Marco Villani

List of Publications by Year
in descending order

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80	2,354	218592	233338
papers	citations	26 h-index	45 g-index

81	81	81	2881
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Zn vacancy induced green luminescence on non-polar surfaces in ZnO nanostructures. Scientific Reports, 2014, 4, 5158.	1.6	144
2	Genetic network models and statistical properties of gene expression data in knock-out experiments. Journal of Theoretical Biology, 2004, 227, 149-157.	0.8	135
3	Why a simple model of genetic regulatory networks describes the distribution of avalanches in gene expression data. Journal of Theoretical Biology, 2007, 246, 449-460.	0.8	119
4	Human stress monitoring through an organic cotton-fiber biosensor. Journal of Materials Chemistry B, 2014, 2, 5620-5626.	2.9	107
5	A single cotton fiber organic electrochemical transistor for liquid electrolyte saline sensing. Journal of Materials Chemistry, 2012, 22, 23830.	6.7	99
6	On the dynamics of random Boolean networks subject to noise: Attractors, ergodic sets and cell types. Journal of Theoretical Biology, 2010, 265, 185-193.	0.8	98
7	Aldehyde detection by ZnO tetrapod-based gas sensors. Journal of Materials Chemistry, 2011, 21, 15532.	6.7	85
8	Genome-Wide Approach in Arabidopsis thaliana to Assess the Toxicity of Cadmium Sulfide Quantum Dots. Environmental Science & Technology, 2014, 48, 5902-5909.	4.6	76
9	An in vivo biosensing, biomimetic electrochemical transistor with applications in plant science and precision farming. Scientific Reports, 2017, 7, 16195.	1.6	67
10	Dynamical Criticality: Overview and Open Questions. Journal of Systems Science and Complexity, 2018, 31, 647-663.	1.6	60
11	Ion selective textile organic electrochemical transistor for wearable sweat monitoring. Organic Electronics, 2020, 78, 105579.	1.4	57
12	A Dynamical Model of Genetic Networks for Cell Differentiation. PLoS ONE, 2011, 6, e17703.	1.1	57
13	Dynamical Properties of a Boolean Model of Gene Regulatory Network with Memory. Journal of Computational Biology, 2011, 18, 1291-1303.	0.8	56
14	Enzymatic sensing with laccase-functionalized textile organic biosensors. Organic Electronics, 2017, 40, 51-57.	1.4	49
15	The Proteomic Response of Arabidopsis thaliana to Cadmium Sulfide Quantum Dots, and Its Correlation with the Transcriptomic Response. Frontiers in Plant Science, 2015, 6, 1104.	1.7	48
16	Diffusion Driven Selectivity in Organic Electrochemical Transistors. Scientific Reports, 2014, 4, 4297.	1.6	48
17	Organic electrochemical transistors monitoring micelle formation. Chemical Science, 2012, 3, 3432.	3.7	45
18	Low temperature thermal evaporation growth of aligned ZnO nanorods on ZnO film: a growth mechanism promoted by Zn nanoclusters on polar surfaces. CrystEngComm, 2011, 13, 1707-1712.	1.3	44

