

Publikationsliste/List of Publications

Begutachtete Veröffentlichungen in Zeitschriften/Reviewed Publications in Journals

1. K. Behringer, W. Kollmar, J. Mentel
„Messungen der Wärmeleitfähigkeit von Wasserstoff zwischen 2000 – 7000 K“
Z. f. Physik **215**, 127 – 151, 1968
2. J. Mentel
„Untersuchung der Wendelinstabilität an einem wandstabilisierten Wasserstoffbogen“
Z. f. Naturforsch. **26a**, 526 – 538, 1971
3. K. A. Ernst, J. Kopainski, J. Mentel
„Der Einsatz der Wendelstabilität in wandstabilisierten Lichtbögen“
Z. f. Physik, **265**, 253 – 265, 1973
4. W. Hertz, J. Mentel, W. Tiemann
“Diagnostic Methods for Circuit - Breaker Arcs“
Siemens Forsch. – u. Entwickl. – Ber. (Springer-Verlag), **3**, 5 – 12, 1974
5. K. Krause, J. Mentel
“Magnetic Forces Acting on Current Carrying Contacts Before and After Contact Separation“
Siemens Forsch. – u. Entwickl. – Ber. (Springer-Verlag), **4**, 33 – 38, 1975
6. W. Hertz, J. Mentel, J. Stroh, W. Tiemann
“Experimental Investigations of Physical Processes Occurring in High Voltage Transmission Circuit – Breakers”
Siemens Forsch. – u. Entwickl. – Ber. (Springer-Verlag), **4**, 281 – 288, 1975
7. J. Mentel
“Schliereninterferometric Investigations of the Gas Flow Occuring in High – Voltage SF₆ – Switchgear”
Siemens Forsch. – u. Entwickl. – Ber. (Springer-Verlag), **4**, 380 – 388, 1975
8. D. W. Branston, J. Mentel
„Beugungstheoretische Behandlung eines Differentialinterferometers für ausgedehnte Phasenobjekte“
Appl. Phys. (Springer-Verlag), **11**, 241 -246, 1976
9. J. Mentel
“The Influence of Vaporization Upon the Roots of a High Current Arc. I. Different Forms of Vaporization in the Arc Roots”
Appl. Phys. (Springer-Verlag), **14**, 269 – 276, 1977

10. J. Mentel
“The Influence of Vaporization Upon the Roots of a High Current Arc. II
Spectroscopic Determination of the Composition and Temperature of a Plasma in
the Neighbourhood of a Graphite Cathode”
Appl. Phys. (Springer-Verlag), **14**, 361 – 366, 1977
11. J. Mentel
“The Influence of Vaporization Upon the Roots of a High Current Arc. III
Determination of Vapour Temperature by Molecular Spectroscopy and Conclusions
Concerning the Arc Root Instability”
Appl. Phys. (Springer-Verlag), **15**, 179 – 183, 1978
12. A. Kurtz, J. Mentel
“Measurement of the polarizability α of chlorine atoms”
J. of the Optical Soc. of America, **72**(8), 114-114, 1982
13. A. Kurtz, J. Mentel
„The thermal conductivity of Cl₂ and O₂ in the dissociation region measured by
optical interferometry, I: Experiment”
J. Phys. D: Appl. Phys., **17**, 1335 – 1342, 1984
14. A. Kurtz, J. Mentel
„The thermal conductivity of Cl₂ and O₂ in the dissociation region measured by
optical interferometry, II: Evaluation of the thermal conductivity from
interferometric data”
J. Phys. D: Appl. Phys., **17**, 1343 – 1348, 1984
15. E. Schmidt, J. Mentel, K.–H. Krahn
„Three color HeSe laser with optimized output power”
Appl. Optics, **25**, 1383 – 1388, 1986
16. G. Roll, J. Mentel
“A system for fast measurement of optical gain in discharges”
J. Phys. E: Sci. Instrum., **19**, 718 – 721, 1986
17. G. Roll, J. Mentel
“Population density ratios determined from Kirchhoff’s law for excited HeI-states in
a helium-selenium laser discharge”
Appl. Optics, **26**, 205 - 207, 1987
18. H. L. Hausmann, J. Mentel
“A fluorine arc of low current strength and its optical spectrum”
IEEE Trans. On Plasma Science, **PS-15**, 268 - 272, 1987
19. H. G. Hülsmann, J. Mentel
“The helical magnetic instability of arcs in an axial magnetic field treated by a linear
time dependent perturbation theory”
The Physics of Fluids, **30**, 2266 – 2273, 1987

