

# Vitor Monteiro

## List of Publications by Year in descending order

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146  
papers

1,932  
citations

430442

18  
h-index

360668

35  
g-index

154  
all docs

154  
docs citations

154  
times ranked

1429  
citing authors

#	ARTICLE	IF	CITATIONS
1	Operation Modes for the Electric Vehicle in Smart Grids and Smart Homes: Present and Proposed Modes. IEEE Transactions on Vehicular Technology, 2016, 65, 1007-1020.	3.9	207
2	Onboard Reconfigurable Battery Charger for Electric Vehicles With Traction-to-Auxiliary Mode. IEEE Transactions on Vehicular Technology, 2014, 63, 1104-1116.	3.9	134
3	Experimental Validation of a Novel Architecture Based on a Dual-Stage Converter for Off-Board Fast Battery Chargers of Electric Vehicles. IEEE Transactions on Vehicular Technology, 2018, 67, 1000-1011.	3.9	115
4	Experimental Validation of a Three-Port Integrated Topology to Interface Electric Vehicles and Renewables With the Electrical Grid. IEEE Transactions on Industrial Informatics, 2018, 14, 2364-2374.	7.2	106
5	Bidirectional battery charger with Grid-to-Vehicle, Vehicle-to-Grid and Vehicle-to-Home technologies. , 2013, , .		86
6	Vehicle-to-Anything Application (V2Anything App) for Electric Vehicles. IEEE Transactions on Industrial Informatics, 2014, 10, 1927-1937.	7.2	72
7	Improved Vehicle-to-Home (iV2H) Operation Mode: Experimental Analysis of the Electric Vehicle as Off-Line UPS. IEEE Transactions on Smart Grid, 2017, 8, 2702-2711.	6.2	71
8	Assessment of a battery charger for Electric Vehicles with reactive power control. , 2012, , .		63
9	Impact of Electric Vehicles on power quality in a Smart Grid context. , 2011, , .		55
10	Model Predictive Control Applied to an Improved Five-Level Bidirectional Converter. IEEE Transactions on Industrial Electronics, 2016, 63, 5879-5890.	5.2	51
11	Assessment of the use of vanadium redox flow batteries for energy storage and fast charging of electric vehicles in gas stations. Energy, 2016, 115, 1478-1494.	4.5	42
12	New Perspectives for Vehicle-to-Vehicle (V2V) Power Transfer. , 2018, , .		41
13	Vehicle Electrification: New Challenges and Opportunities for Smart Grids. Energies, 2019, 12, 118.	1.6	36
14	The future of power systems: Challenges, trends, and upcoming paradigms. Wiley Interdisciplinary Reviews: Energy and Environment, 2020, 9, e368.	1.9	35
15	A Flexible Infrastructure for Dynamic Power Control of Electric Vehicle Battery Chargers. IEEE Transactions on Vehicular Technology, 2016, 65, 4535-4547.	3.9	32
16	Smart electric vehicle charging system. , 2011, , .		30
17	Improved vehicle-for-grid (iV4G) mode: Novel operation mode for EVs battery chargers in smart grids. International Journal of Electrical Power and Energy Systems, 2019, 110, 579-587.	3.3	29
18	A Review on Power Electronics Technologies for Electric Mobility. Energies, 2020, 13, 6343.	1.6	26

