

# Gerardo Escobar

## List of Publications by Year in descending order

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175  
papers

4,999  
citations

147566

31  
h-index

102304

66  
g-index

175  
all docs

175  
docs citations

175  
times ranked

2855  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interconnection and damping assignment passivity-based control of port-controlled Hamiltonian systems. <i>Automatica</i> , 2002, 38, 585-596.	3.0	1,266
2	Repetitive-Based Controller for a UPS Inverter to Compensate Unbalance and Harmonic Distortion. <i>IEEE Transactions on Industrial Electronics</i> , 2007, 54, 504-510.	5.2	248
3	A Hamiltonian viewpoint in the modeling of switching power converters. <i>Automatica</i> , 1999, 35, 445-452.	3.0	206
4	Analysis and design of direct power control (DPC) for a three phase synchronous rectifier via output regulation subspaces. <i>IEEE Transactions on Power Electronics</i> , 2003, 18, 823-830.	5.4	166
5	An experimental comparison of several nonlinear controllers for power converters. <i>IEEE Control Systems</i> , 1999, 19, 66-82.	1.0	160
6	An Adaptive Control for UPS to Compensate Unbalance and Harmonic Distortion Using a Combined Capacitor/Load Current Sensing. <i>IEEE Transactions on Industrial Electronics</i> , 2007, 54, 839-847.	5.2	135
7	Adaptive PI Stabilization of Switched Power Converters. <i>IEEE Transactions on Control Systems Technology</i> , 2010, 18, 688-698.	3.2	124
8	A Single-Phase Asymmetrical T-Type Five-Level Transformerless PV Inverter. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2018, 6, 140-150.	3.7	123
9	An adaptive passivity-based controller for a unity power factor rectifier. <i>IEEE Transactions on Control Systems Technology</i> , 2001, 9, 637-644.	3.2	121
10	A Comparative Performance Study of an Interleaved Boost Converter Using Commercial Si and SiC Diodes for PV Applications. <i>IEEE Transactions on Power Electronics</i> , 2013, 28, 289-299.	5.4	108
11	A robustly stable output feedback saturated controller for the boost DC-to-DC converter. <i>Systems and Control Letters</i> , 2000, 40, 1-8.	1.3	106
12	Practical Design and Implementation Procedure of an Interleaved Boost Converter Using SiC Diodes for PV Applications. <i>IEEE Transactions on Power Electronics</i> , 2012, 27, 2835-2845.	5.4	106
13	A Repetitive-Based Controller for the Compensation of 6% Harmonic Components. <i>IEEE Transactions on Industrial Electronics</i> , 2008, 55, 3150-3158.	5.2	105
14	An Adaptive Controller in Stationary Reference Frame for D-Statcom in Unbalanced Operation. <i>IEEE Transactions on Industrial Electronics</i> , 2004, 51, 401-409.	5.2	99
15	Fixed-Reference-Frame Phase-Locked Loop for Grid Synchronization Under Unbalanced Operation. <i>IEEE Transactions on Industrial Electronics</i> , 2011, 58, 1943-1951.	5.2	88
16	Direct torque control of induction motors: stability analysis and performance improvement. <i>IEEE Transactions on Automatic Control</i> , 2001, 46, 1209-1222.	3.6	81
17	A Model-Based Controller for the Cascade H-Bridge Multilevel Converter Used as a Shunt Active Filter. <i>IEEE Transactions on Industrial Electronics</i> , 2013, 60, 5019-5028.	5.2	79
18	A Negative Feedback Repetitive Control Scheme for Harmonic Compensation. <i>IEEE Transactions on Industrial Electronics</i> , 2006, 53, 1383-1386.	5.2	70