20. H. G. Hülsmann, J. Mentel
 “Experimental investigation of the helical magnetic instability of an arc discharge in an axial magnetic field and comparison with theory”
 The Physics of Fluids, **30**, 2274 – 2279, 1987

21. G. Roll, J. Mentel
 “New laser lines in SeII discovered by gain measurements using amplified spontaneous emission”
 J. Phys. D: Appl. Phys., **22**, 483 – 487, 1989

22. F. Ortwein, J. Mentel, E. Schmidt
 “A birefringent filter as a tuning element for a multiline HeSe⁺-laser”
 J. Phys. D: Appl. Phys., **22**, 488 – 491, 1989

23. H. L. Hausmann, J. Mentel
 “Spectroscopic investigation of a low current arc in pure fluorine”
 IEEE Trans. On Plasma Science, **PS-18**, 708 - 716, 1990

24. N. Reich, J. Mentel, E. Schmidt, F. Gekat
 “Determination of the spectrally resolved gain profile of HeSe⁺-laser lines from the beat frequency spectrum”
 IEEE J. Quantum Electronics, **27**, 454 – 458, 1991

25. K.-P. Nachtigall, J. Mentel
 “Measurement of arc spot formation delay times at cold cathodes”
 IEEE Trans. On Plasma Science, **PS-19**, 942 - 946, 1991

26. K.-P. Nachtigall, J. Mentel
 “Optical investigation of arc spot formation on cold cathodes”
 IEEE Trans. On Plasma Science, **PS-19**, 947 - 953, 1991

27. J. Mentel, G. Schiffner, E. Schmidt
 „Dauerstrich-Metalldampf-Ionenlaser für messtechnische Aufgaben“
 Opto Elektronik Magazin, **7**, 288-294, 1991

28. J. Mentel, E. Schmidt, T. Mavrudis
 “A birefringent filter with arbitrary orientation of the optic axis: an analysis of improved accuracy”
 Appl. Optics, **31**, 5022 - 5029, 1992

29. J. Mizeraczyk, G. Jakob, E. Schmidt, J. Mentel
 “Absorption of the 441.6 nm HeCd⁺-laser line by the He-Cd positive column”
 Appl. Phys., **73**, 7180 – 7183, 1993

30. N. Reich, J. Mentel, G. Jakob, J. Mizeraczyk
 “Cw He-Kr⁺ laser with transverse radio frequency excitation”
 Appl. Phys. Lett., **64**, 397 – 399, 1994

31. J. Mizeraczyk, J. Mentel, E. Schmidt, N. Reich, C. Carlson, S. Hard
“A hollow-cathode discharge cw multicolour He-Cd⁺ laser module”
Meas. Sci. Technol., **5**, 936 – 941, 1994
32. J. Mentel, R. Bayer, J. Schein, M. Schumann
“Interaction of a dense plasma with cold electrodes”
Journal of High Temp. Chem. Processes, **3**, 627 – 638, 1994
33. J. Mizeraczyk, N. Reich, J. Mentel, E. Schmidt
“The performance of the hollow-cathode discharge continuous-wave multicolour He-Cd⁺ laser”
J. Phys. D: Appl. Phys., **28**, 840 – 848, 1995
34. T. Mavrudis, J. Mentel, M. Schumann
“Representation of birefringent filters by directly composed 4x4 matrices”
Appl. Optics, **34**, 4217 - 4227, 1995
35. N. Reich, J. Mentel, J. Mizeraczyk
“Cw radio-frequency excited white-light He-Cd⁺ laser”
IEEE J. Quantum Electronics, **31**, 1902 – 1908, 1995
36. J. Schein, M. Schumann, J. Mentel
“Optical investigation of arc spot formation on cold cathodes in noble gas atmosphere”
IEEE Trans. On Plasma Science, **PS-24**, 59 - 60, 1996
37. A. Hunscher, J. Mentel
“Uniform excitation of a cylindrical plasma column by a microwave-ring resonator”
Rev. of Sci. Instrum., **67**, 775 – 780, 1996
38. J. Mentel, N. Reich, J. Schulze, M. Grozeva, N. Sabotinov, J. Mizeraczyk
“Radio frequency excited CW gas ion lasers”
Trans. IEE of Japan, **116A**, 964 – 969, 1996
39. T. M. Adamowicz, M. Kocik, J. Mizeraczyk, J. Mentel
“Infrared laser properties of sputtered He-Cu mixtures excited by radio-frequency and hollow-cathode discharges”
Kwart. Electr. I Telekom., **43**, 99 -108, 1997
40. R. Bayer, J. Schein, M. Schumann, J. Mentel
“Electrical investigation of the interaction of a dense plasma with cold electrodes in air”
IEEE Trans. On Plasma Science, **PS-25**, 1096 - 1109, 1997
41. R. Bayer, J. Schein, M. Schumann, J. Mentel
“Optical investigations of the interaction of a dense plasma with cold cathodes in air”
IEEE Trans. On Plasma Science, **PS-25**, 1100 - 1116, 1997

