Chitlac). Biomacromolecules, 2007, 8, 957-962.	5.4	45
29	Polysaccharide-Coated Thermosets for Orthopedic Applications: From Material Characterization to In Vivo Tests. Biomacromolecules, 2012, 13, 1564-1572.	5.4	43
30	Chitosan Acetylation Degree Influences the Physical Properties of Polysaccharide Nanoparticles: Implication for the Innate Immune Cells Response. ACS Applied Materials & Interfaces, 2019, 11, 9794-9803.	8.0	43
31	The role played by the molecular weight and acetylation degree in modulating the stiffness and elasticity of chitosan gels. Carbohydrate Polymers, 2018, 196, 405-413.	10.2	39
32	Galactose-Substituted Alginate:Â Preliminary Characterization and Study of Gelling Properties. Biomacromolecules, 2003, 4, 624-631.	5.4	37
33	Complex Coacervates between a Lactose-Modified Chitosan and Hyaluronic Acid as Radical-Scavenging Drug Carriers. Biomacromolecules, 2018, 19, 3936-3944.	5.4	37
34	Determination of the diadic composition of alginate by means of circular dichroism: a fast and accurate improved method. Carbohydrate Research, 2003, 338, 1139-1142.	2.3	36
35	Tailor-Made Alginate Bearing Galactose Moieties on Mannuronic Residues:Â Selective Modification Achieved by a Chemoenzymatic Strategy. Biomacromolecules, 2005, 6, 88-98.	5.4	35
36	Tuning Supramolecular Structuring at the Nanoscale Level:Â Nonstoichiometric Soluble Complexes in Dilute Mixed Solutions of Alginate and Lactose-Modified Chitosan (Chitlac). Biomacromolecules, 2007, 8, 1471-1479.	5.4	34

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37	Hyaluronan delivery by polymer demixing in polysaccharide-based hydrogels and membranes for biomedical applications. Carbohydrate Polymers, 2016, 150, 408-418.	10.2	34
38	Silverâ€“polysaccharide antimicrobial nanocomposite coating for methacrylic surfaces reduces Streptococcus mutans biofilm formation in vitro. Journal of Dentistry, 2015, 43, 1483-1490.	4.1	33
39	Specific Interactions versus Counterion Condensation. 2. Theoretical Treatment within the Counterion Condensation Theory. Biomacromolecules, 2006, 7, 1587-1596.	5.4	31
40	Alginateâ€“Hydroxyapatite Bone Scaffolds with Isotropic or Anisotropic Pore Structure: Material Properties and Biological Behavior. Macromolecular Materials and Engineering, 2015, 300, 989-1000.	3.6	29
41	Lactose-Modified Chitosan Gold(III)-PEGylated Complex-Bioconjugates: From Synthesis to Interaction with Targeted Galectin-1 Protein. Bioconjugate Chemistry, 2018, 29, 3352-3361.	3.6	29
42	Surface Modification and Polysaccharide Deposition on BisGMA/TEGDMA Thermoset. Biomacromolecules, 2010, 11, 583-592.	5.4	28
43	Exploiting natural polysaccharides to enhance in vitro bio-constructs of primary neurons and progenitor cells. Acta Biomaterialia, 2018, 73, 285-301.	8.3	28
44	On the Correlation between the Microscopic Structure and Properties of Phosphate-Cross-Linked Chitosan Gels. ACS Applied Materials & Interfaces, 2018, 10, 10761-10770.	8.0	28
45	Substrate Dissipation Energy Regulates Cell Adhesion and Spreading. Advanced Functional Materials, 2020, 30, 2001977.	14.9	27
46	Effect of sodium alginate molecular structure on electrospun membrane cell adhesion. Materials Science and Engineering C, 2021, 124, 112067.	7.3	27
47	Galactose-Substituted Alginate 2:Â Conformational Aspects. Biomacromolecules, 2004, 5, 186-196.	5.4	26
48	Terminal Sterilization of BisGMA-TEGDMA Thermoset Materials and Their Bioactive Surfaces by Supercritical CO₂. Biomacromolecules, 2012, 13, 1152-1160.	5.4	26
49	Glycosylated-Chitosan Derivatives: A Systematic Review. Molecules, 2020, 25, 1534.	3.8	26
50	Insight into the Molecular Properties of Chitlac, a Chitosan Derivative for Tissue Engineering. Journal of Physical Chemistry B, 2013, 117, 13578-13587.	2.6	25
51	Polyelectrolyte Study of the Calcium-Induced Chain Association of Pectateâ€. Biomacromolecules, 2006, 7, 3439-3447.	5.4	24
52	Albumin-directed stereoselective reduction of 1,3-diketones and Î²-hydroxyketones to anti diols. Organic and Biomolecular Chemistry, 2011, 9, 1987.	2.8	24