#	ARTICLE	IF	CITATIONS
19	Dissipativity-based adaptive and robust control of UPS in unbalanced operation. IEEE Transactions on Power Electronics, 2003, 18, 1056-1062.	5.4	64
20	Output-feedback global stabilization of a nonlinear benchmark system using a saturated passivity-based controller. IEEE Transactions on Control Systems Technology, 1999, 7, 289-293.	3.2	62
21	Analog Circuits to Implement Repetitive Controllers With Feedforward for Harmonic Compensation. IEEE Transactions on Industrial Electronics, 2007, 54, 567-573.	5.2	56
22	Reactive power and imbalance compensation using STATCOM with dissipativity-based control. IEEE Transactions on Control Systems Technology, 2001, 9, 718-727.	3.2	51
23	Regulation and tracking of the nonholonomic double integrator: A field-oriented control approach. Automatica, 1998, 34, 125-131.	3.0	46
24	Analysis and experimentation of nonlinear adaptive controllers for the series resonant converter. IEEE Transactions on Power Electronics, 2000, 15, 536-544.	5.4	44
25	Filters With Linear-Phase Properties for Repetitive Feedback. IEEE Transactions on Industrial Electronics, 2014, 61, 405-413.	5.2	41
26	A repetitive-based controller for the boost converter to compensate the harmonic distortion of the output Voltage. IEEE Transactions on Control Systems Technology, 2005, 13, 500-508.	3.2	40
27	An Adaptive Controller for the Shunt Active Filter Considering a Dynamic Load and the Line Impedance. IEEE Transactions on Control Systems Technology, 2009, 17, 458-464.	3.2	37
28	A Model-Based Controller for A Three-Phase Four-Wire Shunt Active Filter With Compensation of the Neutral Line Current. IEEE Transactions on Power Electronics, 2007, 22, 2261-2270.	5.4	35
29	Direct Power Control of a Three-Phase Rectifier Based on Positive Sequence Detection. IEEE Transactions on Industrial Electronics, 2014, 61, 4084-4092.	5.2	35
30	A PWM method for single-phase cascade multilevel inverters to reduce leakage ground current in transformerless PV systems. International Transactions on Electrical Energy Systems, 2016, 26, 2353-2369.	1.2	35
31	Implementation of a $\mu$ -Repetitive Controller Subject to Fractional Delays. IEEE Transactions on Industrial Electronics, 2015, 62, 444-452.	5.2	33
32	Dissipativity-based adaptive and robust control of UPS. IEEE Transactions on Industrial Electronics, 2001, 48, 334-343.	5.2	32
33	A Controller for a Boost Converter With Harmonic Reduction. IEEE Transactions on Control Systems Technology, 2004, 12, 717-726.	3.2	29
34	H5-HERIC based transformerless multilevel inverter for single-phase grid connected PV systems. , 2015, , .		26
35	Multisampling Maximum Power Point Tracker (MS-MPPT) to Compensate Irradiance and Temperature Changes. IEEE Transactions on Sustainable Energy, 2017, 8, 1096-1105.	5.9	26
36	A Repetitive-Based Controller for a Power Factor Precompensator. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, 54, 1968-1976.	3.5	25

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37	Analog circuits to implement repetitive controllers for tracking and disturbance rejection of periodic signals. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2005, 52, 466-470.	2.3	23
38	Effects of modulation techniques on leakage ground currents in a grid-tied transformerless HB-NPC inverter. IET Renewable Power Generation, 2019, 13, 1250-1260.	1.7	22
39	Reactive Power Control for Single-Phase Grid-Tie Inverters Using Quasi-Sinusoidal Waveform. IEEE Transactions on Sustainable Energy, 2018, 9, 3-11.	5.9	21
40	A family of switching control strategies for the reduction of torque ripple in DTC. IEEE Transactions on Control Systems Technology, 2003, 11, 933-939.	3.2	20
41	Practical implementation of an interleaved boost converter using SiC diodes for PV applications. , 2011, , .		20
42	Mitigation of Leakage-Ground Currents in Transformerless Grid-Tied Inverters via Virtual-Ground Connection. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 3111-3123.	3.7	20
43	A switching control strategy based on output regulation subspaces for the control of induction motors using a three-level inverter. IEEE Power Electronics Letters, 2003, 1, 29-32.	1.1	19
44	Modeling of a three level converter used in a synchronous rectifier application. , 0, , .		18
45	A comparative analysis of grid-tied single-phase transformerless five-level NPC-based inverters for photovoltaic applications. , 2016, , .		18
46	Analysis and Validation for an Inverter-side Current Controller in LCL Grid-connected Power Systems. Journal of Modern Power Systems and Clean Energy, 2020, 8, 387-398.	3.3	17
47	Maximum power point searching method for partial shaded PV strings. , 2012, , .		16
48	Analysis and experimental validation of a controller for a single-phase active power filter based on a 3L-NPC topology. International Transactions on Electrical Energy Systems, 2017, 27, e2385.	1.2	16
49	An improved algorithm for fault detection and location in multi-terminal transmission lines based on wavelet correlation modes. Electric Power Systems Research, 2021, 192, 106953.	2.1	16
50	A Fast-Dynamic Control Scheme for a Power-Electronics-Based PV Emulator. IEEE Journal of Photovoltaics, 2021, 11, 485-495.	1.5	16
51	Control of a three level converter used as a synchronous rectifier. , 0, , .		15
52	Transformerless single-phase multilevel inverter for grid tied photovoltaic systems. , 2014, , .		15
53	A repetitive-based controller for the compensation of 6l $\hat{A} \pm 1$ harmonic components. , 2007, , .		14
54	Performance evaluation of full SiC switching cell in an interleaved boost converter for PV applications. , 2011, , .		14