42. J. Schein, M. Schumann, D. Nandelstädt, J. Mentel
“Investigation of the ignition of arc spots on cold cathodes in a noble gas atmosphere”
IEEE Trans. On Plasma Science, **PS-25**, 897 - 904, 1997
43. M. Grozeva, M. Kocik, J. Mentel, J. Mizeraczyk, T. Petrov, P. Telbizov, D. Teuner, N. Sabotinov, J. Schulze
“Laser capabilities of CuBr mixtures excited by RF discharge”
Euro Phys. J. D, **8**, 277 -286, 2000
44. R. Bayer, J. Luhmann, J. Mentel, C. Neumann
„Simulation von einphasigen Kippschwingungen in Spannungswandlern mittels EMTP/ATP“
Elektrie (Berlin), **56**, 01 – 04, 2002
45. L. Dabringhausen, D. Nandelstädt, J. Luhmann, J. Mentel
“Determination of HID electrode falls in a model lamp I: pyrometric measurements”
J. Phys. D: Appl. Phys., **35** (2002) 1621–1630
46. J. Luhmann, S. Lichtenberg, O. Langenscheidt, M. S. Benilov, J. Mentel
“Determination of HID electrode falls in a model lamp II: Langmuir probe measurements”
J. Phys. D: Appl. Phys., **35** (2002) 1631–1638
47. D. Nandelstädt, M. Redwitz, L. Dabringhausen, J. Luhmann, S. Lichtenberg, J. Mentel
“Determination of HID electrode falls in a model lamp III: results and comparison with theory”
J. Phys. D: Appl. Phys., **35** (2002) 1639–1647
48. S. Lichtenberg, D. Nandelstädt, L. Dabringhausen, M. Redwitz, J. Luhmann, J. Mentel
“Observation of different modes of cathodic arc attachment to HID electrodes in a model lamp”
J. Phys. D: Appl. Phys., **35** (2002) 1648–1656
49. T. Hartmann, K. Günther, S. Lichtenberg, D. Nandelstädt, L. Dabringhausen, M. Redwitz, J. Mentel
“Observation of an extremely constricted cathodic arc attachment to electrodes of high intensity discharge (HID) lamps”
J. Phys. D: Appl. Phys., **35** (2002) 1657–1667
50. J. Mentel
“Ulrich Kogelschatz: an appreciation”
Plasma Sources, Science & Technology, **11** (2002) Sp. Iss. SI (3A)
51. S. Lichtenberg, L. Dabringhausen, O. Langenscheidt, J. Mentel
“The plasma boundary layer of HID cathodes: Modelling and numerical results”
J. Phys. D: Appl. Phys., **38** (2005) 3112-3127

