Marco Govoni

List of Publications by Year
in descending order

73 papers	2,834 citations	172457 29 h-index	175258 52 g-index
74 all docs	74 docs citations	74 times ranked	3340 citing authors

#	Article	IF	Citations
1	Do Pomegranate Hydrolyzable Tannins and Their Derived Metabolites Provide Relief in Osteoarthritis? Findings from a Scoping Review. Molecules, 2022, 27, 1033.	3.8	2
2	Quality Control Platform for the Standardization of a Regenerative Medicine Product. Bioengineering, 2022, 9, 142.	3.5	1
3	Fiber Thickness and Porosity Control in a Biopolymer Scaffold 3D Printed through a Converted Commercial FDM Device. Materials, 2022, 15, 2394.	2.9	8
4	Simulating the Electronic Structure of Spin Defects on Quantum Computers. PRX Quantum, 2022, 3, .	9.2	18
5	Custom Massive Allograft in a Case of Pelvic Bone Tumour: Simulation of Processing with Computerised Numerical Control vs. Robotic Machining. Journal of Clinical Medicine, 2022, 11, 2781.	2.4	2
6	Green's Function Formulation of Quantum Defect Embedding Theory. Journal of Chemical Theory and Computation, 2022, 18, 3512-3522.	5.3	17
7	Code interoperability extends the scope of quantum simulations. Npj Computational Materials, 2021, 7, .	8.7	8
8	Quantum Embedding Theory for Strongly Correlated States in Materials. Journal of Chemical Theory and Computation, 2021, 17, 2116-2125.	5.3	45
9	Comparison of a fast track protocol and standard care after hip arthroplasty in the reduction of the length of stay and the early weight-bearing resumption: study protocol for a randomized controlled trial. Trials, 2021, 22, 348.	1.6	7
10	Commercial Bone Grafts Claimed as an Alternative to Autografts: Current Trends for Clinical Applications in Orthopaedics. Materials, 2021, 14, 3290.	2.9	30
11	Extra-Corporeal Membrane Oxygenation Cadaver Donors: What about Tissues Used as Allografts?. Membranes, 2021, 11, 545.	3.0	5
12	Quantum vibronic effects on the electronic properties of solid and molecular carbon. Physical Review Materials, 2021, 5, .	2.4	12
13	OPTIMADE, an API for exchanging materials data. Scientific Data, 2021, 8, 217.	5.3	49
14	Photoluminescence spectra of point defects in semiconductors: Validation of first-principles calculations. Physical Review Materials, 2021, 5, .	2.4	29
15	Machine learning dielectric screening for the simulation of excited state properties of molecules and materials. Chemical Science, 2021, 12, 4970-4980.	7.4	16
16	Fresh Osteochondral Allograft Transplantation in Osteochondritis Dissecans in the Knee Joint. Life, 2021, 11, 1205.	2.4	9
17	Brillouin and Raman Micro-Spectroscopy: A Tool for Micro-Mechanical and Structural Characterization of Cortical and Trabecular Bone Tissues. Materials, 2021, 14, 6869.	2.9	7
18	Combined First-Principles Calculations of Electron–Electron and Electron–Phonon Self-Energies in Condensed Systems. Journal of Chemical Theory and Computation, 2021, 17, 7468-7476.	5.3	6