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19	Extended functionality of ZnO nanotetrapods by solution-based coupling with CdS nanoparticles. Journal of Materials Chemistry, 2012, 22, 5694.	6.7	42
20	Exposure of Cucurbita pepo to binary combinations of engineered nanomaterials: physiological and molecular response. Environmental Science: Nano, 2017, 4, 1579-1590.	2.2	40
21	Proteomic, gene and metabolite characterization reveal the uptake and toxicity mechanisms of cadmium sulfide quantum dots in soybean plants. Environmental Science: Nano, 2019, 6, 3010-3026.	2.2	37
22	Cellâ€“cell interaction and diversity of emergent behaviours. IET Systems Biology, 2011, 5, 137-144.	0.8	34
23	Nucleo-mitochondrial interaction of yeast in response to cadmium sulfide quantum dot exposure. Journal of Hazardous Materials, 2017, 324, 744-752.	6.5	33
24	On the dynamics of random Boolean networks with scale-free outgoing connections. Physica A: Statistical Mechanics and Its Applications, 2004, 339, 665-673.	1.2	30
25	Robustness Analysis of a Boolean Model of Gene Regulatory Network with Memory. Journal of Computational Biology, 2011, 18, 559-577.	0.8	30
26	Branched gold nanoparticles on ZnO 3D architecture as biomedical SERS sensors. RSC Advances, 2015, 5, 93644-93651.	1.7	30
27	Surface coating determines the response of soybean plants to cadmium sulfide quantum dots. NanoImpact, 2019, 14, 100151.	2.4	28
28	Nanoscale mapping of plasmon and exciton in ZnO tetrapods coupled with Au nanoparticles. Scientific Reports, 2016, 6, 19168.	1.6	27
29	Dynamical regimes and learning properties of evolved Boolean networks. Neurocomputing, 2013, 99, 111-123.	3.5	25
30	A theoretical model for the time varying current in organic electrochemical transistors in a dynamic regime. Organic Electronics, 2016, 35, 59-64.	1.4	23
31	Dynamical Criticality in Gene Regulatory Networks. Complexity, 2018, 2018, 1-14.	0.9	23
32	Cadmium sulfide quantum dots impact Arabidopsis thaliana physiology and morphology. Chemosphere, 2020, 240, 124856.	4.2	23
33	All-Polymeric Pressure Sensors Based on PEDOT:PSS-Modified Polyurethane Foam. ACS Applied Polymer Materials, 2021, 3, 1563-1572.	2.0	23
34	Modeling, Fabrication and Testing of a Customizable Micromachined Hotplate for Sensor Applications. Sensors, 2017, 17, 62.	2.1	21
35	Differences in toxicity, mitochondrial function and miRNome in human cells exposed in vitro to Cd as CdS quantum dots or ionic Cd. Journal of Hazardous Materials, 2020, 393, 122430.	6.5	21
36	Solution-free and catalyst-free synthesis of ZnO-based nanostructured TCOs by PED and vapor phase growth techniques. Nanotechnology, 2012, 23, 194008.	1.3	20

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37	Low Temperature Sensing Properties of a Nano Hybrid Material Based on ZnO Nanotetrapods and Titanyl Phthalocyanine. Sensors, 2013, 13, 3445-3453.	2.1	20
38	Continuous genetic networks. Parallel Computing, 2001, 27, 663-683.	1.3	19
39	Microtexturing of the Conductive PEDOT:PSS Polymer for Superhydrophobic Organic Electrochemical Transistors. BioMed Research International, 2014, 2014, 1-10.	0.9	19
40	Selective response inversion to NO₂and acetic acid in ZnO and CdS nanocomposite gas sensor. Nanotechnology, 2014, 25, 365502.	1.3	19
41	Ring-shaped corona proteins influence the toxicity of engineered nanoparticles to yeast. Environmental Science: Nano, 2018, 5, 1428-1440.	2.2	18
42	Cortical-like mini-columns of neuronal cells on zinc oxide nanowire surfaces. Scientific Reports, 2019, 9, 4021.	1.6	18
43	Engineered Nanomaterial Exposure Affects Organelle Genetic Material Replication in Arabidopsis thaliana. ACS Nano, 2022, 16, 2249-2260.	7.3	18
44	Composite multifunctional nanostructures based on ZnO tetrapods and superparamagnetic Fe₃O₄nanoparticles. Nanotechnology, 2013, 24, 135601.	1.3	17
45	A new method to integrate ZnO nano-tetrapods on MEMS micro-hotplates for large scale gas sensor production. Nanotechnology, 2016, 27, 385503.	1.3	17
46	Geometrical Patterning of Super-Hydrophobic Biosensing Transistors Enables Space and Time Resolved Analysis of Biological Mixtures. Scientific Reports, 2016, 6, 18992.	1.6	17
47	Smart composites materials: A new idea to add gas-sensing properties to commercial carbon-fibers by functionalization with ZnO nanowires. Sensors and Actuators B: Chemical, 2017, 245, 166-170.	4.0	17
48	Functionalization of carbon fiber tows with ZnO nanorods for stress sensor integration in smart composite materials. Nanotechnology, 2018, 29, 335501.	1.3	16
49	The fate of CdS quantum dots in plants as revealed by extended X-ray absorption fine structure (EXAFS) analysis. Environmental Science: Nano, 2020, 7, 1150-1162.	2.2	16
50	The simulation of gene knock-out in scale-free random Boolean models of genetic networks. Networks and Heterogeneous Media, 2008, 3, 333-343.	0.5	15
51	Vapourâ€phase growth, purification and largeâ€area deposition of ZnO tetrapod nanostructures. Crystal Research and Technology, 2010, 45, 667-671.	0.6	14
52	Perturbing the Regular Topology of Cellular Automata: Implications for the Dynamics. Lecture Notes in Computer Science, 2002, , 168-177.	1.0	13
53	Growth and characterization of Î²-Ga2O3 nanowires obtained on not-catalyzed and Au/Pt catalyzed substrates. Journal of Crystal Growth, 2017, 457, 255-261.	0.7	12
54	Dynamical regimes in non-ergodic random Boolean networks. Natural Computing, 2017, 16, 353-363.	1.8	12

