Ralf Methling

List of Publications by Citations

54 papers	399 citations	12 h-index	18 g-index
74 ext. papers	547 ext. citations	1.7 avg, IF	3.44 L-index

#	Paper	IF	Citations
54	Spectroscopic Investigation of a CuCr Vacuum Arc. *IEEE Transactions on Plasma Science*, **2015**, 43, 2303-2309	1.3	29
53	Time and space resolved spectroscopic investigation during anode plume formation in a high-current vacuum arc. *Journal Physics D: Applied Physics*, **2017**, 50, 185203	3	25
52	Temperature determination in copper-dominated free-burning arcs. *Journal Physics D: Applied Physics*, **2014**, 47, 015202	3	25
51	An Improved Arc Model Based on the Arc Diameter. *IEEE Transactions on Power Delivery*, **2016**, 31, 1335-1341	1.3	24
50	Impact of Different Vacuum Interrupter Properties on High-Current Anode Phenomena. *IEEE Transactions on Plasma Science*, **2016**, 44, 3337-3345	1.3	24
49	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	1.3	23
48	Overview spectra and axial distribution of spectral line intensities in a high-current vacuum arc with CuCr electrodes. *Journal of Applied Physics*, **2015**, 118, 123304	2.5	22
47	Effect of color temperature on melatonin production for illumination of working environments. *Applied Ergonomics*, **2017**, 58, 446-453	4.2	21
46	Video Spectroscopy of Vacuum Arcs During Transition Between Different High-Current Anode Modes. *IEEE Transactions on Plasma Science*, **2016**, 44, 2462-2469	1.3	21
45	Mass-filtered ferromagnetic alloy clusters on surfaces. *Surface Science*, **2004**, 566-568, 332-336	1.8	19
44	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	1.3	16
43	Anode Surface Temperature Determination in High-Current Vacuum Arcs by Different Methods. *IEEE Transactions on Plasma Science*, **2017**, 45, 2099-2107	1.3	14
42	Mercury-free high-intensity discharge with high luminous efficacy and good colour rendering index. *Journal Physics D: Applied Physics*, **2007**, 40, 3836-3841	3	12
41	Spectroscopic Study of a Single Vacuum-Arc Cathode Spot. *IEEE Transactions on Plasma Science*, **2009**, 37, 1419-1425	1.3	11
40	Time- and Spectrum-Resolved Study of a Single Cathode Spot in Vacuum. *IEEE Transactions on Plasma Science*, **2011**, 39, 1296-1302	1.3	9
39	Vapor density and electron density determination during high-current anode phenomena in vacuum arcs. *Journal of Applied Physics*, **2018**, 124, 243301	2.5	9
38	Investigation of Anode Plume in Vacuum Arcs Using Different Optical Diagnostic Methods. *IEEE Transactions on Plasma Science*, **2019**, 47, 3488-3495	1.3	8