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55	Compensation of Variable Fractional Delays in the $\frac{1}{s}$ Repetitive Controller. IEEE Transactions on Industrial Electronics, 2015, 62, 6448-6456.	5.2	14
56	Discrete-Time Modeling and Control of Double Dual Boost Converters With Implicit Current Ripple Cancellation Over a Wide Operating Range. IEEE Transactions on Industrial Electronics, 2021, 68, 5966-5977.	5.2	14
57	Nonlinear Stability Analysis of the Conventional SRF-PLL and Enhanced SRF-EPLL. IEEE Access, 2021, 9, 59446-59455.	2.6	14
58	Fixed reference frame phase-locked loop (FRF-PLL) for unbalanced line voltage conditions. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	13
59	Comparative evaluation of L and LCL filters in transformerless grid tied converters for active power injection. , 2014, , .		13
60	Design of an inverter-side current reference and controller for a single-phase LCL-based grid-connected inverter. International Transactions on Electrical Energy Systems, 2018, 28, e2476.	1.2	13
61	A Discrete-Time Frequency-Locked Loop for Single-Phase Grid Synchronization Under Harmonic Distortion. IEEE Transactions on Power Electronics, 2020, 35, 4647-4657.	5.4	13
62	Reactive power and unbalance compensation using STATCOM with dissipativity-based control. , 0, , .		12
63	Regulation and compensation of source harmonics for the boost converter-based power factor precompensator. , 0, , .		12
64	Optimized Direct Power Control Strategy using Output Regulation Subspaces and Pulse Width Modulation. Industrial Electronics Society (IECON ), Annual Conference of IEEE, 2006, , .	0.0	12
65	A comparative performance study of an interleaved boost converter using commercialized Si and SiC diodes for PV applications. , 2011, , .		12
66	Control of single-phase inverter connected to the grid through an LCL filter. , 2012, , .		12
67	Model based controller for an LCL coupling filter for transformerless grid connected inverters in PV applications. , 2013, , .		12
68	A model-based controller for a DC-DC boost converter with an LCL input filter. , 2015, , .		11
69	Modelling and control of a hybrid power filter to compensate harmonic distortion under unbalanced operation. IET Power Electronics, 2017, 10, 782-791.	1.5	11
70	Minimum Current Ripple Point Tracking Control for Interleaved Dual Switched-Inductor DC-DC Converters. IEEE Transactions on Industrial Electronics, 2021, 68, 175-185.	5.2	11
71	Phase-locked loop for grid synchronization under unbalanced operation and harmonic distortion. , 2011, , .		10
72	Data-Driven Control of LVDC Network Converters: Active Load Stabilization. IEEE Transactions on Smart Grid, 2020, 11, 2182-2194.	6.2	10

