

# Ralf Methling

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Unified modelling of low-current short-length arcs between copper electrodes. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 025203	3	2
53	The effect of oxygen admixture on the properties of microwave generated plasma in ArO <sub>2</sub> : a modelling study. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 355205	3	2
52	Observed Oscillating Anodic Plasma Plume Phenomena in High Current Vacuum Arcs. <i>IEEE Transactions on Plasma Science</i> , <b>2021</b> , 49, 2498-2504	1.3	
51	Advanced Optical Diagnostics for Characterization of Arc Plasmas. <i>IEEE Transactions on Plasma Science</i> , <b>2021</b> , 49, 2505-2515	1.3	1
50	Plasma-based VAD process for multiply doped glass powders and high-performance fiber preforms with outstanding homogeneity. <i>Plasma Processes and Polymers</i> , <b>2020</b> , 17, 2000140	3.4	1
49	Arc temperatures in a circuit breaker experiment from iterative analysis of emission spectra. <i>Journal Physics D: Applied Physics</i> , <b>2020</b> , 53, 385204	3	5
48	Positive streamers: inception and propagation along mineral-oil/solid interfaces. <i>Journal of Physics Communications</i> , <b>2020</b> , 4, 025008	1.2	1
47	Optical Diagnostics of Vacuum Arc Discharges for Switching Applications <b>2020</b> ,		1
46	Ablation-Dominated Arcs in CO <sub>2</sub> Atmosphere Part I: Temperature Determination near Current Zero. <i>Energies</i> , <b>2020</b> , 13, 4714	3.1	1
45	Ablation-Dominated Arcs in CO <sub>2</sub> Atmosphere Part II: Molecule Emission and Absorption. <i>Energies</i> , <b>2020</b> , 13, 4720	3.1	
44	Optische Diagnostik an Vakuumlichtbögen. <i>Vakuum in Forschung Und Praxis</i> , <b>2020</b> , 32, 14-19	0.3	
43	Switching Behavior of a Gas-Filled Model DC-Contactor Under Different Conditions. <i>IEEE Transactions on Plasma Science</i> , <b>2020</b> , 48, 2515-2522	1.3	3
42	Properties of Vacuum Arcs Generated by Switching RMF Contacts at Different Ignition Positions. <i>Energies</i> , <b>2020</b> , 13, 5596	3.1	1
41	An improved arc model for vacuum arc regarding anode spot modes. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , <b>2019</b> , 26, 120-128	2.3	5
40	Determination of Cr density during high-current anode modes in vacuum arc. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 133301	2.5	7
39	Investigation of Anode Plume in Vacuum Arcs Using Different Optical Diagnostic Methods. <i>IEEE Transactions on Plasma Science</i> , <b>2019</b> , 47, 3488-3495	1.3	8
38	Analysis of C <sub>2</sub> Swan Bands in Ablation-Dominated Arcs in CO <sub>2</sub> Atmosphere. <i>Plasma Physics and Technology</i> , <b>2019</b> , 6, 82-86	0.4	1

37	Analysis of Erosion Resistance of CuC Arcing Contacts Manufactured by Plasma Spraying Technology. <i>Plasma Physics and Technology</i> , <b>2019</b> , 6, 123-126	0.4	1
36	On the Interaction of a Microwave Excited Oxygen Plasma with a Jet of Precursor Material for Deposition Applications. <i>Plasma Physics and Technology</i> , <b>2019</b> , 6, 243-246	0.4	2
35	. <i>IEEE Transactions on Plasma Science</i> , <b>2019</b> , 47, 5204-5213	1.3	1
34	Spectroscopic Investigation of DC-arcs between Parallel Rails under the Influence of External Magnetic Fields <b>2019</b> ,		1
33	Investigation on Vacuum Arc Dynamics and Discharge Transition Modes under Different Conditions <b>2018</b> ,		1
32	Cu and Cr Density Determination during High-Current Discharge Modes in Vacuum Arcs <b>2018</b> ,		2
31	Vapor density and electron density determination during high-current anode phenomena in vacuum arcs. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 243301	2.5	9
30	Optical and Electrical Investigation of Transition From Anode Spot Type 1 to Anode Spot Type 2. <i>IEEE Transactions on Plasma Science</i> , <b>2017</b> , 45, 2126-2134	1.3	23
29	Time and space resolved spectroscopic investigation during anode plume formation in a high-current vacuum arc. <i>Journal Physics D: Applied Physics</i> , <b>2017</b> , 50, 185203	3	25
28	Determination of Cr Density After Current Zero in a High-Current Vacuum Arc Considering Anode Plume. <i>IEEE Transactions on Plasma Science</i> , <b>2017</b> , 45, 2108-2114	1.3	16
27	Anode Surface Temperature Determination in High-Current Vacuum Arcs by Different Methods. <i>IEEE Transactions on Plasma Science</i> , <b>2017</b> , 45, 2099-2107	1.3	14
26	Effect of color temperature on melatonin production for illumination of working environments. <i>Applied Ergonomics</i> , <b>2017</b> , 58, 446-453	4.2	21
25	<b>2017</b> ,		1
24	Determination of Cr Density in the Active Phase of a High-current Vacuum Arcs. <i>Plasma Physics and Technology</i> , <b>2017</b> , 4, 190-193	0.4	3
23	INVESTIGATION OF VACUUM ARC ANODE TEMPERATURES OF Cu/Cr AND PURE Cu CONTACTS. <i>Plasma Physics and Technology</i> , <b>2017</b> , 4, 16-19	0.4	3
22	An Improved Arc Model Based on the Arc Diameter. <i>IEEE Transactions on Power Delivery</i> , <b>2016</b> , 31, 1335-1341	1.3	24
21	Spectrally and spatially resolved imaging of an anode flare in the initial stage of a vacuum arc discharge <b>2016</b> ,		5
20	The spectroscopy of cathode spot of pulsed vacuum arc discharge in a wide range of current <b>2016</b> ,		1