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55	Information Transfer among Coupled Random Boolean Networks. Lecture Notes in Computer Science, 2010, , 1-11.	1.0	12
56	Facile synthesis of hierarchical CuO nanostructures with enhanced photocatalytic activity. Crystal Research and Technology, 2014, 49, 594-598.	0.6	11
57	Non-interacting hard ferromagnetic L10 FePt nanoparticles embedded in a carbon matrix. Journal of Materials Chemistry, 2011, 21, 18331.	6.7	10
58	In Vivo-In Vitro Comparative Toxicology of Cadmium Sulphide Quantum Dots in the Model Organism Saccharomyces cerevisiae. Nanomaterials, 2019, 9, 512.	1.9	10
59	Comparative Analysis of Proteins Regulated during Cadmium Sulfide Quantum Dots Response in Arabidopsis thaliana Wild Type and Tolerant Mutants. Nanomaterials, 2021, 11, 615.	1.9	9
60	Pd/PdO functionalization of SnO₂ nanowires and ZnO nanotetrapods. Crystal Research and Technology, 2011, 46, 847-851.	0.6	8
61	Turning carbon fiber into a stress-sensitive composite material. Journal of Materials Chemistry A, 2016, 4, 10486-10492.	5.2	8
62	Improved electroless platinum contacts on CdZnTe X- and Î³-rays detectors. Scientific Reports, 2020, 10, 13762.	1.6	8
63	Oriented orthorhombic Lead Oxide film grown by vapour phase deposition for Xâ€ray detector applications. Crystal Research and Technology, 2013, 48, 245-250.	0.6	7
64	Directionally Selective Sensitization of ZnO Nanorods by TiOPc: A Novel Approach to Functionalized Nanosystems. Journal of Physical Chemistry C, 2012, 116, 8223-8229.	1.5	6
65	Fabrication of ZnO-nanowire-coated thin-foil targets for ultra-high intensity laser interaction experiments. Matter and Radiation at Extremes, 2021, 6, .	1.5	6
66	Dynamically Critical Systems and Power-Law Distributions: Avalanches Revisited. Communications in Computer and Information Science, 2016, , 29-39.	0.4	6
67	Automatic Design of Boolean Networks for Cell Differentiation. Communications in Computer and Information Science, 2017, , 91-102.	0.4	6
68	Controllable vapor phase growth of vertically aligned ZnO nanorods on TCO/Glass substrates. Crystal Research and Technology, 2014, 49, 558-563.	0.6	5
69	Transforming diatomaceous earth into sensing devices by surface modification with gold nanoparticles. Micro and Nano Engineering, 2019, 2, 29-34.	1.4	5
70	Proteomic Analysis Identifies Markers of Exposure to Cadmium Sulphide Quantum Dots (CdS QDs). Nanomaterials, 2020, 10, 1214.	1.9	5
71	Dynamical Properties of Artificially Evolved Boolean Network Robots. Lecture Notes in Computer Science, 2015, , 45-57.	1.0	5
72	Dynamical Properties of a Gene-Protein Model. Communications in Computer and Information Science, 2018, , 142-152.	0.4	5

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73	Tailoring super-hydrophobic properties of electrochemical biosensor for early cancer detection. MRS Advances, 2016, 1, 3545-3552.	0.5	4
74	Kinetic Rate Constants of Gold Nanoparticle Deposition on Silicon. Langmuir, 2019, 35, 14258-14265.	1.6	4
75	Multiscale modification of the conductive PEDOT:PSS polymer for the analysis of biological mixtures in a super-hydrophobic drop. Microelectronic Engineering, 2016, 158, 80-84.	1.1	3
76	Evolving Critical Boolean Networks. Communications in Computer and Information Science, 2019, , 17-29.	0.4	3
77	Cadmium Sulfide Quantum Dots Adversely Affect Gametogenesis in Saccharomyces cerevisiae. Nanomaterials, 2022, 12, 2208.	1.9	3
78	InZnO nanorods obtained via zinc vapour phase deposition on liquid indium seeded substrates. CrystEngComm, 2014, 16, 1696.	1.3	2
79	Evaluating the plasmon-exciton interaction in ZnO tetrapods coupled with gold nanostructures by nanoscale cathodoluminescence. Nano Express, 2021, 2, 014004.	1.2	1
80	Selecting for Positive Responses to Knock Outs in Boolean Networks. Communications in Computer and Information Science, 2020, , 7-16.	0.4	1