37	Determination of Cr density during high-current anode modes in vacuum arc. *Journal of Applied Physics*, **2019**, 125, 133301	2.5	7
36	Spectroscopy of Single Vacuum Arc Cathode Spots With Improved Sensitivity. *IEEE Transactions on Plasma Science*, **2013**, 41, 1904-1910	1.3	7
35	Mercury-free high pressure discharge lamps dominated by molecular radiation. *Journal Physics D: Applied Physics*, **2011**, 44, 224005	3	7
34	An improved arc model for vacuum arc regarding anode spot modes. *IEEE Transactions on Dielectrics and Electrical Insulation*, **2019**, 26, 120-128	2.3	5
33	Arc temperatures in a circuit breaker experiment from iterative analysis of emission spectra. *Journal Physics D: Applied Physics*, **2020**, 53, 385204	3	5
32	Spectrally and spatially resolved imaging of an anode flare in the initial stage of a vacuum arc discharge **2016**,		5
31	Time and space resolved video spectroscopy of the vacuum arc during the formation of high-current anode modes **2016**,		5
30	Dynamics of cathode spot plasma parameters in spark and arc stages of vacuum discharge **2008**,		3
29	Determination of Cr Density in the Active Phase of a High-current Vacuum Arcs. *Plasma Physics and Technology*, **2017**, 4, 190-193	0.4	3
28	INVESTIGATION OF VACUUM ARC ANODE TEMPERATURES OF CU□R AND PURE CU CONTACTS. *Plasma Physics and Technology*, **2017**, 4, 16-19	0.4	3
27	Switching Behavior of a Gas-Filled Model DC-Contactor Under Different Conditions. *IEEE Transactions on Plasma Science*, **2020**, 48, 2515-2522	1.3	3
26	Interaction of a free burning arc with regenerative protective layers. *Journal of Physics: Conference Series*, **2014**, 550, 012010	0.3	2
25	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	3.5	2
24	Unified modelling of low-current short-length arcs between copper electrodes. *Journal Physics D: Applied Physics*, **2021**, 54, 025203	3	2
23	The effect of oxygen admixture on the properties of microwave generated plasma in Ar□2: a modelling study. *Journal Physics D: Applied Physics*, **2021**, 54, 355205	3	2
22	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	0.4	2
21	Cu and Cr Density Determination during High-Current Discharge Modes in Vacuum Arcs **2018**,		2
20	Plasma-based VAD process for multiply doped glass powders and high-performance fiber preforms with outstanding homogeneity. *Plasma Processes and Polymers*, **2020**, 17, 2000140	3.4	1

19	Positive streamers: inception and propagation along mineral-oil/solid interfaces. *Journal of Physics Communications*, **2020**, 4, 025008	1.2	1
18	**2017**,		1
17	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	3.5	1
16	Time-resolved spectroscopy on cathode spots of a vacuum discharge **2008**,		1
15	Optical Diagnostics of Vacuum Arc Discharges for Switching Applications **2020**,		1
14	Ablation-Dominated Arcs in CO2 Atmosphere Part I: Temperature Determination near Current Zero. *Energies*, **2020**, 13, 4714	3.1	1
13	Properties of Vacuum Arcs Generated by Switching RMF Contacts at Different Ignition Positions. *Energies*, **2020**, 13, 5596	3.1	1
12	The spectroscopy of cathode spot of pulsed vacuum arc discharge in a wide range of current **2016**,		1
11	Analysis of C2 Swan Bands in Ablation-Dominated Arcs in CO2 Atmosphere. *Plasma Physics and Technology*, **2019**, 6, 82-86	0.4	1
10	Analysis of Erosion Resistance of CuC Arcing Contacts Manufactured by Plasma Spraying Technology. *Plasma Physics and Technology*, **2019**, 6, 123-126	0.4	1
9	. *IEEE Transactions on Plasma Science*, **2019**, 47, 5204-5213	1.3	1
8	Spectroscopic Investigation of DC-arcs between Parallel Rails under the Influence of External Magnetic Fields **2019**,		1
7	Investigation on Vacuum Arc Dynamics and Discharge Transition Modes under Different Conditions **2018**,		1
6	Advanced Optical Diagnostics for Characterization of Arc Plasmas. *IEEE Transactions on Plasma Science*, **2021**, 49, 2505-2515	1.3	1
5	Time-Resolved Spectroscopy of Single Cathode Spots: Comparison of Cathode and Anode Position. *IEEE Transactions on Plasma Science*, **2011**, 39, 2860-2861	1.3	0
4	Ignition of High-Pressure Discharge Lamps Supported by Microdischarges. *IEEE Transactions on Plasma Science*, **2011**, 39, 2988-2989	1.3	
3	Ablation-Dominated Arcs in CO2 Atmosphere Part II: Molecule Emission and Absorption. *Energies*, **2020**, 13, 4720	3.1	
2	Optische Diagnostik an Vakuumlichtbögen. *Vakuum in Forschung Und Praxis*, **2020**, 32, 14-19	0.3	

List of Publications

1	Observed Oscillating Anodic Plasma Plume Phenomena in High Current Vacuum Arcs. *IEEE Transactions on Plasma Science*, **2021**, 49, 2498-2504	1.3