53	Highly monodisperse colloidal coacervates based on a bioactive lactose-modified chitosan: From synthesis to characterization. Carbohydrate Polymers, 2017, 174, 360-368.	10.2	23
54	In vitro antimicrobial properties of silverâ€“polysaccharide coatings on porous fiber-reinforced composites for bone implants. Journal of Materials Science: Materials in Medicine, 2013, 24, 2775-2785.	3.6	22

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55	Boric Acid Induced Transient Cross-Links in Lactose-Modified Chitosan (Chitlac). Biomacromolecules, 2017, 18, 4206-4213.	5.4	21
56	Mimicking mechanical response of natural tissues. Strain hardening induced by transient reticulation in lactose-modified chitosan (chitlac). International Journal of Biological Macromolecules, 2018, 106, 656-660.	7.5	21
57	SYNTHESIS OF GLYCOSYLAMINES: IDENTIFICATION AND QUANTIFICATION OF SIDE PRODUCTS. Journal of Carbohydrate Chemistry, 2001, 20, 263-273.	1.1	20
58	Adhesive coatings based on melanin-like nanoparticles for surgical membranes. Colloids and Surfaces B: Biointerfaces, 2017, 155, 553-559.	5.0	20
59	pH-Assisted Gelation of Lactose-Modified Chitosan. Biomacromolecules, 2019, 20, 3070-3075.	5.4	20
60	Characterization of Thermoresponsive Poly-N-Vinylcaprolactam Polymers for Biological Applications. Polymers, 2021, 13, 2639.	4.5	20
61	N-isopropyl chitosan. A pH- and thermo-responsive polysaccharide for gel formation. Carbohydrate Polymers, 2020, 230, 115641.	10.2	19
62	Albumin-controlled stereoselective reduction of 1,3-diketones to anti-diolsElectronic supplementary information (ESI) available: Scatchard and Lineweaverâ€“Burk plots. See http://www.rsc.org/suppdata/cc/b2/b200474g/. Chemical Communications, 2002, , 828-829.	4.1	18
63	On the Mechanism of Genipin Binding to Primary Amines in Lactose-Modified Chitosan at Neutral pH. International Journal of Molecular Sciences, 2020, 21, 6831.	4.1	18
64	Polysaccharide-Based Polyanionâ€“Polycationâ€“Polyanion Ternary Systems. A Preliminary Analysis of Interpolyelectrolyte Interactions in Dilute Solutions. Biomacromolecules, 2011, 12, 4044-4056.	5.4	17
65	Effects of supercritical carbon dioxide sterilization on polysaccharidic membranes for surgical applications. Carbohydrate Polymers, 2017, 173, 482-488.	10.2	17
66	Nucleation, reorganization and disassembly of an active network from lactose-modified chitosan mimicking biological matrices. Carbohydrate Polymers, 2019, 208, 451-456.	10.2	17
67	Mnâ€alginate gels as a novel system for controlled release of Mn²⁺ in manganeseâ€enhanced MRI. Contrast Media and Molecular Imaging, 2012, 7, 265-275.	0.8	16
68	Inkjet printing of Chitlac-nanosilverâ€”a method to create functional coatings for non-metallic bone implants. Biofabrication, 2014, 6, 041001.	7.1	16
69	Polysaccharideâ€Based Polyanionâ€“Polycationâ€“Polyanion Ternary Systems in the Concentrated Regime and Hydrogel Form. Macromolecular Chemistry and Physics, 2013, 214, 1309-1320.	2.2	14
70	Myoblast Adhesion, Proliferation and Differentiation on Human Elastin-Like Polypeptide (HELP) Hydrogels. Journal of Applied Biomaterials and Functional Materials, 2017, 15, 43-53.	1.6	14
71	Antibacterialâ€nanocomposite bone filler based on silver nanoparticles and polysaccharides. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e747-e759.	2.7	14
72	Biomimetic, Multiresponsive, and Self-Healing Lactose-Modified Chitosan (CTL)-Based Gels Formed via Competitor-Assisted Mechanism. ACS Biomaterials Science and Engineering, 2019, 5, 5539-5547.	5.2	11

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73	Strain Hardening in Highly Acetylated Chitosan Gels. Biomacromolecules, 2021, 22, 2902-2909.	5.4	11
74	Degradation of Silverâ€“Polysaccharide Nanocomposite in Solution and as Coating on Fiber-Reinforced Composites by Lysozyme and Hydrogen Peroxide. Biomacromolecules, 2012, 13, 2605-2608.	5.4	10
75	On the Molecular Mechanism of the Calcium-Induced Gelation of Pectate. Different Steps in the Binding of Calcium Ions by Pectate. Biomacromolecules, 2021, 22, 5000-5019.	5.4	10