52. L. Dabringhausen, O. Langenscheidt, S. Lichtenberg, M. Redwitz, J. Mentel
“Different modes of arc attachment at HID cathodes: Simulation and comparison to measurements”
J. Phys. D: Appl. Phys., **38** (2005) 3128-3142
53. M. Redwitz, O. Langenscheidt, J. Mentel
“Spectroscopic investigation of the plasma boundary layer in front of HID electrodes”
J. Phys. D: Appl. Phys., **38** (2005) 3143-3154
54. M. Redwitz, L. Dabringhausen, S. Lichtenberg, O. Langenscheidt, J. Heberlein, J. Mentel
“The arc attachment at HID anodes: Measurements and interpretation”
J. Phys. D: Appl. Phys., **39** (2006) 2160-2179
55. O. Langenscheidt, S. Lichtenberg, L. Dabringhausen, M. Redwitz, P. Awakowicz, J. Mentel
“The boundary layers of ac-arcs at HID-electrodes: phase resolved electrical measurements and optical observations”
J. Phys. D: Appl. Phys., **40**, (2007) 415 – 431
56. J. Reinelt, O. Langenscheidt, M. Westermeier, P. Awakowicz, J. Mentel
“Development of the arc attachment at HID lamp electrodes in the range from low to RF-frequencies”
J. Phys. D: Appl. Phys., **41**, (2008) 144002
57. O. Langenscheidt, M. Westermeier, J. Reinelt, J. Mentel, P. Awakowicz
“Investigation of the gas-phase emitter effect of dysprosium in ceramic metal halide lamps”
J. Phys. D: Appl. Phys., **41**, (2008) 144005
58. M. Czichy, Th. Hartmann, J. Mentel, P. Awakowicz
“Ignition of mercury-free high intensity discharge lamps”
J. Phys. D: Appl. Phys., **41**, (2008) 144027
59. M. Westermeier, O. Langenscheidt, J. Reinelt, J. Mentel, P. Awakowicz
“Visualisation of the gas-phase emitter effect of dysprosium in ceramic metal halide lamps”
IEEE Trans. On Plasma Science, **PS-36**, (2008) 1176 – 1177
60. J. Heberlein, J. Mentel, E. Pfender
Topical Review
“The anode region of electric arcs: a survey”
J. Phys. D: Appl. Phys., **43**, (2010) 023001 (31pp)
61. J. Mentel, J. Heberlein
Topical Review
“The anode region of low current arcs in high intensity discharge lamps”
J. Phys. D: Appl. Phys., **43**, (2010) 023002 (20pp)

62. T. Hartmann, K. Guenther, J. Mentel
“The gas phase emitter effect at the anode in a high pressure sodium vapour discharge”
J. Phys. D: Appl. Phys., **43**, (2010) 025201 (20pp)
63. M. Westermeier, J. Reinelt, G. Luijks, J. Mentel, P. Awakowicz
“Measurement of Ba-densities close to the electrode in a HPS-lamp by broadband absorption spectroscopy with an UHP-lamp”
J. Phys. D: Appl. Phys., **43**, (2010) 124015 (6pp)
64. J. Reinelt, M. Westermeier, C. Ruhrmann, A. Bergner, P. Awakowicz, J. Mentel
“Investigating the dependence of the temperature of high-intensity discharge (HID) lamp electrodes on the the operating frequency by pyrometric measurements”
J. Phys. D: Appl. Phys., **44**, (2011) 095204 (17pp)
65. J. Reinelt, M. Westermeier, C. Ruhrmann, A. Bergner, G. M. J. F. Luijks, P. Awakowicz, J. Mentel
“Investigating the influence of the operating frequency on the gas phase emitter effect of dysprosium in ceramic metal halide lamps”
J. Phys. D: Appl. Phys., **44**, (2011) 224006 (13pp)
66. C. Ruhrmann, M. Westermeier, A. Bergner, G. M. J. F. Luijks. P. Awakowicz, J. Mentel
“Investigating the gas phase emitter effect of caesium and cerium in ceramic metal halide lamps in dependence on the operating frequency“
J. Phys. D: Appl. Phys., **44** (2011) 355202 (12p).
67. A. Bergner, M. Westermeier, C. Ruhrmann, P. Awakowicz , J. Mentel
“Temperature measurements at thoriated tungsten electrodes in a model lamp and their interpretation by numerical simulation“
J. Phys. D: Appl. Phys., **44** (2011) 505203 (15pp).
68. M. Westermeier, C. Ruhrmann, A. Bergner, C. Denissen, J. Suijker, P. Awakowicz, J. Mentel
“A study of electrode temperature lowering in Dy-containing ceramic metal halide lamps I: The effect of mixtures of Dy, Tl and Na compared to pure Dy“,
J. Phys. D: Appl. Phys., **46** (2013) 185201 (16pp)
69. M. Westermeier, C. Ruhrmann, A. Bergner, C. Denissen, J. Suijker, P. Awakowicz, J. Mentel
“A study of electrode temperature lowering in Dy-containing ceramic metal halide lamps II: An investigation of the converse effect of Tl and/or Na additives”
J. Phys. D: Appl. Phys., **46** (2013) 185202 (7pp)
70. C. Ruhrmann, M. Westermeier, T. Höbing, A. Bergner, C. Denissen, J. Suijker, P. Awakowicz, J. Mentel
“Combining emission and absorption spectroscopy at rare earth spectral lines: Plasma temperature measurements in ceramic metal halide lamps“
J. Phys. D: Appl. Phys., **46** (2013) 295202 (12pp)