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19	First-principles studies of strongly correlated states in defect spin qubits in diamond. Physical Chemistry Chemical Physics, 2020, 22, 25522-25527.	2.8	22
20	PyCDFT : A Python package for constrained density functional theory. Journal of Computational Chemistry, 2020, 41, 1859-1867.	3.3	10
21	Design Techniques to Optimize the Scaffold Performance: Freeze-dried Bone Custom-made Allografts for Maxillary Alveolar Horizontal Ridge Augmentation. Materials, 2020, 13, 1393.	2.9	17
22	A Comprehensive Microstructural and Compositional Characterization of Allogenic and Xenogenic Bone: Application to Bone Grafts and Nanostructured Biomimetic Coatings. Coatings, 2020, 10, 522.	2.6	11
23	Quantum simulations of materials on near-term quantum computers. Npj Computational Materials, 2020, 6, .	8.7	99
24	Demineralized bone matrix paste formulated with biomimetic PLGA microcarriers for the vancomycin hydrochloride controlled delivery: Release profile, citotoxicity and efficacy against S. aureus. International Journal of Pharmaceutics, 2020, 582, 119322.	5.2	15
25	PyZFS: A Python package for first-principles calculations of zero-field splitting tensors. Journal of Open Source Software, 2020, 5, 2160.	4.6	10
26	MatD^3^: A Database and Online Presentation Package for Research Data Supporting Materials Discovery, Design, and Dissemination. Journal of Open Source Software, 2020, 5, 1945.	4.6	2
27	Qresp, a tool for curating, discovering and exploring reproducible scientific papers. Scientific Data, 2019, 6, 190002.	5.3	24
28	Finite-Field Approach to Solving the Bethe-Salpeter Equation. Physical Review Letters, 2019, 122, 237402.	7.8	35
29	Improving the efficiency of G0W0 calculations with approximate spectral decompositions of dielectric matrices. Journal of Chemical Physics, 2019, 151, 224102.	3.0	6
30	A Finite-Field Approach for GW Calculations beyond the Random Phase Approximation. Journal of Chemical Theory and Computation, 2019, 15, 154-164.	5.3	21
31	Dielectric-dependent hybrid functionals for heterogeneous materials. Physical Review Materials, 2019, 3, .	2.4	36
32	Novel biocompatible PBS-based random copolymers containing PEG-like sequences for biomedical applications: From drug delivery to tissue engineering. Polymer Degradation and Stability, 2018, 153, 53-62.	5.8	23
33	GW100: Comparison of Methods and Accuracy of Results Obtained with the WEST Code. Journal of Chemical Theory and Computation, 2018, 14, 1895-1909.	5.3	58
34	Electron affinity of liquid water. Nature Communications, 2018, 9, 247.	12.8	114
35	Coupling First-Principles Calculations of Electron–Electron and Electron–Phonon Scattering, and Applications to Carbon-Based Nanostructures. Journal of Chemical Theory and Computation, 2018, 14, 6269-6275.	5.3	10
36	The role of defects and excess surface charges at finite temperature for optimizing oxide photoabsorbers. Nature Materials, 2018, 17, 1122-1127.	27.5	61

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37	Communication: Dielectric properties of condensed systems composed of fragments. Journal of Chemical Physics, 2018, 149, 051101.	3.0	9
38	Fundamental principles for calculating charged defect ionization energies in ultrathin two-dimensional materials. Physical Review Materials, 2018, 2, .	2.4	50
39	<sup />An Engineered Multiphase Three-Dimensional Microenvironment to Ensure the Controlled Delivery of Cyclic Strain and Human Growth Differentiation Factor 5 for the Tenogenic Commitment of Human Bone Marrow Mesenchymal Stem Cells. Tissue Engineering - Part A, 2017, 23, 811-822.	3.1	51
40	Performance and Self-Consistency of the Generalized Dielectric Dependent Hybrid Functional. Journal of Chemical Theory and Computation, 2017, 13, 3318-3325.	5.3	33
41	Electronic structure of aqueous solutions: Bridging the gap between theory and experiments. Science Advances, 2017, 3, e1603210.	10.3	49
42	Carrier Multiplication in Silicon Nanocrystals: Theoretical Methodologies and Role of the Passivation. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, 1700198.	0.8	5
43	Designing defect-based qubit candidates in wide-gap binary semiconductors for solid-state quantum technologies. Physical Review Materials, 2017, 1, .	2.4	43
44	Implementation and Validation of Fully Relativistic <i>GW</i> Calculations: Spin–Orbit Coupling in Molecules, Nanocrystals, and Solids. Journal of Chemical Theory and Computation, 2016, 12, 3523-3544.	5.3	156
45	Design of defect spins in piezoelectric aluminum nitride for solid-state hybrid quantum technologies. Scientific Reports, 2016, 6, 20803.	3.3	46
46	Photoelectron Spectra of Aqueous Solutions from First Principles. Journal of the American Chemical Society, 2016, 138, 6912-6915.	13.7	64
47	Nonempirical range-separated hybrid functionals for solids and molecules. Physical Review B, 2016, 93, .	3.2	125
48	Generalization of Dielectric-Dependent Hybrid Functionals to Finite Systems. Physical Review X, 2016, 6, .	8.9	49
49	The molecular mechanism of the cholesterol–lowering effect of dill and kale: The influence of the food matrix components. Electrophoresis, 2016, 37, 1805-1813.	2.4	12
50	Mechanical Actuation Systems for the Phenotype Commitment of Stem Cell-Based Tendon and Ligament Tissue Substitutes. Stem Cell Reviews and Reports, 2016, 12, 189-201.	5.6	23
51	First-principles calculations of electronic coupling effects in silicon nanocrystals: Influence on near band-edge states and on carrier multiplication processes. Solar Energy Materials and Solar Cells, 2016, 145, 162-169.	6.2	17
52	Carrier multiplication in silicon nanocrystals: ab initio results. Beilstein Journal of Nanotechnology, 2015, 6, 343-352.	2.8	15
53	Large Scale GW Calculations. Journal of Chemical Theory and Computation, 2015, 11, 2680-2696.	5.3	255
54	The effect of plasma surface modification on the biodegradation rate and biocompatibility of a poly(butylene succinate)-based copolymer. Polymer Degradation and Stability, 2015, 121, 271-279.	5.8	20

