Ralf Methling

List of Publications by Year
in descending order

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71	672	566801 15	610482 24
papers	citations	h-index	g-index

74	74	74	280
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An Improved Arc Model Based on the Arc Diameter. IEEE Transactions on Power Delivery, 2016, 31, 1335-1341.	2.9	45
2	Optical and Electrical Investigation of Transition From Anode Spot Type 1 to Anode Spot Type 2. IEEE Transactions on Plasma Science, 2017, 45, 2126-2134.	0.6	43
3	Time and space resolved spectroscopic investigation during anode plume formation in a high-current vacuum arc. Journal Physics D: Applied Physics, 2017, 50, 185203.	1.3	43
4	Spectroscopic Investigation of a Cuâ€”Cr Vacuum Arc. IEEE Transactions on Plasma Science, 2015, 43, 2303-2309.	0.6	40
5	Overview spectra and axial distribution of spectral line intensities in a high-current vacuum arc with CuCr electrodes. Journal of Applied Physics, 2015, 118, .	1.1	38
6	Impact of Different Vacuum Interrupter Properties on High-Current Anode Phenomena. IEEE Transactions on Plasma Science, 2016, 44, 3337-3345.	0.6	34
7	Anode Surface Temperature Determination in High-Current Vacuum Arcs by Different Methods. IEEE Transactions on Plasma Science, 2017, 45, 2099-2107.	0.6	33
8	Temperature determination in copper-dominated free-burning arcs. Journal Physics D: Applied Physics, 2014, 47, 015202.	1.3	32
9	Video Spectroscopy of Vacuum Arcs During Transition Between Different High-Current Anode Modes. IEEE Transactions on Plasma Science, 2016, 44, 2462-2469.	0.6	32
10	Determination of Cr Density After Current Zero in a High-Current Vacuum Arc Considering Anode Plume. IEEE Transactions on Plasma Science, 2017, 45, 2108-2114.	0.6	29
11	Effect of color temperature on melatonin production for illumination of working environments. Applied Ergonomics, 2017, 58, 446-453.	1.7	27
12	Vapor density and electron density determination during high-current anode phenomena in vacuum arcs. Journal of Applied Physics, 2018, 124, .	1.1	25
13	Mass-filtered ferromagnetic alloy clusters on surfaces. Surface Science, 2004, 566-568, 332-336.	0.8	21
14	Spectroscopic Study of a Single Vacuum-Arc Cathode Spot. IEEE Transactions on Plasma Science, 2009, 37, 1419-1425.	0.6	18
15	Investigation of Anode Plume in Vacuum Arcs Using Different Optical Diagnostic Methods. IEEE Transactions on Plasma Science, 2019, 47, 3488-3495.	0.6	17
16	Determination of Cr density during high-current anode modes in vacuum arc. Journal of Applied Physics, 2019, 125, .	1.1	14
17	Mercury-free high-intensity discharge with high luminous efficacy and good colour rendering index. Journal Physics D: Applied Physics, 2007, 40, 3836-3841.	1.3	13
18	An improved arc model for vacuum arc regarding anode spot modes. IEEE Transactions on Dielectrics and Electrical Insulation, 2019, 26, 120-128.	1.8	11

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19	Time- and Spectrum-Resolved Study of a Single Cathode Spot in Vacuum. IEEE Transactions on Plasma Science, 2011, 39, 1296-1302.	0.6	10
20	Spectroscopy of Single Vacuum Arc Cathode Spots With Improved Sensitivity. IEEE Transactions on Plasma Science, 2013, 41, 1904-1910.	0.6	10
21	Mercury-free high pressure discharge lamps dominated by molecular radiation. Journal Physics D: Applied Physics, 2011, 44, 224005.	1.3	9
22	Arc temperatures in a circuit breaker experiment from iterative analysis of emission spectra. Journal Physics D: Applied Physics, 2020, 53, 385204.	1.3	9
23	Switching Behavior of a Gas-Filled Model DC-Contactor Under Different Conditions. IEEE Transactions on Plasma Science, 2020, 48, 2515-2522.	0.6	8
24	Unified modelling of low-current short-length arcs between copper electrodes. Journal Physics D: Applied Physics, 2021, 54, 025203.	1.3	8
25	Cu and Cr Density Determination during High-Current Discharge Modes in Vacuum Arcs. , 2018, , .		7
26	Determination of Cr Density in the Active Phase of a High-current Vacuum Arcs. Plasma Physics and Technology, 2017, 4, 190-193.	0.1	7
27	Time and space resolved video spectroscopy of the vacuum arc during the formation of high-current anode modes. , 2016, , .		6
28	Spectrally and spatially resolved imaging of an anode flare in the initial stage of a vacuum arc discharge. , 2016, , .		6
29	Spectroscopic investigation of high-current vacuum arcs. , 2014, , .		5
30	Properties of Vacuum Arcs Generated by Switching RMF Contacts at Different Ignition Positions. Energies, 2020, 13, 5596.	1.6	5
31	The effect of oxygen admixture on the properties of microwave generated plasma in Arâ€“O2: a modelling study. Journal Physics D: Applied Physics, 2021, 54, 355205.	1.3	5
32	Dynamics of cathode spot plasma parameters in spark and arc stages of vacuum discharge. , 2008, , .		4
33	Time-resolved spectroscopy on cathode spots of a vacuum discharge. , 2008, , .		3
34	Analysis of Erosion Resistance of CuC Arcing Contacts Manufactured by Plasma Spraying Technology. Plasma Physics and Technology, 2019, 6, 123-126.	0.1	3
35	Plasmaâ€based VAD process for multiply doped glass powders and highâ€performance fiber preforms with outstanding homogeneity. Plasma Processes and Polymers, 2020, 17, 2000140.	1.6	3
36	Positive streamers: inception and propagation along mineral-oil/solid interfaces. Journal of Physics Communications, 2020, 4, 025008.	0.5	3

