
List of publications

Journals

Emission spectroscopy for characterizing metal-halide lamps

A.J. Flikweert, T. Nimalasuriya, G.M.W. Kroesen, M. Haverlag and W.W. Stoffels, Journal of Physics D-Applied Physics **41** (2008) issue 18

Imaging Laser Absorption Spectroscopy of the metal-halide lamp under hyper-gravity conditions ranging from 1–10 g

A.J. Flikweert, A.F. Meunier, T. Nimalasuriya, G.M.W. Kroesen and W.W. Stoffels, Journal of Physics D-Applied Physics **41** (2008) issue 18

Semi-empirical model for axial segregation in metal-halide lamps

A.J. Flikweert, M.L. Beks, T. Nimalasuriya, G.M.W. Kroesen, M. Haverlag, J.J.A.M. van der Mullen and W.W. Stoffels, Journal of Physics D-Applied Physics **41** (2008) issue 18

2-D Images of the Metal-Halide Lamp Obtained by Experiment and Model

A.J. Flikweert, M.L. Beks, T. Nimalasuriya, G.M.W. Kroesen, J.J.A.M. van der Mullen and W.W. Stoffels, IEEE Transactions on Plasma Science **36(4)** (2008) 1174–1175

The metal-halide lamp under varying gravity conditions measured by emission and laser absorption spectroscopy

A.J. Flikweert, T. Nimalasuriya, G.M.W. Kroesen, M. Haverlag and W.W. Stoffels, submitted to Microgravity - Science and Technology (2008)

Competition between convection and diffusion in a metal halide lamp, investigated by numerical simulations and imaging laser absorption spectroscopy

M.L. Beks, A.J. Flikweert, T. Nimalasuriya, W.W. Stoffels and J.J.A.M. van der Mullen, Journal of Physics D-Applied Physics **41** (2008) 144025

Metal-halide lamps in micro-gravity, experiment and model

T. Nimalasuriya, M.L. Beks, A.J. Flikweert, M. Haverlag, W.W. Stoffels, G.M.W. Kroesen and J.J.A.M. van der Mullen, *Journal of Physics D-Applied Physics* **41** (2008) 144022

Imaging Laser Absorption Spectroscopy of the metal-halide lamp in a centrifuge (1–10g)

A.J. Flikweert, T. Nimalasuriya, G.M.W. Kroesen and W.W. Stoffels, *Plasma Sources Science & Technology* **16(3)** (2007) 606–613

Axial segregation in metal-halide lamps under gravity conditions ranging from 1g to 10g

T. Nimalasuriya, G.M. Thubé, A.J. Flikweert, M. Haverlag, G.M.W. Kroesen, W.W. Stoffels and J.J.A.M. van der Mullen, *Journal of Physics D-Applied Physics* **40** (2007) 2839–2846

Discharges for lighting

W.W. Stoffels, T. Nimalasuriya, A.J. Flikweert and H.C.J. Mulders, *Plasma Physics and Controlled Fusion* **49** (2007) B505–B512

X-ray induced fluorescence measurement of segregation in a DyI₃-Hg metal-halide lamp

T. Nimalasuriya, J.J. Curry, C.J. Sansonetti, E.J. Ridderhof, S.D. Shastri, A.J. Flikweert, W.W. Stoffels, M. Haverlag and J.J.A.M. van der Mullen, *Journal of Physics D-Applied Physics* **40** (2007) 2831–2838

Axial segregation in metal-halide lamps under varying gravity conditions during parabolic flights

A.J. Flikweert, M. van Kemenade, T. Nimalasuriya, M. Haverlag, G.M.W. Kroesen and W.W. Stoffels, *Journal of Physics D-Applied Physics* **39(8)** (2006) 1599–1605 **On the list of best articles published in J. Phys. D. in 2006**

Metal halide lamps in the international space station ISS

T. Nimalasuriya, A.J. Flikweert, M. Haverlag, P. Kemps, G.M.W. Kroesen, W.W. Stoffels and J.J.A.M. van der Mullen, *Journal of Physics D-Applied Physics* **39** (2006) 2993–3001

Metal halide lamps: Gravitational influence on color separation

W.W. Stoffels, A.J. Flikweert, T. Nimalasuriya, J.J.A.M. van der Mullen, G.M.W. Kroesen and M. Haverlag, *Pure Appl. Chem.* **78(6)** (2006) 1239–1252

Optical emission spectroscopy of metal-halide lamps: Radially resolved atomic state distribution functions of Dy and Hg

T. Nimalasuriya, N.B.M. Papat, A.J. Flikweert, W.W. Stoffels, M. Haverlag and J.J.A.M. van der Mullen, *Journal of Applied Physics* **99** (2006) 053302

Axial segregation in high intensity discharge lamps measured by laser absorption spectroscopy