76	Synthesis and characterization of a novel glycopolymer with protective activity toward human anti-Â-Gal antibodies. Glycobiology, 2002, 12, 283-290.	2.5	9
77	Bioactive glass surface for fiber reinforced composite implants via surface etching by Excimer laser. Medical Engineering and Physics, 2016, 38, 664-670.	1.7	9
78	Dissecting the conformational determinants of chitosan and chitlac oligomers. Biopolymers, 2018, 109, e23221.	2.4	8
79	Temporary/Permanent Dual Crossâ€Link Gels Formed of a Bioactive Lactoseâ€Modified Chitosan. Macromolecular Bioscience, 2020, 20, e2000236.	4.1	8
80	Insights into Mechanical Behavior and Biological Properties of Chia Seed Mucilage Hydrogels. Gels, 2021, 7, 47.	4.5	8
81	High-yield enzymatic synthesis of O-allyl Î²-d-galactopyranoside. Journal of Molecular Catalysis B: Enzymatic, 2003, 21, 153-156.	1.8	7
82	Borate complexes of X-ray iodinated contrast agents: Characterization and sorption studies for their removal from aqueous media. Journal of Hazardous Materials, 2012, 205-206, 10-16.	12.4	7
83	Characterization of Chitosan/Hyaluronan Complex Coacervates Assembled by Varying Polymers Weight Ratio and Chitosan Physical-Chemical Composition. Colloids and Interfaces, 2020, 4, 12.	2.1	7
84	Regulation of Substrate Dissipation via Tunable Linear Elasticity Controls Cell Activity. Advanced Functional Materials, 2022, 32, .	14.9	7
85	Enzymatic synthesis and characterization of oligosaccharides structurally related to the repeating unit of Pullulan. Biochemical and Biophysical Research Communications, 2002, 297, 382-389.	2.1	6
86	Rheology of mixed alginate-hyaluronan aqueous solutions. International Journal of Biological Macromolecules, 2015, 78, 363-369.	7.5	6
87	Evaluation of concentration and dispersion of functionalized carbon nanotubes in aqueous media by means of Low Field Nuclear Magnetic Resonance. Carbon, 2017, 113, 387-394.	10.3	6
88	Sulfated lactose-modified chitosan. A novel synthetic glycosaminoglycan-like polysaccharide inducing chondrocyte aggregation. Carbohydrate Polymers, 2022, 288, 119379.	10.2	6
89	Novel fluorescent cycloheximide derivatives for the imaging of protein synthesis. Biochemical and Biophysical Research Communications, 2010, 396, 258-264.	2.1	5
90	Development of biodegradable membranes for the delivery of a bioactive chitosanâ€derivative on cartilage defects: A preliminary investigation. Journal of Biomedical Materials Research - Part A, 2020, 108, 1534-1545.	4.0	5

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91	Hydroxyapatite and bioactive glass surfaces for fiber reinforced composite implants via surface ablation by Excimer laser. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 89-96.	3.1	4
92	Separation of O- and C-allyl glycoside anomeric mixtures by capillary electrophoresis and high-performance liquid chromatography. Journal of Chromatography A, 2006, 1110, 125-132.	3.7	3
93	Determination of the Composition for Binary Mixtures of Polyanions: The Case of Mixed Solutions of Alginate and Hyaluronan. Biomacromolecules, 2014, 15, 1069-1073.	5.4	3
94	Binary Solutions of Hyaluronan and Lactose-Modified Chitosan: The Influence of Experimental Variables in Assembling Complex Coacervates. Polymers, 2020, 12, 897.	4.5	3
95	Influence of Temperature and Polymer Concentration on the Nonlinear Response of Highly Acetylated Chitosanâ€“Genipin Hydrogels. Gels, 2022, 8, 194.	4.5	3
96	H2O2 Causes Improved Adhesion Between a Polysaccharide-based Membrane and Intestinal Serosa. Colloids and Interface Science Communications, 2016, 15, 5-8.	4.1	2
97	On the demixing of hyaluronan and alginate in the gel state. International Journal of Biological Macromolecules, 2017, 95, 49-53.	7.5	1
98	Development of hyaluronan-based membranes for the healing of intestinal surgical wounds: a preliminary study. Journal of Materials Science: Materials in Medicine, 2019, 30, 60.	3.6	1
99	Correction to â€œLactose-Modified Chitosan Gold(III)-PEGylated Complex-Bioconjugates: From Synthesis to Interaction with Targeted Galectin-1 Proteinâ€• Bioconjugate Chemistry, 2022, 33, 1439-1439.	3.6	0