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37	Unified modelling of TIG microarcs with evaporation from copper anode. Plasma Physics and Technology, 2021, 8, 1-4.	0.1	3
38	INVESTIGATION OF VACUUM ARC ANODE TEMPERATURES OF CUâ€“CR AND PURE CU CONTACTS. Plasma Physics and Technology, 2017, 4, 16-19.	0.1	3
39	Optical Diagnostics of Vacuum Arc Discharges for Switching Applications. , 2020, , .		3
40	Study of Noble Gases as Mercury Substitutes in High-pressure Discharge Lamps. LEUKOS - Journal of Illuminating Engineering Society of North America, 2007, 3, 217-227.	1.5	2
41	Interaction of a free burning arc with regenerative protective layers. Journal of Physics: Conference Series, 2014, 550, 012010.	0.3	2
42	The spectroscopy of cathode spot of pulsed vacuum arc discharge in a wide range of current. , 2016, , .		2
43	Comparison of methods of electrode temperature determination in high-current vacuum arcs. , 2016, , .		2
44	Investigation of an Ablation-dominated Arc in a Model Chamber by Optical Emission Spectroscopy. Plasma Physics and Technology, 2017, 4, 153-156.	0.1	2
45	Investigation on Vacuum Arc Dynamics and Discharge Transition Modes under Different Conditions. , 2018, , .		2
46	Optical Emission Spectroscopy during the Formation of an Anode Plume. , 2018, , .		2
47	On the Interaction of a Microwave Excited Oxygen Plasma with a Jet of Precursor Material for Deposition Applications. Plasma Physics and Technology, 2019, 6, 243-246.	0.1	2
48	Spectroscopic Analysis of Anode Surface Thermal Emission With Single and Dual Vacuum Arc Columns. IEEE Transactions on Plasma Science, 2019, 47, 5204-5213.	0.6	2
49	Spectroscopic Investigation of DC-arcs between Parallel Rails under the Influence of External Magnetic Fields. , 2019, , .		2
50	Ablation-Dominated Arcs in CO2 Atmosphereâ€”Part II: Molecule Emission and Absorption. Energies, 2020, 13, 4720.	1.6	2
51	Advanced Optical Diagnostics for Characterization of Arc Plasmas. IEEE Transactions on Plasma Science, 2021, 49, 2505-2515.	0.6	2
52	Time-Resolved Spectroscopy of Single Cathode Spots: Comparison of Cathode and Anode Position. IEEE Transactions on Plasma Science, 2011, 39, 2860-2861.	0.6	1
53	X-Ray Computer Tomography in End-of-Life Investigations of HID Lamps. LEUKOS - Journal of Illuminating Engineering Society of North America, 2011, 7, 237-239.	1.5	1
54	Influence of paper properties on streamers creeping in mineral oil. , 2017, , .		1

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55	Determination of Anode Surface Temperature of Horseshoe-Type AMF Electrode after Current Zero. , 2018, , .		1
56	Analysis of C2 Swan Bands in Ablation-Dominated Arcs in CO2 Atmosphere. Plasma Physics and Technology, 2019, 6, 82-86.	0.1	1
57	Ablation-Dominated Arcs in CO2 Atmphereâ€"Part I: Temperature Determination near Current Zero. Energies, 2020, 13, 4714.	1.6	1
58	Firstâ€mode of negative streamers: Inception at liquid/solid interfaces. High Voltage, 2021, 6, 1069-1078.	2.7	1
59	Observed Oscillating Anodic Plasma Plume Phenomena in High Current Vacuum Arcs. IEEE Transactions on Plasma Science, 2021, 49, 2498-2504.	0.6	1
60	Novel approach for high-performance optical fibers: multiple-doped silica powders with plasma-enhanced processes. , 2019, , .		1
61	Influence of ignition position on the properties of vacuum arc generated by switching RMF contacts. , 2021, , .		1
62	Determination of Surface Temperature of Switching RMF and AMF Contacts by Optical Methods. , 2022, , .		1
63	Study of a single cathode spot in vacuum produced by short voltage pulses. , 2009, , .		0
64	Temporal and spatial behaviour of the single cathode spot ignition in vacuum. , 2010, , .		0
65	Ignition of High-Pressure Discharge Lamps Supported by Microdischarges. IEEE Transactions on Plasma Science, 2011, 39, 2988-2989.	0.6	0
66	Spectroscopy of single vacuum arc cathode spots with improved sensitivity. , 2012, , .		0
67	Spectral analysis of arc radiation with high optical thickness. , 2013, , .		0
68	Spectroscopic and Thermographic Analysis of Anode Spots from Visible to Infrared. , 2018, , .		0
69	Investigation of the Attachment Process of Anode Spot Type 2 and Anode Plume of Vacuum Arcs Depending on Current Density. , 2019, , .		0
70	Emission Spectroscopy During High-Current Anode Modes in Vacuum Arc. Plasma Physics and Technology, 2017, 4, 249-252.	0.1	0
71	Study of High-Current Anode Modes for Various Electrode Materials. , 2021, , .		0