A.J. Flikweert, T. Nimalasuriya, C.H.J.M. Groothuis, G.M.W. Kroesen and W.W. Stoffels, *Journal of Applied Physics* **98**(7) (2005) 073301

Plasma needle: a non-destructive atmospheric plasma source for fine surface treatment of (bio)materials

E. Stoffels, A.J. Flikweert, W.W. Stoffels and G.M.W. Kroesen, *Plasma Sources Science & Technology* **11** (2002) 383–388

Oral presentations

The metal-halide lamp investigated in the centrifuge (1-10g) by Imaging Laser Absorption Spectroscopy and emission spectroscopy

A.J. Flikweert, Group Seminar Wendelstein, Max-Planck-Institut für Plasmaphysik (30 June 2008), Greifswald, Germany

Axial segregation in a metal-halide lamp at 1-10G measured by emission spectroscopy

A.J. Flikweert, L. Navarro, T. Nimalasuriya, G.M.W. Kroesen, and W.W. Stoffels, 35th IEEE International Conference on Plasma Science (15–19 June 2008), Karlsruhe, Germany

Metal-halide lamps under varying gravity conditions measured by emission and laser absorption spectroscopy

A.J. Flikweert, T. Nimalasuriya, G.M.W. Kroesen and W.W. Stoffels, Microgravity Platform / NL-Gravitybijeekomst (28 March 2008), NIVR TU Delft, The Netherlands

Metal halide lamps between 1 and 10 g in a centrifuge

W.W. Stoffels, A.J. Flikweert, T. Nimalasuriya and G.M.W. Kroesen, Symposium Technology for Artificial Gravity and Microgravity Simulation (10–12 December 2007), ESA, Noordwijk, The Netherlands

Imaging Laser Absorption Spectroscopy of MH lamp under hyper-gravity (1–10g)

A.J. Flikweert, Ruhr Universität Bochum, Allgemeine Elektrotechnik und Plasmatechnik, Research group of Prof. Awakowicz (13 June 2007), Bochum, Germany

2D laser absorption spectroscopy under hyper-gravity (1–10g) of the metal-halide lamp
A.J. Flikweert, T. Nimalasuriya, G.M.W. Kroesen and W.W. Stoffels, 7th Workshop on Frontiers in Low Temperature Plasma Diagnostics (1–5 April 2007), Beverly, United Kingdom

2D laser absorption spectroscopy of the metal-halide lamp in a centrifuge (1–10g)
A.J. Flikweert, T. Nimalasuriya, G.M.W. Kroesen and W.W. Stoffels, 19th Symposium Plasma Physics & Radiation Technology (6–8 March 2007), Lunteren, The Netherlands

Axial segregation in high intensity discharge lamps under varying gravity conditions
A.J. Flikweert, T. Nimalasuriya, M. Haverlag, G.M.W. Kroesen and W.W. Stoffels, 14th Gaseous Electronics Meeting (5–9 February 2006), Murramarang Resort, Batemans Bay, Australia

Axial and radial segregation in high intensity discharge lamps measured by laser absorption spectroscopy
A.J. Flikweert, COST-Meeting "plasma light generation" 27th International Conference on Phenomena in Ionized Gases, XXVII ICPIG (17 July 2005), Veldhoven, The Netherlands

Axial segregation in metal halide lamps under varying gravity conditions
A.J. Flikweert, T. Nimalasuriya, M. Haverlag, G.M.W. Kroesen and W.W. Stoffels, 8th Euregional WELT-PP, Workshop on the Exploration of Low Temperature Plasma Physics (24–25 November 2005), Kerkrade, The Netherlands

Conference posters

The metal-halide lamp investigated in the centrifuge (1–10g) by emission and Imaging Laser Absorption Spectroscopy
A.J. Flikweert, L. Navarro, T. Nimalasuriya, G.M.W. Kroesen and W.W. Stoffels, 29th Symposium Plasma Physics & Radiation Technology (4–5 March 2008), Lunteren, The Netherlands

3D dysprosium density in the metal-halide lamp measured by emission and laser absorption spectroscopy in a centrifuge at 1–10g
A.J. Flikweert, T. Nimalasuriya, G.M. Thubé, G.M.W. Kroesen and W.W. Stoffels, 11th International Symposium on the Science and Technology of Light Sources (20–24 May 2007), Shanghai, China

Fluctuating magnetic field measurements in a horizontal helicon double layer system
A.J. Flikweert, M.D. West, A. Aanesland, C. Charles and R.W. Boswell, 9th Euregional Workshop on the Exploration of Low Temperature Plasma Physics (23–24 November 2006), Kerkrade, The Netherlands

Search for molecules in the metal halide lamp by emission spectroscopy
G.F.C. Saget, A.J. Flikweert, T. Nimalasuriya and W.W. Stoffels, 9th Euregional Workshop on the Exploration of Low Temperature Plasma Physics (23–24 November 2006), Kerkrade, The Netherlands