#	ARTICLE	IF	CITATIONS
19	Topologies and Operation Modes of Rail Power Conditioners in AC Traction Grids: Review and Comprehensive Comparison. <i>Energies</i> , 2020, 13, 2151.	1.6	26
20	Dynamic range prediction for an electric vehicle. , 2013, , .		23
21	A Review on Power Electronics Technologies for Power Quality Improvement. <i>Energies</i> , 2021, 14, 8585.	1.6	23
22	Comprehensive comparison of a current-source and a voltage-source converter for three-phase EV fast battery chargers. , 2015, , .		22
23	An Energy Management Platform for Public Buildings. <i>Electronics (Switzerland)</i> , 2018, 7, 294.	1.8	22
24	A Novel Multilevel Bidirectional Topology for On-Board EV Battery Chargers in Smart Grids. <i>Energies</i> , 2018, 11, 3453.	1.6	19
25	IoT and Blockchain Paradigms for EV Charging System. <i>Energies</i> , 2019, 12, 2987.	1.6	19
26	A Case Study on the Conversion of an Internal Combustion Engine Vehicle into an Electric Vehicle. , 2014, , .		18
27	Comparison of current-source and voltage-source Shunt Active Power Filters for harmonic compensation and reactive power control. , 2012, , .		17
28	Experimental validation of a proposed single-phase five-level active rectifier operating with model predictive current control. , 2015, , .		17
29	Model predictive current control of a proposed single-switch three-level active rectifier applied to EV battery chargers. , 2016, , .		17
30	Electric Vehicles On-Board Battery Charger for the Future Smart Grids. <i>IFIP Advances in Information and Communication Technology</i> , 2013, , 351-358.	0.5	16
31	Mobile Cockpit System for Enhanced Electric Bicycle Use. <i>IEEE Transactions on Industrial Informatics</i> , 2015, 11, 1017-1027.	7.2	16
32	Power quality phenomena in electrified railways: Conventional and new trends in power quality improvement toward public power systems. , 2018, , .		15
33	On-board electric vehicle battery charger with enhanced V2H operation mode. , 2014, , .		13
34	A novel single-phase five-level active rectifier for on-board EV battery chargers. , 2017, , .		13
35	Experimental Validation of a Reduced-Scale Rail Power Conditioner Based on Modular Multilevel Converter for AC Railway Power Grids. <i>Energies</i> , 2021, 14, 484.	1.6	13
36	Review of a Disruptive Vision of Future Power Grids: A New Path Based on Hybrid AC/DC Grids and Solid-State Transformers. <i>Sustainability</i> , 2021, 13, 9423.	1.6	13

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37	Novel single-phase five-level VIENNA-type rectifier with model predictive current control. , 2017, , .		12
38	Single-Phase Shunt Active Power Filter Based on a 5-Level Converter Topology. Energies, 2018, 11, 1019.	1.6	12
39	The Role of Front-End AC/DC Converters in Hybrid AC/DC Smart Homes: Analysis and Experimental Validation. Electronics (Switzerland), 2021, 10, 2601.	1.8	12
40	Blockchain and Internet of Things for Electrical Energy Decentralization: A Review and System Architecture. Energies, 2021, 14, 8043.	1.6	11
41	iV2G Charging Platform. , 2010, , .		10
42	Collaborative Broker for Distributed Energy Resources. Intelligent Systems, Control and Automation: Science and Engineering, 2013, , 365-376.	0.3	10
43	Three-phase current-source shunt active power filter with solar photovoltaic grid interface. , 2015, , .		10
44	Experimental Validation of a Bidirectional Three-Level dc-dc Converter for On-Board or Off-Board EV Battery Chargers. , 2019, , .		10
45	Electric Vehicles Charging Management System for Optimal Exploitation of Photovoltaic Energy Sources Considering Vehicle-to-Vehicle Mode. Frontiers in Energy Research, 2021, 9, .	1.2	10
46	Smart Charging Management for Electric Vehicle Battery Chargers. , 2014, , .		9
47	Predictive control of a current-source inverter for solar photovoltaic grid interface. , 2015, , .		9
48	IoT system for anytime/anywhere monitoring and control of vehicles' parameters. , 2017, , .		9
49	Deadbeat Predictive Current Control for Circulating Currents Reduction in a Modular Multilevel Converter Based Rail Power Conditioner. Applied Sciences (Switzerland), 2020, 10, 1849.	1.3	9
50	An Off-Board Multi-Functional Electric Vehicle Charging Station for Smart Homes: Analysis and Experimental Validation. Energies, 2020, 13, 1864.	1.6	9
51	Electric vehicle assistant based on driver profile. International Journal of Electric and Hybrid Vehicles, 2014, 6, 335.	0.2	7
52	Development of an IoT System with Smart Charging Current Control for Electric Vehicles. , 2018, , .		7
53	Comparative Analysis of Power Electronics Topologies to Interface dc Homes with the Electrical ac Power Grid. , 2019, , .		7
54	Wireless Communication and Management System for E-Bike Dynamic Inductive Power Transfer Lanes. Electronics (Switzerland), 2020, 9, 1485.	1.8	7