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73	Analysis of the Input Current-Ripple in the Series-Capacitor Boost Converter. IEEE Transactions on Industrial Electronics, 2021, 68, 10303-10308.	5.2	10
74	Passivity-based controller for a three phase synchronous rectifier. , 0, , .		9
75	An adaptive direct power control for three-phase pwm rectifier in the unbalanced case. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	9
76	PV current sensorless MPPT for a single-phase PV inverter. , 2011, , .		9
77	Data-driven short-circuit detection and location in microgrids using micro-synchrophasors. IET Generation, Transmission and Distribution, 2020, 14, 1353-1365.	1.4	9
78	Nonlinear Stabilizing Control Design for DC-DC Converters Using Lifted Models. IEEE Transactions on Industrial Electronics, 2021, 68, 10772-10783.	5.2	9
79	A repetitive based controller for a shunt active filter to compensate for reactive power and harmonic distortion. , 0, , .		8
80	A Model-Based Controller for the Cascade Multilevel Converter Used as a Shunt Active Filter. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2007, , .	0.0	8
81	Cascade three-phase PLL for unbalance and harmonic distortion operation (CSRF-PLL). , 2014, , .		8
82	Inverter-side current control of a single-phase inverter grid connected through an LCL filter. , 2014, , .		8
83	Control design for a quadratic buck converter with LC input filter. , 2016, , .		8
84	Modifications to repetitive-based controllers using FIR filters for practical implementation. , 2009, , .		7
85	Active Power Injection Control for Power Converters Connected to the Grid Through an L Filter. Electric Power Components and Systems, 2017, 45, 660-671.	1.0	7
86	Data-Driven Passivity-Based Control Design for Modular DC Microgrids. IEEE Transactions on Industrial Electronics, 2022, 69, 2545-2556.	5.2	7
87	On the nonlinear control of TCSC. , 0, , .		6
88	A model-based controller for the cascade h-bridge multilevel converter used as a shunt active filter. , 0, , .		6
89	Digital Implementation Issues for a Three-Phase Power Converter Development Using a Repetitive Control Scheme. , 2007, , .		6
90	A modified repetitive-based controller for an active filter to compensate harmonics $6k+1$ . Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	6

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91	Implementation of repetitive controllers subject to fractional delays. , 2013, , .		6
92	A combined controller for a PV simulator. , 2014, , .		6
93	A generalized model-based controller for the n-level CHB multilevel converter used as a shunt active filter. , 2015, , .		6
94	A fast dynamic photovoltaic simulator with instantaneous output impedance matching controller. , 2017, , .		6
95	A Modulation Strategy for a Single-Phase Transformerless Multilevel Inverter with Dual Bidirectional Switch. , 2018, , .		6
96	Control Design and Experimental Validation of a HB-NPC as a Shunt Active Power Filter. Energies, 2020, 13, 1691.	1.6	6
97	Direct active and reactive power control (DPQ) for a three phase synchronous rectifier. , 0, , .		5
98	Passivity-based controller for harmonic compensation in distribution lines with nonlinear loads. , 0, , .		5
99	Dissipativity-based adaptive and robust control of UPS in unbalanced operation. , 0, , .		5
100	A novel model-based controller for a three-phase four-wire shunt active filter. , 0, , .		5
101	A repetitive-based controller in stationary reference frame for D-Statcom in unbalanced operation. , 2006, , .		5
102	A model-based controller for a hybrid power filter to compensate harmonic distortion in unbalanced operation. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	5
103	A charge control for interleaved operation of a PFC boost converter. , 2010, , .		5
104	Model-Based and Model-Free Control of DCâ€“DC Converters With High-Order Dynamics and Limited Measurements. IEEE Transactions on Industrial Electronics, 2021, 68, 6750-6761.	5.2	5
105	A comparative study of three nonlinear controllers for TCSC. , 0, , .		4
106	Robust adaptive PI stabilization of a quadratic converter: Experimental results. , 2010, , .		4
107	A direct power control for three-phase rectifier based on positive sequence detection. , 2011, , .		4
108	Grid Synchronisation Based on Frequency-Locked Loop Schemes. Advances in Industrial Control, 2012, , 133-159.	0.4	4