The effect of micro- and hyper-gravity (0-10 g) on axial segregation in metal-halide lamps
A.J. Flikweert, T. Nimalasuriya, M. van Kemenade, G.M. Thubé, M. Haverlag, G.M.W. Kroesen and W.W. Stoffels, ESCAMPIG XVIII (12–16 July, 2006), Lecce, Italy

Axial segregation in metal-halide lamps under varying gravity conditions (0–10g)
A.J. Flikweert, M. van Kemenade, T. Nimalasuriya, M. Haverlag, G.M.W. Kroesen and W.W. Stoffels, 18th Symposium Plasma Physics & Radiation Technology (22–23 March 2006), Lunteren, The Netherlands

Axial segregation in high intensity discharge lamps measured by laser absorption spectroscopy
A.J. Flikweert, T. Nimalasuriya, C.H.J.M. Groothuis, M. Haverlag, G.M.W. Kroesen and W.W. Stoffels, 27th International Conference on Phenomena in Ionized Gases, XXVII ICPIG (17–22 July 2005), Veldhoven, The Netherlands

Axial and radial segregation in metal halide lamps measured by absorption spectroscopy
A.J. Flikweert, T. Nimalasuriya, W.W. Stoffels, M. Haverlag and G.M.W. Kroesen, Symposium Plasma Physics & Radiation Technology (1–2 March 2005), Lunteren, The Netherlands

Studying axial segregation in high intensity discharge lamps by means of absorption spectroscopy
A.J. Flikweert, T. Nimalasuriya, W.W. Stoffels, M. van Kemenade, J. Beckers, C.H.J.M. Groothuis, M. Haverlag and G.M.W. Kroesen, 7th Eurogional WELT-PP (25–26 November 2004), Kerkrade, The Netherlands

Non-thermal atmospheric discharge for biomedical purposes
A.J. Flikweert, E. Stoffels, W.W. Stoffels, E.J. Ridderhof, R.P. Dahiya and G.M.W. Kroesen, 4th Euregional Welt-PP, Workshop on the Exploration of Low Temperature Plasma Physics (November 2001), Kerkrade, The Netherlands

Orals and presentations, co-author

Competition between convection and diffusion in metal halide lamps

M.L. Beks, A.J. Flikweert and J.J.A.M. van der Mullen, 29th Symposium Plasma Physics & Radiation Technology (4–5 March 2008), Lunteren, The Netherlands, Oral

Transport phenomena in metal-halide lamps, a poly-diagnostic study

T. Nimalasuriya, A.J. Flikweert, M.L. Beks, W.W. Stoffels, M. Haverlag, G.M.W. Kroesen and J.J.A.M. van der Mullen, 29th Symposium Plasma Physics & Radiation Technology (4–5 March 2008), Lunteren, The Netherlands, Conference Poster

Metal Halide Lamps from 0 to 10 g

W.W. Stoffels, A.J. Flikweert, T. Nimalasuriya, M.L. Beks, A.F. Meunier, J.J.A.M. van der Mullen, M. Haverlag and G.M.W. Kroesen, 18th International Symposium on Plasma Chemistry (26–31 August 2007), Kyoto, Japan, Conference Poster

X-Ray Induced Fluorescence Measurement of the Additive and Hg Densities in a Metal-Halide Lamp

T. Nimalasuriya, J.J. Curry, C.J. Sansonetti, E.J. Ridderhof, A.J. Flikweert, W.W. Stoffels, M. Haverlag and J.J.A.M. van der Mullen, 11th International Symposium on the Science and Technology of Light Sources (20–24 May 2007), Shanghai, China, Conference Poster

Simulating Metal Halide Lamps Under Varying Accelerational Conditions With Plasimo

M.L. Beks, A.J. Flikweert, A. Hartgers and J.J.A.M. van der Mullen, 11th International Symposium on the Science and Technology of Light Sources (20–24 May 2007), Shanghai, China, Conference Poster

Color separation in metal halide lamps

W.W. Stoffels, T. Nimalasuriya, A.J. Flikweert, W.J.M. Brok, J.J.A.M. van der Mullen, G.M.W. Kroesen and M. Haverlag, 59th Annual Gaseous Electronics Conference (GEC) (10–13 October 2006), Columbus, United States, Conference Poster

Additive density distributions and temperature profiles of metal-halide lamps measured in the International Space Station and a centrifuge

T. Nimalasuriya, G.M. Thubé, A.J. Flikweert, W.W. Stoffels, M. Haverlag, G.M.W. Kroesen and J.J.A.M. van der Mullen, ESCAMPIG XVIII (12–16 July, 2006), Lecce, Italy, Conference Poster