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55	Efficiency Comparison of a dc-dc Interleaved Converter Based on SiC-MOSFET and Si-IGBT Devices for EV Chargers. , 2020, , .		7
56	Three-phase three-level current-source converter for EVs fast battery charging systems. , 2015, , .		6
57	Simplified rail power conditioner based on a half-bridge indirect AC/DC/AC Modular Multilevel Converter and a V/V power transformer. , 2017, , .		6
58	A Novel Multilevel Converter for On-Grid Interface of Renewable Energy Sources in Smart Grids. , 2019, , .		6
59	A Proposed Bidirectional Three-Level dc-dc Power Converter for Applications in Smart Grids: An Experimental Validation. , 2019, , .		6
60	A Three-Level dc-dc Converter for Bipolar dc Power Grids: Analysis and Experimental Validation. , 2020, , .		6
61	Smart Platform towards Batteries Analysis Based on Internet-of-Things. Procedia Technology, 2014, 17, 520-527.	1.1	5
62	A novel concept of unidirectional bridgeless combined boost-buck converter for EV battery chargers. , 2015, , .		5
63	A Novel Multi-Objective Off-Board EV Charging Station for Smart Homes. , 2018, , .		5
64	Innovative Off-Board EV Home Charging Station as a Smart Home Enabler: Present and Proposed Perspectives. , 2018, , .		5
65	Comprehensive Analysis and Experimental Validation of Five-Level Converters for EV Battery Chargers Framed in Smart Grids. , 2019, , .		5
66	Vehicle Electrification: Technologies, Challenges, and a Global Perspective for Smart Grids. , 0, , .		5
67	Review of Five-Level Front-End Converters for Renewable-Energy Applications. Frontiers in Energy Research, 2020, 8, .	1.2	5
68	Operation Modes of Battery Chargers for Electric Vehicles in the Future Smart Grids. IFIP Advances in Information and Communication Technology, 2014, , 401-408.	0.5	5
69	A Unified Topology for the Integration of Electric Vehicle, Renewable Energy Source, and Active Filtering for the Power Quality Improvement of the Electrical Power Grid: An Experimental Validation. Electronics (Switzerland), 2022, 11, 429.	1.8	5
70	Current-Source Shunt Active Power Filter with Periodic-Sampling Modulation Technique. , 2012, , .		4
71	Evaluation of a Shunt Active Power Filter with energy backup capability. , 2013, , .		4
72	A novel modular voltage balancing topology for active battery management system. , 2016, , .		4

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73	Experimental Evaluation of a Control System Based on a Dual-DSP Architecture for a Unified Power Quality Conditioner. <i>Energies</i> , 2019, 12, 1694.	1.6	4
74	A Novel Hardware Protection Scheme for a Modular Multilevel Converter Half-Bridge Submodule. , 2019, , .		4
75	Comparative Analysis of Vehicle-to-Vehicle (V2V) Power Transfer Configurations without Additional Power Converters. , 2020, , .		4
76	Improved Voltage Control for the Electric Vehicle Operation in V2H Mode as an Off-Line UPS in the Context of Smart Homes. <i>EAI Endorsed Transactions on Energy Web</i> , 2020, 7, 160980.	0.3	4
77	Experimental Comparison of Single-Phase Active Rectifiers for EV Battery Chargers. , 2017, , .		4
78	Power Electronics Converters for an Electric Vehicle Fast Charging Station with Storage Capability. <i>Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering</i> , 2019, , 119-130.	0.2	4
79	A Review on Integrated Battery Chargers for Electric Vehicles. <i>Energies</i> , 2022, 15, 2756.	1.6	4
80	Field oriented control of an axial flux permanent magnet synchronous motor for traction solutions. , 2014, , .		3
81	A novel architecture of a bidirectional bridgeless interleaved converter for EV battery chargers. , 2015, , .		3
82	OpenADRâ€™ Intelligent Electrical Energy Consumption Towards Internet-of-Things. <i>Lecture Notes in Electrical Engineering</i> , 2017, , 725-736.	0.3	3
83	Single-phase shunt active power filter with UPS operation using a bidirectional Dc-Dc converter for energy storage interface. , 2017, , .		3
84	A Novel Topology of Modular Multilevel Bidirectional Non-Isolated dc-dc Converter. , 2020, , .		3
85	A Novel Topology of Multilevel Bidirectional and Symmetrical Split-Pi Converter. , 2020, , .		3
86	Unified Three-Port Topology Integrating a Renewable and an Energy Storage System with the Grid-Interface Operating as Active Power Filter. , 2020, , .		3
87	Smart home power management system for electric vehicle battery charger and electrical appliance control. <i>International Transactions on Electrical Energy Systems</i> , 2021, 31, e12812.	1.2	3
88	Power losses reduction in a variable linear power supply using the LM317 voltage regulator. <i>ISA Transactions</i> , 2021, 112, 402-408.	3.1	3
89	A Multilevel Bidirectional Four-Port DC-DC Converter to Create a DC-Grid in Solid-State Transformers with Hybrid AC/DC Grids. , 2021, , .		3
90	Development of an Internet of Things System for Smart Home HVAC Monitoring and Control. <i>Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering</i> , 2020, , 197-208.	0.2	3