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109	A model-based controller for a single-phase active filter using a full bridge NPC. , 2014, , .		4
110	Controller for a reduced output current ripple DC-DC buck converter. , 2015, , .		4
111	Model based current mode control design and experimental validation for a $3\phi$ $3T$ rectifier under unbalanced grid voltage conditions. Journal of Modern Power Systems and Clean Energy, 2018, 6, 777-790.	3.3	4
112	Step-up seven-level neutral-point-clamped inverter based topology for TL-UPS. IET Power Electronics, 2020, 13, 2847-2853.	1.5	4
113	A model-based controller for a single-phase n-level CHB multilevel converter. International Journal of Electrical Power and Energy Systems, 2021, 125, 106454.	3.3	4
114	Differential and common-mode model-based controller for the double-dual buck transformerless inverter. International Journal of Electrical Power and Energy Systems, 2021, 131, 107065.	3.3	4
115	To tune or not to tune?: A monitoring procedure to decide. Automatica, 1992, 28, 179-184.	3.0	3
116	An adaptive controller for a boost converter with harmonic reduction. , 0, , .		3
117	An adaptive control for UPS to compensate unbalance and harmonic distortion using a combined capacitor/load current approach. , 0, , .		3
118	A hybrid active filter implementation of an overvoltage suppression scheme. , 2004, , .		3
119	A Repetitive-based Controller for UPS using a Combined Capacitor/load Current Sensing. , 0, , .		3
120	A repetitive-based controller for a single-phase shunt active filter. , 2006, , .		3
121	Power factor correction with an active filter using a repetitive controller. , 2006, , .		3
122	A model-based controller for a three-phase four-leg shunt active filter with homopolar current compensation. , 2008, , .		3
123	Passive power factor compensation of a controlled rectifier with non-sinusoidal generator voltage. , 2008, , .		3
124	Adaptive PI Stabilisation of Switched Power Converters Described by Port-Hamiltonian Models. Advances in Industrial Control, 2012, , 355-388.	0.4	3
125	A model-based controller for a half-bridge NPC used as an active power filter. , 2013, , .		3
126	Multi-sampling maximum power point tracker (MS-MPPT) to compensate irradiation and temperature changes. , 2014, , .		3



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127	Reduced output current ripple DC-DC buck converter control. , 2016, , .		3
128	A comparative analysis of the 5L-AH6 and 5L-SC topologies for grid-connected transformer-less multilevel inverters for PV systems. , 2016, , .		3
129	A single-phase asymmetrical NPC inverter topology. , 2016, , .		3
130	DC-Link Capacitorsâ€™ Voltage Balance in an HB-NPC Five-Level Grid-Tied Inverter via the Common-Mode Control Component. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 3242-3255.	3.7	3
131	DC-DC Buck Converter with an LC Filter for Battery Parameter Identification. , 2020, , .		3
132	A Repetitive-Based Controller for a Power Factor Precompensator With Harmonic Compensation. , 0, , .		2
133	A model-based controller for a three-phase four-wire shunt active filter with compensation of the neutral line current. , 2006, , .		2
134	On ultimate boundedness around non-assignable equilibria of linear time-invariant systems. Automatica, 2008, 44, 286-288.	3.0	2
135	An adaptive controller for a shunt active filter considering load and line impedances. , 2008, , .		2
136	A current mode control for a single phase full bridge Power Factor Compensator. , 2014, , .		2
137	A modulation scheme for a 3L-NPC converter in transformerless PV applications. , 2015, , .		2
138	A model-based controller of a three-level stacked-cell grid connected converter. , 2015, , .		2
139	Diode-rectifier clamped half-bridge single-phase optimized transformerless inverter. , 2016, , .		2
140	A current controller for the modular multilevel converter operating under distorted grid voltage. International Transactions on Electrical Energy Systems, 2018, 28, e2524.	1.2	2
141	Experimental Validation of a Buck Converter in Discontinuous Conduction Mode with Power Factor Correction. , 2018, , .		2
142	A model-based controller for a single-phase grid-tied modular multilevel inverter with regulation and balance of energy. International Transactions on Electrical Energy Systems, 2019, 29, e12030.	1.2	2
143	An Architecture for Level-3 EV Battery Charger Stations Using Integrated Solid State Transformer (I-SST). , 2020, , .		2
144	Power Grid Dynamic Performance Enhancement via STATCOM Data-Driven Control. Mathematics, 2021, 9, 2361.	1.1	2