71. C. Ruhrmann, M. Depta, A. Bergner, T. Höbing, C. Denissen, J. Suijker, J. Mentel, P. Awakowicz
“Gas Phase emitter effect of thulium within ceramic metal halide lamps in dependence on frequency”
Contr. To Plasma Physics **54**, No.2 (2014) 215 - 224
72. T. Hoebing, A. Bergner, B. Koch, F. Manders, C. Ruhrmann, J. Mentel, P. Awakowicz
“The effect of active antennas on the hot-restrike of high intensity discharge lamps”
J. Phys. D: Appl. Phys. **47** (2014) 205501 (9pp)
73. A. Bergner, S. Groeger, T. Hoebing, C. Ruhrmann, U. Hechtfisher, G. Tochadse, J. Mentel, P. Awakowicz
“Investigating the outer bulb discharge as ignition aid for automotive HID lamps”
J. Phys. D: Appl. Phys., **47** (2014) 355204 (15pp)
74. A. Bergner, F.H: Scharf, G. Kuehn, C. Ruhrmann, T. Hoebing, P. Awakowicz, J. Mentel
“Simulation of the hot core mode of arc attachment at a thoriated tungsten cathode by an emitter spot model”
Plasma Sources Sci. **23** (2014) 054005 (13pp)
75. A. Bergner, M. Engelhardt, S. Bienholz, C. Ruhrmann, T. Hoebing, S. Groeger, J. Mentel, P. Awakowicz
“Investigating antennas as ignition aid for automotive HID lamps”
J. Phys. D: Appl. Phys. **48** (2015) 025201
76. T. Hoebing, P. Hermanns, A. Bergner, C. Ruhrmann, H. Traxler, I. Wesemann, W. Knabl, P. Awakowicz, J. Mentel
“Investigation of the flickering of La_2O_3 and ThO_2 doped tungsten cathodes”
J. Appl. Phys. **118** (2015) 023306
77. C. Ruhrmann, T. Hoebing, A. Bergner, S. Groeger, C. Denissen, J. Suijker, P. Awakowicz, J. Mentel
“The gas phase emitter effect of lanthanum within ceramic metal halide lamps and its dependence on the La vapor pressure and operating frfrequency”
J. Appl. Phys. **118** (2015) 053304
78. P. Hermanns, T. Hoebing, A. Bergner, C. Ruhrmann, P. Awakowicz, J. Mentel
“Antenna induced hot restrike of a ceramic metal halide lamp recorded by high-speed photography”
J. Appl. Phys. **119** (2016) 113304
79. T. Hoebing, A. Bergner, P. Hermanns, J. Mentel, P. Awakowicz
“The anodic emitter effect and ist inversion demonstrated by temperature measurements at doped and undoped tungsten electrodes”
J. Phys. D: Appl. Phys. **49** (2016) 155504