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91	Tracking Users Mobility Patterns Towards CO2 Footprint. Advances in Intelligent Systems and Computing, 2016, , 87-96.	0.5	3
92	Power Electronics Converters for an Electric Vehicle Fast Charging Station with Energy Storage System and Renewable Energy Sources. EAI Endorsed Transactions on Energy Web, 2020, 7, 161749.	0.3	3
93	Model Predictive Control of an On-Board Fast Battery Charger for Electric Mobility Applications. Lecture Notes in Electrical Engineering, 2017, , 679-689.	0.3	2
94	Selective Harmonic Measurement and Compensation Using Smart Inverters in a Microgrid with Distributed Generation. , 2018, , .		2
95	Sliding Mode Control of an Innovative Single-Switch Three-Level Active Rectifier. , 2019, , .		2
96	An Improved Modular Charge Equalization Structure for Series Cascaded Battery. , 2019, , .		2
97	Design of an Intrinsically Safe Series-Series Compensation WPT System for Automotive LiDAR. Electronics (Switzerland), 2020, 9, 86.	1.8	2
98	Unified Power Converter Based on a Dual-Stator Permanent Magnet Synchronous Machine for Motor Drive and Battery Charging of Electric Vehicles. Energies, 2021, 14, 3344.	1.6	2
99	A Bidirectional Multilevel DC-DC Converter Applied to a Bipolar DC Grid: Analysis of Operation under Fault Conditions. , 2021, , .		2
100	The Role of Off-Board EV Battery Chargers in Smart Homes and Smart Grids: Operation with Renewables and Energy Storage Systems. , 2020, , 47-72.		2
101	Evaluation of the Introduction of Electric Vehicles in the Power Grid – A Study for the Island of Maio in Cape Verde. Lecture Notes in Electrical Engineering, 2017, , 713-724.	0.3	2
102	Comprehensive Analysis and Comparison of Digital Current Control Techniques for Active Rectifiers. Lecture Notes in Electrical Engineering, 2017, , 655-666.	0.3	2
103	Performance Comparison of a Typical Nonlinear Load Connected to Ac and Dc Power Grids. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2019, , 54-63.	0.2	2
104	Performance Comparison of a Typical Nonlinear Load Supplied by ac and dc Voltages. EAI Endorsed Transactions on Energy Web, 2020, 7, 161748.	0.3	2
105	Model Predictive Current Control of a Slow Battery Charger for Electric Mobility Applications. Lecture Notes in Electrical Engineering, 2017, , 643-653.	0.3	1
106	Mobile device sensing system for urban goods distribution logistics. , 2017, , .		1
107	New multifunctional push-pull converter operating with MPPT and integrated energy storage system for PV micro-inverter applications. , 2017, , .		1
108	A Novel Five-Level Semi-Bridgeless Power Factor Correction Topology. , 2018, , .		1