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145	From Real to Complex FLL With Unbalance and Harmonic Distortion Compensation. IEEE Access, 2021, 9, 158710-158725.	2.6	2
146	An adaptive controller for a series active filter to compensate voltage sags, unbalance and harmonic distortion. , 0, , .		1
147	A Model-Based Controller for the Cascade Multilevel Converter Used as a Shunt Active Filter. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2007, , .	0.0	1
148	Practical modifications of a repetitive-based controller aimed to compensate 6&#x2113; &#x00B1; 1 harmonics. , 2008, , .		1
149	A controller for the active filter considering load and line impedances. , 2008, , .		1
150	On the passivity properties of a new family of repetitive (hyperbolic) controllers. International Journal of Control, 2008, 81, 1424-1433.	1.2	1
151	Power factor compensation of a controlled rectifier with non-sinusoidal generator voltage using passive components. , 2008, , .		1
152	Discrete phase-locked loop for three-phase systems. , 2014, , .		1
153	A model-based controller for a three-phase grid-connected modular multilevel converter. , 2015, , .		1
154	An improved current mode control of a three-phase rectifier based on positive-sequence detection. , 2015, , .		1
155	Current control of a three-phase inverter grid connected through an LCL filter. , 2015, , .		1
156	Reactive power control for single-phase grid-tie inverters using Quasi Sinusoidal Waveform. , 2016, , .		1
157	A phase-locked loop with saturated estimator for single-phase grid synchronization. , 2016, , .		1
158	A combined method for anti-islanding in PV inverters. , 2016, , .		1
159	Experimental validation for an open-loop LCLC output filter buck converter. , 2017, , .		1
160	Voltage and Current Switching-Ripple Cancelation in the Double Dual Boost Converter. , 2018, , .		1
161	An Angular Speed and Position FLL-Based Estimator Using Linear Hall-Effect Sensors. IEEE Access, 2021, 9, 168004-168014.	2.6	1
162	Direct Output-Voltage Control of Nonminimum Phase Higher Order DC&#x2013;DC Converters. IEEE Transactions on Industrial Electronics, 2023, 70, 1455-1466.	5.2	1

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163	On disturbance attenuation properties of control schemes for Euler-Lagrange systems: Theoretical and experimental results. , 1997, , .		0
164	Theoretic and experimental study of direct torque control of induction motors. , 0, , .		0
165	A Repetitive-based Controller to Compensate for Harmonic Distortion in the Output Voltage of a Boost Converter. , 0, , .		0
166	On the passivity properties of a new family of repetitive (hyperbolic) controllers. , 2008, , .		0
167	On the generalized-proportional-integral multi-level sigma-delta sliding mode control of a buck-based inverter. , 2013, , .		0
168	Compensation of variable fractional delays in repetitive controllers. , 2014, , .		0
169	Control law for transformerless converters connected to the grid through an L filter. , 2014, , .		0
170	Comparative study of two model-based controllers for a quadratic boost converter. , 2016, , .		0
171	Passivity-based Stabilization of DC-DC converters with Constant Power Loads. , 2019, , .		0
172	A Sequence Impedance Matrix Approach to Current Unbalance Detection for Grid Code Fulfillment. IEEE Transactions on Power Delivery, 2021, 36, 1640-1650.	2.9	0
173	A Single-Phase Globally Stable Frequency-Locked Loop Based on the Second-Order Harmonic Oscillator Model. Electronics (Switzerland), 2021, 10, 525.	1.8	0
174	Some remarks on non-assignable equilibria of linear time-invariant systems. , 2007, , .		0
175	Fuel-cell power conversion system based on double dual topologies. International Journal of Hydrogen Energy, 2022, , .	3.8	0