Preliminary results from tests of the helicon double layer thruster in the ANU space simulation chamber

M.D. West, A.J. Flikweert, C. Charles and R.W. Boswell, 42nd AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit (9–12 July 2006), Sacramento, California, United States, Conference Poster

A study of the coupling between the helicon pump wave and instabilities associated with a current-free double layer in Chi Kung

Å. Fredriksen, A. Aanesland, A.J. Flikweert, C. Charles and R.W. Boswell, 8th Asia-Pacific Conference on Plasma Science and Technology and 19th Symposium on Plasma Science for Materials (2–5 July 2006), Cairns, Australia, Oral

Segregation phenomena in metal-halide lamps

W.J.M. Brok, T. Nimalasuriya, A. Hartgers, J. van Dijk, M.L. Beks, A.J. Flikweert, G.M. Thubé, N.B.M. Papat, M. Haverlag, W.W. Stoffels, J.J.A.M. van der Mullen and G.M.W. Kroesen, 9th High Technology Plasma Process (HTPP) Conference (30 May 2006), St. Petersburg, Russian Federation, Invited talk

Optical and X-ray Diagnostics of Metal-Halide Lamps

T. Nimalasuriya, G.M. Thubé, N.B.M. Papat, J.J. Curry, C.J. Sansonetti, E.J. Ridderhof, A.J. Flikweert, W.W. Stoffels, M. Haverlag, G.M.W. Kroesen and J.J.A.M. van der Mullen, COST 529 Meeting (30 March–2 April 2006), Mierlo, The Netherlands, Invited Lecture

Additive Density distributions and Temperature profiles of Metal-Halide lamps from zero to hyper-gravity

T. Nimalasuriya, G.M. Thubé, A.J. Flikweert, W.W. Stoffels, M. Haverlag, G.M.W. Kroesen and J.J.A.M. van der Mullen, 18th Symposium Plasma Physics & Radiation Technology (22–23 March 2006), Lunteren, The Netherlands, Oral

Additive density distributions and temperature profiles of metal-halide lamps in the International Space Station

T. Nimalasuriya, A.J. Flikweert, W.W. Stoffels, M. Haverlag, G.M.W. Kroesen and J.J.A.M. van der Mullen, 8th Euregional WELT-PP, Workshop on the Exploration of Low Temperature Plasma Physics (24–25 November 2005), Kerkrade, The Netherlands, Oral

Absolute line intensity measurements of the density distribution of Dy in a metal-halide lamp

T. Nimalasuriya, N.B.M. Pupat, A.J. Flikweert, W.W. Stoffels, M. Haverlag and J.J.A.M. van der Mullen, 27th International Conference on Phenomena in Ionized Gases, XXVII ICPIG (17–22 July 2005), Veldhoven, The Netherlands, Conference Poster

X-ray induced fluorescence measurement of the density distribution of Dy and Hg in a metal-halide lamp

T. Nimalasuriya, J.J. Curry, C.J. Sansonetti, E.J. Ridderhof, A.J. Flikweert, W.W. Stoffels, M. Haverlag and J.J.A.M. van der Mullen, 27th International Conference on Phenomena in Ionized Gases, XXVII ICPIG (17–22 July 2005), Veldhoven, The Netherlands, Conference Poster

Metal Halide Discharge Lamps under Micro Gravity Conditions

W.W. Stoffels, G.M.W. Kroesen, C.H.J.M. Groothuis, A.J. Flikweert, T. Nimalasuriya, M. van Kemenade, P. Kemps, M. Bax, F.H.J. van den Hout, D. van den Akker, G. Schiffelers, J. Beckers, E.C.A. Dekkers, J.G.M. Moerel, P. Brinkgeve, M. Haverlag, R. Keijser and A. Kuipers, 27th International Conference on Phenomena in Ionized Gases, XXVII ICPIG (17–22 July 2005), Veldhoven, The Netherlands, Conference Poster

Emission Spectroscopy of Metal Halide Lamps under Normal and Microgravity conditions

T. Nimalasuriya, A.J. Flikweert, W.W. Stoffels, M. Haverlag, G.M.W. Kroesen and J.J.A.M. van der Mullen, Symposium Plasma Physics & Radiation Technology (1–2 March 2005), Lunteren, The Netherlands, Conference Poster

Emission Spectroscopy of Metal Halide Lamps under Normal and Microgravity conditions

T. Nimalasuriya, A.J. Flikweert, W.W. Stoffels, M. Haverlag, G.M.W. Kroesen and J.J.A.M. van der Mullen, 7th Eurogional WELT-PP (25–26 November 2004), Kerkrade, The Netherlands, Conference Poster

Miscellaneous

Brochure of The Helicon Double Layer Thruster

SP3 group members, The Australian National University, Research School of Physical Sciences & Engineering (2006), Canberra, Australia