

Grant Covic

List of Publications by Year in descending order

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98
papers

8,380
citations

101543

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175258

52
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98
all docs

98
docs citations

98
times ranked

2574
citing authors

#	ARTICLE	IF	CITATIONS
1	Modern Trends in Inductive Power Transfer for Transportation Applications. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2013, 1, 28-41.	5.4	1,041
2	Development of a Single-Sided Flux Magnetic Coupler for Electric Vehicle IPT Charging Systems. IEEE Transactions on Industrial Electronics, 2013, 60, 318-328.	7.9	943
3	Inductive Power Transfer. Proceedings of the IEEE, 2013, 101, 1276-1289.	21.3	916
4	Design and Optimization of Circular Magnetic Structures for Lumped Inductive Power Transfer Systems. IEEE Transactions on Power Electronics, 2011, 26, 3096-3108.	7.9	805
5	A Three-Phase Inductive Power Transfer System for Roadway-Powered Vehicles. IEEE Transactions on Industrial Electronics, 2007, 54, 3370-3378.	7.9	371
6	Investigation of Multiple Decoupled Coil Primary Pad Topologies in Lumped IPT Systems for Interoperable Electric Vehicle Charging. IEEE Transactions on Power Electronics, 2015, 30, 1937-1955.	7.9	286
7	Tripolar Pad for Inductive Power Transfer Systems for EV Charging. IEEE Transactions on Power Electronics, 2017, 32, 5045-5057.	7.9	215
8	Multiphase Pickups for Large Lateral Tolerance Contactless Power-Transfer Systems. IEEE Transactions on Industrial Electronics, 2010, 57, 1590-1598.	7.9	202
9	An Approximate Dynamic Model of LCL- LCL-Based Inductive Power Transfer Power Supplies. IEEE Transactions on Power Electronics, 2014, 29, 5554-5567.	7.9	182
10	Development and evaluation of single sided flux couplers for contactless electric vehicle charging. , 2011, , .		176
11	A Parallel Topology for Inductive Power Transfer Power Supplies. IEEE Transactions on Power Electronics, 2014, 29, 1140-1151.	7.9	161
12	A Direct AC-AC Converter for Inductive Power-Transfer Systems. IEEE Transactions on Power Electronics, 2012, 27, 661-668.	7.9	145
13	Interphase Mutual Inductance in Polyphase Inductive Power Transfer Systems. IEEE Transactions on Industrial Electronics, 2009, 56, 2393-2400.	7.9	140
14	A bipolar receiver pad in a lumped IPT system for electric vehicle charging applications. , 2012, , .		136
15	Double-Coupled Systems for IPT Roadway Applications. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 37-49.	5.4	133
16	A Dynamic EV Charging System for Slow Moving Traffic Applications. IEEE Transactions on Transportation Electrification, 2017, 3, 354-369.	7.8	122
17	Evaluation of Magnetic Pad Sizes and Topologies for Electric Vehicle Charging. IEEE Transactions on Power Electronics, 2015, 30, 6391-6407.	7.9	104
18	Detection of the Tuned Point of a Fixed-Frequency LCL Resonant Power Supply. IEEE Transactions on Power Electronics, 2009, 24, 1140-1143.	7.9	97