80. A. Alexejev, P. Flesch, J. Mentel, P. Awakowicz
 „Change of the arc attachment mode and its effect on the lifetime in automotive high intensity discharge lamp”
 J. Appl. Phys. **120** (2016) 133301
81. J. Mentel
 Topical Review
 “The cathophoretic emitter effect exhibited in high intensity discharge lamp electrodes”
 J. Phys. D: Appl. Phys. **51** (2018) 033002 (40pp)
82. H. Traxler, I. Wesemann, W. Knabl, M. Nilius, M. Morkel, T. Höbing, J. Mentel, P. Awakowicz
 “Carbon doping – A key for the substitute of thoriated tungsten”
 International Journal of Refractory Metals & Hard Materials, **74** (2018) 93-98
83. S. Frohnert, J. Mentel
 “Investigation of the interaction of dense noble gas plasmas with cold cathodes: I- Experimental setup and application to Al, Cu, Ti, and graphite cathodes”
 Contributions to Plasma Physics **62**, No. 7 (2022), e202100212
84. S. Frohnert, J. Mentel
 “Investigations of the interaction of dense noble gas plasmas with cold cathodes: II- Arc spot ignition on Au, Pd and Pt cathodes”
 Contributions to Plasma Physics **62**, No. 7 (2022), e202100214
85. S. Frohnert, J. Mentel
 “Investigations of the interaction of dense noble gas plasmas with cold cathodes: III- Arc spot ignition on pure and doped W cathodes”
 Contributions to Plasma Physics **62** No. 7 (2022), e202100216

Buchbeiträge/Contributions to Books

1. J. Mentel
 „Magnetische Instabilität von Lichtbögen“
 Beitrag zu dem Buch „Theorie des zwangsgekühlten Lichtbogens“ in Russisch
 (Herausgeber: M. F. Schukov, Institut für Thermophysik der Sibirischen Abteilung der Akademie der Wissenschaften der UdSSR, Nowosibirsk, 1977)
2. J. Mentel
 “The Influence of Arc Roots on Current Interruption”
 Beitrag zu dem Buch “Current Interruption in High-Voltage Networks”,
 (Herausgeber: K. Ragaller, Plenum Publishing Corporation, 1978)
3. J. Mentel, N. Reich, J. Mizeraczyk, M. Grozeva, N. Sabotinov
 “Capacitively coupled RF excitation of CW gas lasers and its comparison with hollow cathode lasers”
 Beitrag zu dem Buch “Gas Lasers – Recent Developments and Future Prospects”
 (Herausgeber: W. Witteman, V. N. Ochkin, Kluwer Academic Publishers, Dordrecht; NATO ASI Series 3, **Vol. 10**, 55 – 67, 1996)

4. J. Schulze, C. Lücking, N. Reich, D. Teuner, J. Mentel, M. Grozeva, J. Mizeraczyk, J. Mentel
 “CCRF excited copper ion laser”
 Beitrag zu dem Buch “Gas Lasers – Recent Developments and Future Prospects”
 (Herausgeber: W. Witteman, V. N. Ochkin, Kluwer Academic Publishers,
 Dordrecht; NATO ASI Series 3, **Vol. 10**, 221 – 225, 1996)
5. J. Mentel
 „The Magnetic Instability of Arcs
 Beitrag zu dem Buch “The Electric Arc“
 H.Maecker et al.
 (Herausgeber: H.-P. Popp, H. Popp Matlab GmbH, D 82335 Berg,
 ISBN 978-3-00-023602-0, 17/1 – 17/36, 2009)

Publizierte eingeladene Tagungsvorträge/Published Invited Lectures

1. J. Mentel
 “Investigation of the magnetic instability of arcs”
 XVII. Int. Conf. Phen. Ionized Gases 1985, Budapest, Invited Lecture, J. S. Bakos & Zsuzsa Sörlei, Eds., 158 – 171
2. J. Mentel, R. Bayer, J. Schein, M. Schumann
 “Arc spot ignition on cold electrodes in an ambient gas atmosphere”
 XXII. Int. Conf. Phen. Ionized Gases 1995, Hoboken NJ, Invited Lecture
 Kurt H. Becker, Wayne E. Carr, Erich E. Kunhardt, Eds., Woodbury, New York:
 AIP Press, 278 – 288, 1996
3. J. Mentel, L. Dabringhausen, S. Lichtenberg, J. Luhmann, D. Nandelstädt, M. Redwitz
 “Diagnostics of HID-electrodes”
 Proc. of the 9th Int. Symp. on the Science & Technology of Light Sources Ithaca 2001, USA, , 177 – 188, (Invited lecture).
4. J. Mentel
 “What fore high intensity discharge lamps are beneficial in the age of LEDs”,
 Proc. of the 14th Conf. on High-Tech Plasma Processes, 3-7 July 2016 Munich, Germany, page 97 (Invited lecture).