19	Time and space resolved video spectroscopy of the vacuum arc during the formation of high-current anode modes <b>2016</b> ,		5
18	Impact of Different Vacuum Interrupter Properties on High-Current Anode Phenomena. <i>IEEE Transactions on Plasma Science</i> , <b>2016</b> , 44, 3337-3345	1.3	24
17	Video Spectroscopy of Vacuum Arcs During Transition Between Different High-Current Anode Modes. <i>IEEE Transactions on Plasma Science</i> , <b>2016</b> , 44, 2462-2469	1.3	21
16	Spectroscopic Investigation of a CuCr Vacuum Arc. <i>IEEE Transactions on Plasma Science</i> , <b>2015</b> , 43, 2303-2309	1.3	29
15	Overview spectra and axial distribution of spectral line intensities in a high-current vacuum arc with CuCr electrodes. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 123304	2.5	22
14	Temperature determination in copper-dominated free-burning arcs. <i>Journal Physics D: Applied Physics</i> , <b>2014</b> , 47, 015202	3	25
13	Interaction of a free burning arc with regenerative protective layers. <i>Journal of Physics: Conference Series</i> , <b>2014</b> , 550, 012010	0.3	2
12	Spectroscopy of Single Vacuum Arc Cathode Spots With Improved Sensitivity. <i>IEEE Transactions on Plasma Science</i> , <b>2013</b> , 41, 1904-1910	1.3	7
11	Time- and Spectrum-Resolved Study of a Single Cathode Spot in Vacuum. <i>IEEE Transactions on Plasma Science</i> , <b>2011</b> , 39, 1296-1302	1.3	9
10	Ignition of High-Pressure Discharge Lamps Supported by Microdischarges. <i>IEEE Transactions on Plasma Science</i> , <b>2011</b> , 39, 2988-2989	1.3	
9	Mercury-free high pressure discharge lamps dominated by molecular radiation. <i>Journal Physics D: Applied Physics</i> , <b>2011</b> , 44, 224005	3	7
8	Time-Resolved Spectroscopy of Single Cathode Spots: Comparison of Cathode and Anode Position. <i>IEEE Transactions on Plasma Science</i> , <b>2011</b> , 39, 2860-2861	1.3	0
7	X-Ray Computer Tomography in End-of-Life Investigations of HID Lamps. <i>LEUKOS - Journal of Illuminating Engineering Society of North America</i> , <b>2011</b> , 7, 237-239	3.5	1
6	Spectroscopic Study of a Single Vacuum-Arc Cathode Spot. <i>IEEE Transactions on Plasma Science</i> , <b>2009</b> , 37, 1419-1425	1.3	11
5	Dynamics of cathode spot plasma parameters in spark and arc stages of vacuum discharge <b>2008</b> ,		3
4	Time-resolved spectroscopy on cathode spots of a vacuum discharge <b>2008</b> ,		1
3	Mercury-free high-intensity discharge with high luminous efficacy and good colour rendering index. <i>Journal Physics D: Applied Physics</i> , <b>2007</b> , 40, 3836-3841	3	12
2	Study of Noble Gases as Mercury Substitutes in High-pressure Discharge Lamps. <i>LEUKOS - Journal of Illuminating Engineering Society of North America</i> , <b>2007</b> , 3, 217-227	3.5	2

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