#	ARTICLE	IF	CITATIONS
19	An AC Processing Pickup for IPT Systems. IEEE Transactions on Power Electronics, 2010, 25, 1275-1284.	7.9	96
20	Practical Design Considerations for Contactless Power Transfer Quadrature Pick-Ups. IEEE Transactions on Industrial Electronics, 2013, 60, 400-409.	7.9	96
21	Detection of EVs on IPT Highways. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 584-597.	5.4	94
22	An Appropriate Magnetic Coupling Co-Efficient for the Design and Comparison of ICPT Pickups. IEEE Transactions on Power Electronics, 2007, 22, 333-335.	7.9	92
23	Analysis of Coplanar Intermediate Coil Structures in Inductive Power Transfer Systems. IEEE Transactions on Power Electronics, 2015, 30, 6141-6154.	7.9	83
24	Design and optimisation of magnetic structures for lumped Inductive Power Transfer systems. , 2009, , .		81
25	Ferrite-Less Circular Pad With Controlled Flux Cancellation for EV Wireless Charging. IEEE Transactions on Power Electronics, 2017, 32, 8349-8359.	7.9	77
26	Self tuning pick-ups for inductive power transfer. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	66
27	Comparative Study of CCPT Systems With Two Different Inductor Tuning Positions. IEEE Transactions on Power Electronics, 2012, 27, 294-306.	7.9	66
28	Determining the Physical Size of Inductive Couplers for IPT EV Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 571-583.	5.4	66
29	Comparison of Tripolar and Circular Pads for IPT Charging Systems. IEEE Transactions on Power Electronics, 2018, 33, 6093-6103.	7.9	66
30	Self-Tuning Power Supply for Inductive Charging. IEEE Transactions on Power Electronics, 2017, 32, 3467-3479.	7.9	63
31	Steady-State Flat-Pickup Loading Effects in Polyphase Inductive Power Transfer Systems. IEEE Transactions on Industrial Electronics, 2011, 58, 2274-2282.	7.9	61
32	Interoperable EV Detection for Dynamic Wireless Charging With Existing Hardware and Free Resonance. IEEE Transactions on Transportation Electrification, 2017, 3, 370-379.	7.8	59
33	Design Considerations for Variable Coupling Lumped Coil Systems. IEEE Transactions on Power Electronics, 2015, 30, 680-689.	7.9	51
34	Determining the physical size of inductive couplers for IPT EV systems. , 2014, , .		50
35	Wireless Fleet Charging System for Electric Bicycles. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 75-86.	5.4	47
36	Power Management for Multiple-Pickup IPT Systems in Materials Handling Applications. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 163-176.	5.4	46

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37	Multiobjective Optimization of Inductive Power Transfer Double-D Pads for Electric Vehicles. IEEE Transactions on Power Electronics, 2021, 36, 5135-5146.	7.9	46
38	Robust Ferrite-Less Double D Topology for Roadway IPT Applications. IEEE Transactions on Power Electronics, 2019, 34, 6062-6075.	7.9	45
39	A new primary power regulation method for contactless power transfer. , 2009, , .		44
40	Practical considerations for designing IPT system for EV battery charging. , 2009, , .		44
41	A Hybrid Solenoid Coupler for Wireless Charging Applications. IEEE Transactions on Power Electronics, 2019, 34, 5632-5645.	7.9	44
42	Reducing leakage flux in IPT systems by modifying pad ferrite structures. , 2014, , .		43
43	A practical multiphase IPT system for AGV and roadway applications. , 2010, , .		42
44	Variable-Frequency Retuned WPT System for Power Transfer and Efficiency Improvement in Dynamic EV Charging With Fixed Voltage Characteristic. IEEE Transactions on Energy Conversion, 2021, 36, 2141-2151.	5.2	39
45	An Inductive Coupler Array for In-Motion Wireless Charging of Electric Vehicles. IEEE Transactions on Power Electronics, 2021, 36, 9854-9863.	7.9	39
46	A Mistuning-Tolerant and Controllable Power Supply for Roadway Wireless Power Systems. IEEE Transactions on Power Electronics, 2017, 32, 6689-6699.	7.9	37
47	Effective Coupling Factors for Series and Parallel Tuned Secondaries in IPT Systems Using Bipolar Primary Pads. IEEE Transactions on Transportation Electrification, 2017, 3, 434-444.	7.8	36
48	Leakage Flux Control of Mismatched IPT Systems. IEEE Transactions on Transportation Electrification, 2017, 3, 474-487.	7.8	32
49	A systematic review of charging infrastructure location problem for electric vehicles. Transport Reviews, 2021, 41, 432-455.	8.8	29
50	Effects of pulse and DC charging on lithium iron phosphate (LiFePO ₄) batteries. , 2013, , .		21
51	Reduced Ferrite Double D Pad for Roadway IPT Applications. IEEE Transactions on Power Electronics, 2021, 36, 5055-5068.	7.9	21
52	Magnetic Design Considerations for High-Power Wireless Charging Systems. IEEE Transactions on Power Electronics, 2022, 37, 9972-9982.	7.9	20
53	Magnetic design of a 300 W under-floor contactless Power Transfer system. , 2011, , .		19
54	A Reduced Order Model to Determine the Coupling Factor Between Magnetic Pads Used in Wireless Power Transfer. IEEE Transactions on Transportation Electrification, 2017, 3, 321-331.	7.8	19