Begutachtete Beiträge zu internationalen Tagungen/Reviewed Contributions to International Conferences

1. J. Mentel
 “Experimental and theoretical investigations on the helical instability in the H₂- arc”
 IX. Int. Conf. Phen. Ionized Gases 1969, Bucharest, 312
2. K. A. Ernst, J. Kopainsky, J. Mentel
 “Helical instability in cylindrical arcs”
 XI. Int. Conf. Phen. Ionized Gases 1973, Prague, 210

3. D. W. Branston, J. Mentel
“Investigations in the current zero region of an SF₆-arc”
XIII. Int. Conf. Phen. Ionized Gases 1977, Berlin, 525 – 526
4. J. Mentel, H. G. Hülsmann
“Theoretical investigations on the interaction between gas flow and arc in a double nozzle system”
VI. Int. Conf. on Gas Discharges and their Applications 1980, Edinburgh
5. H. G. Hülsmann, J. Mentel
“New theoretical and experimental investigation on the helical magnetic instability of arcs”
XV. Int. Conf. Phen. Ionized Gases 1981, Minsk, 717 – 718
6. H. G. Hülsmann, J. Mentel
“Results of theoretical and experimental investigations on the helical magnetic instability of arcs”
XV. Int. Conf. Phen. Ionized Gases 1981, Minsk, 719 – 720
7. Kurtz, J. Mentel
“Measurement of the thermal conductivity of Cl₂ in the dissociation regime”
XV. Int. Conf. Phen. Ionized Gases 1981, Minsk, 741 – 742
8. H. G. Hülsmann, J. Mentel
“Instability growth rates and automatic control loop stabilization of a helically magnetic instable arc”
VII. Int. Conf. on Gas Discharges and their Applications 1982, London, 77 – 80
9. A. Kurtz, J. Mentel
“Measurement of the thermal conductivity of O₂ in the dissociation region”
VII. Int. Conf. on Gas Discharges and their Applications 1982, London, 81 – 84
10. B. Jaax, J. Mentel
“A flow stabilized dc-arc lamp for high radiation densities”
XVI. Int. Conf. Phen. Ionized Gases 1983, Düsseldorf, 538 – 539
11. H. L. Hausmann, J. Mentel
“The thermal conductivity of F₂ in the dissociation region measured at a fluorine arc”
XVII. Int. Conf. Phen. Ionized Gases 1985, Budapest, 383 – 385
12. J. Mentel
“Experimental and theoretical investigation of the magnetic instability of arcs”
X. Symposium on Electrical Discharges in Gases of Warsaw University of Technology, June 1986
13. K.-P. Nachtigall, J. Mentel
“Measurement of arc root ignition delay time at a cathode”
XVIII. Int. Conf. Phen. Ionized Gases 1987, Swansea, 562 – 563

14. K.-P. Nachtigall, J. Mentel
“Optical investigations of arc root ignition on a cathode”
XVIII. Int. Conf. Phen. Ionized Gases 1987, Swansea, 566 – 567
15. H. L. Hausmann, J. Mentel
“Determination of the electron velocity distribution in a fluorine arc from the affinity continuum”
XIX. Int. Conf. Phen. Ionized Gases 1989, Belgrade, 296 – 297
16. R. Bayer, J. Mentel
“Measurement of arc spot formation delay times at cold cathodes in dependence on the electrode material”
XX. Int. Conf. Phen. Ionized Gases 1991, Pisa, 655 – 656
17. R. Bayer, J. Mentel
“Experimental investigation of arc spot formation on cold cathodes”
10th Int. Symp. on Plasma Chemistry, 1991, Bochum, 1.3-3, 1 -6
18. W. Köster, N. Reich, J. Mentel, A. Hunscher
“Measurement of the spectrally resolved gain profile of the 441 nm HeCd⁺-laserline”
XVIII. Int. Quantum Electronics Conf. 1992, Vienna, 212 – 213 (PTU 112)
19. R. Bayer, J. Mentel, J. Schein
“The effect of electrode material and surface treatment on arc spot formation on cold cathodes”
X. Int. Conf. on Gas Discharges and their Applications 1992, Swansea, 196 – 199
20. J. Schein, R. Bayer, J. Mentel
“Optical investigation of arc spot ignition on cold electrodes in dependence on the electrode material and surface treatment”
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