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55	Hyaluronan and cardiac regeneration. Journal of Biomedical Science, 2014, 21, 100.	7.0	66
56	Strategies Affording Prevascularized Cell-Based Constructs for Myocardial Tissue Engineering. Stem Cells International, 2014, 2014, 1-8.	2.5	24
57	An innovative stand-alone bioreactor for the highly reproducible transfer of cyclic mechanical stretch to stem cells cultured in a 3D scaffold. Journal of Tissue Engineering and Regenerative Medicine, 2014, 8, 787-793.	2.7	20
58	Self-consistent hybrid functional for condensed systems. Physical Review B, 2014, 89, .	3.2	341
59	Biocompatible multiblock aliphatic polyesters containing ether-linkages: influence of molecular architecture on solid-state properties and hydrolysis rate. RSC Advances, 2014, 4, 32965-32976.	3.6	18
60	Red-Shifted Carrier Multiplication Energy Threshold and Exciton Recycling Mechanisms in Strongly Interacting Silicon Nanocrystals. Journal of the American Chemical Society, 2014, 136, 13257-13266.	13.7	29
61	Epigenetic Signature of Early Cardiac Regulatory Genes in Native Human Adipose-Derived Stem Cells. Cell Biochemistry and Biophysics, 2013, 67, 255-262.	1.8	21
62	Molecular mechanisms of ischemic preconditioning and postconditioning as putative therapeutic targets to reduce tumor survival and malignancy. Medical Hypotheses, 2013, 81, 1141-1145.	1.5	8
63	Priming adult stem cells by hypoxic pretreatments for applications in regenerative medicine. Journal of Biomedical Science, 2013, 20, 63.	7.0	58
64	Mechanostimulation Protocols for Cardiac Tissue Engineering. BioMed Research International, 2013, 2013, 1-10.	1.9	31
65	Poly(butylene/diethylene glycol succinate) multiblock copolyester as a candidate biomaterial for soft tissue engineering: Solid-state properties, degradability, and biocompatibility. Journal of Bioactive and Compatible Polymers, 2012, 27, 244-264.	2.1	41
66	Ethanol disinfection affects physical properties and cell response of electrospun poly(l-lactic acid) scaffolds. European Polymer Journal, 2012, 48, 2008-2018.	5.4	46
67	Molecular architecture and solid-state properties of novel biocompatible PBS-based copolyesters containing sulphur atoms. Reactive and Functional Polymers, 2012, 72, 856-867.	4.1	36
68	Carrier multiplication between interacting nanocrystals for fostering silicon-based photovoltaics. Nature Photonics, 2012, 6, 672-679.	31.4	111
69	Auger recombination in Si and GaAs semiconductors: *Ab initio* results. Physical Review B, 2011, 84, .	3.2	36
70	Overexpression of ornithine decarboxylase increases myogenic potential of H9c2 rat myoblasts. Amino Acids, 2010, 38, 541-547.	2.7	15
71	Electrospun Scaffolds of a Polyhydroxyalkanoate Consisting of Ï‰-Hydroxylpentadecanoate Repeat Units: Fabrication and In Vitro Biocompatibility Studies. Journal of Biomaterials Science, Polymer Edition, 2010, 21, 1283-1296.	3.5	24
72	Difluoromethylornithine stimulates early cardiac commitment of mesenchymal stem cells in a model of mixed culture with cardiomyocytes. Journal of Cellular Biochemistry, 2008, 103, 1046-1052.	2.6	24

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73	Induction of NO synthase 2 in ventricular cardiomyocytes incubated with a conventional bicarbonate dialysis bath. Nephrology Dialysis Transplantation, 2008, 23, 2192-2197.	0.7	15