#	ARTICLE	IF	CITATIONS
55	Regulator capacitor selection for series compensated IPT pickups. , 2008, , .		18
56	Analysis of mutually decoupled primary coils for IPT systems for EV charging. , 2016, , .		18
57	Detection of EVs on IPT highways. , 2014, , .		16
58	A practical 1.2kW Inductive Power Transfer lighting system using AC processing controllers. , 2011, , .		14
59	Design of a SAE Compliant Multicoil Ground Assembly. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2020, 1, 14-25.	3.9	13
60	A Power Loss Measurement Technique for Inductive Power Transfer Magnetic Couplers. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2020, 1, 113-122.	3.9	13
61	Thermal Evaluation of an Inductive Power Transfer Pad for Charging Electric Vehicles. IEEE Transactions on Industrial Electronics, 2022, 69, 314-322.	7.9	13
62	Development of a discrete energy injection inverter for contactless power transfer. , 2008, , .		12
63	A parallel topology for inductive power transfer power supplies. , 2011, , .		12
64	A comparative study of various magnetic design topologies for a semi-dynamic EV charging application. , 2016, , .		12
65	A Comparison of Multi-Coil Pads in IPT systems for EV Charging. , 2018, , .		12
66	Thermal Characterisation of a Double-D Pad. , 2019, , .		12
67	Improved Grid Dynamics Using a Localized Demand Control System. IEEE Transactions on Smart Grid, 2014, 5, 2748-2756.	9.0	11
68	Novel single-sided ferrite-less magnetic coupler for roadway EV charging. , 2015, , .		10
69	Leakage and coupling of square and double D magnetic couplers. , 2016, , .		10
70	High power IPT stage lighting controller. , 2011, , .		9
71	Interoperable EV detection for dynamic wireless charging with existing hardware and free resonance. , 2016, , .		9
72	An Alternative IPT Pickup Controller for Material Handling Using a Current Doubler. IEEE Transactions on Power Electronics, 2018, 33, 10135-10147.	7.9	9

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73	Robust double D topology for roadway IPT applications. , 2017, , .		8
74	Wireless fleet charging system for electric bicycles. , 2013, , .		7
75	Magnetic couplers in kickstands for wireless charging of electric bicycles. , 2014, , .		7
76	Comparison of Meander Track Primary Topologies for EV Roadway Charging. , 2018, , .		7
77	An MMC based IPT System with Integrated Magnetics and ZVS Operations. IEEE Transactions on Power Electronics, 2021, , 1-1.	7.9	7
78	A 1kW inductive charging system using AC processing pickups. , 2011, , .		6
79	Net energy stored control for residential demand-side management. , 2013, , .		6
80	Measuring the Q-factor of IPT Magnetic Couplers. , 2019, , .		6
81	Development of Partial Ferrite double-D Pad for IPT Systems for EV Charging. , 2020, , .		6
82	Evaluation of a current doubler IPT pickup controller for materials handling applications. , 2016, , .		5
83	Evaluation of a Meandering Track Primary Topology for EV Roadway Charging. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2020, 1, 26-35.	3.9	5
84	Passive Reflection Winding for Ferrite-less Double D Topology for Roadway IPT Applications. , 2019, , .		4
85	Ironsand (Titanomagnetite-Titanohematite): Chemistry, Magnetic Properties and Direct Applications for Wireless Power Transfer. Materials, 2021, 14, 5455.	2.9	4
86	Implementation and evaluation of an IPT battery charging system in assisting grid frequency stabilisation through Dynamic Demand Control. , 2010, , .		3
87	A novel fast-switching control for multiple pickup IPT systems. , 2013, , .		3
88	Analysis of co-planar intermediate coil structures in inductive power transfer systems. , 2014, , .		3
89	Double-coupled systems for roadway IPT systems. , 2014, , .		3
90	Mitigation of Local Grid Congestion Due to Electric Vehicles Through Localized Demand Control. , 2018, , .		3

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91	Multi-objective Optimization of Double D Coils for Wireless Charging System. , 2018, , .		3
92	A low energy storage IPT system using AC processing controllers. , 2011, , .		2
93	Push-pull driven Low-cost Coupler Array for Dynamic IPT systems. , 2019, , .		2
94	Normalized characteristics of AC processing pickups. , 2011, , .		1
95	A novel slow-switching control for multiple pickup IPT systems. , 2013, , .		1
96	Resonant network design considerations for variable coupling lumped coil systems. , 2012, , .		0
97	A mistuning-tolerant and controllable power supply for roadway wireless power systems. , 2016, , .		0
98	Shaped passive magnetic field shaping for roadway IPT. , 2016, , .		0