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109	A Novel Control Strategy Based on Predictive Control for a Bidirectional Interleaved Three-Phase Converter. , 2018, , .		1
110	A Novel Single-Phase Bidirectional Nine-Level Converter Employing Four Quadrant Switches. , 2018, , .		1
111	A novel two-switch three-level active rectifier for grid-connected electrical appliances in smart grids. , 2018, , .		1
112	Parallel Association of Power Semiconductors: An Experimental Evaluation with IGBTs and MOSFETs. , 2019, , .		1
113	Integrated System for Traction and Battery Charging of Electric Vehicles with Universal Interface to the Power Grid. IFIP Advances in Information and Communication Technology, 2019, , 355-366.	0.5	1
114	A Proposed Single-Phase Five-Level PFC Rectifier for Smart Grid Applications: An Experimental Evaluation. , 2019, , .		1
115	Comparative Analysis and Validation of Different Modulation Strategies for an Isolated DC-DC Dual Active Bridge Converter. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2021, , 30-49.	0.2	1
116	A Single-Phase Current-Source Converter Combined with a Hybrid Converter for Interfacing an Electric Vehicle and a Renewable Energy Source. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2021, , 175-186.	0.2	1
117	Unified Systems for Traction and Battery Charging of Electric Vehicles: A Sustainability Perspective. EAI Endorsed Transactions on Energy Web, 2021, 8, 170557.	0.3	1
118	Model Predictive Control of a Single-Phase Five-Level VIENNA Rectifier. , 2021, , .		1
119	A Novel Single-Phase Shunt Active Power Filter Based on a Current-Source Converter with Reduced Dc-Link. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 269-280.	0.2	1
120	Interfacing Power Electronics Systems for Smart Grids: Innovative Perspectives of Unified Systems and Operation Modes. , 2021, , .		1
121	A Novel Multilevel Interleaved-Based PFC Rectifier with Modular DC Interfaces. , 2021, , .		1
122	Various strategies comparison of NPC inverter current control connected to the grid for photovoltaic system. , 2014, , .		0
123	Renewable energy system for an isolated micro grid. , 2014, , .		0
124	Decision Process to Manage Renewable Energy Production in Smart Grid Environment. Communications in Computer and Information Science, 2017, , 299-306.	0.4	0
125	Renewable Energy System for an Isolated Sustainable Social Centre. Lecture Notes in Electrical Engineering, 2017, , 701-711.	0.3	0
126	Performance Evaluation of a Proportional-Integral with Proportional-Derivative Feedforward Voltage Control for UPSs. , 2018, , .		0



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127	A Novel Fixed Switching Frequency Control Strategy Applied to an Improved Five-Level Active Rectifier. , 2018, , .		0
128	Development and Evaluation of Smart Home IoT Systems applied to HVAC Monitoring and Control. EAI Endorsed Transactions on Energy Web, 2021, 8, 167205.	0.3	0
129	Experimental Validation of a Current-Source Converter with Reduced Dc-link Operating as Shunt Active Power Filter. EAI Endorsed Transactions on Energy Web, 2021, 8, 168135.	0.3	0
130	Experimental Validation of a Three-Phase Induction Motor Operating with a Three-Phase Bidirectional Variable Speed Drive. EAI Endorsed Transactions on Energy Web, 2021, 8, 168137.	0.3	0
131	Design and Experimental Validation of a Compact Low-Cost Weather Station for Solar Photovoltaic Applications. EAI Endorsed Transactions on Energy Web, 2021, 8, 167290.	0.3	0
132	The Role of the Electric Vehicle in Smart Homes: Assessment and Future Perspectives. EAI Endorsed Transactions on Energy Web, 2021, 8, 168223.	0.3	0
133	Digital Control of a Novel Single-Phase Three-Port Bidirectional Converter to Interface Renewables and Electric Vehicles with the Power Grid. Lecture Notes in Electrical Engineering, 2017, , 667-677.	0.3	0
134	New Opportunities and Perspectives for the Electric Vehicle Operation in Smart Grids and Smart Homes Scenarios. , 2017, , .		0
135	Improved Voltage Control of the Electric Vehicle Operating as UPS in Smart Homes. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2019, , 1-12.	0.2	0
136	The Electric Vehicle in Smart Homes: A Review and Future Perspectives. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 3-17.	0.2	0
137	Advanced Load-Shift System: An Experimental Validation of the ac-dc Converter as Shunt Active Power Filter. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 257-268.	0.2	0
138	Unified Traction and Battery Charging Systems for Electric Vehicles: A Sustainability Perspective. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 58-69.	0.2	0
139	Smart Auditorium: Development and Analysis of a Power and Environment Monitoring Platform. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 73-87.	0.2	0
140	Three-Phase Smart Energy Meter for Grid-Connected PV Installations. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 281-290.	0.2	0
141	A Three-Phase Bidirectional Variable Speed Drive: An Experimental Validation for a Three-Phase Induction Motor. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2020, , 47-57.	0.2	0
142	Power electronics technologies for renewable energy sources. , 2022, , 403-455.		0
143	Continuous Control Set Model Predictive Control of a Bridgeless-Boost Three-Level Active Rectifier. , 2021, , .		0
144	Enhanced Three-Phase Shunt Active Power Filter Interfacing a Renewable and an Energy Storage System. , 2021, , .		0

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145	Power Electronics Technologies and Applications for EV Battery Charging Systems. Energies, 2022, 15, 1049.	1.6	0
146	A Three-Phase Multilevel AC-DC Converter Operating as a Shunt Active Power Filter: Validation Considering an Industrial Environment. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2022, , 141-153.	0.2	0