DIFFER

Annual Report 2014 appendix

Dutch Institute for Fundamental Energy Research

*This appendix to the DIFFER annual report 2014 gives an overview of the employees in the institute's groups and lists the scientific output at DIFFER in 2014. Some output from the themes on plasma surface interactions and nanolayer surface and interface physics is also part of the solar fuels theme; this is indicated in the output lists with an *.*

The annual report and appendices can be found at www.differ.nl/annual_reports

Index

appendix A

Personnel

Management

Institute director, theme leader solar fuels	*M.C.M. van de Sanden*
Institute manager	*W.R. Koppers*
Theme leader fusion	*A.J.H. Donné (until May 2014)*
	M.R. de Baar (from May 2014)

Fusion research

Theme leader	A.J.H. Donné
	M.R. de Baar (per May 2014)

Computational Plasma Physics - Low Temperature (CPP-LT)

Program leader	*W.J. Goedheer*
Senior scientist	*H.J. de Blank (50% from CPP-HT)*
PhD students	*W. Lu, G.A. van Swaaij*

Plasma Surface Interactions - Engineering (PSI-E)

Program leader	*G.C. De Temmerman (until April 2014)*
Senior scientist	*H.J. van der Meiden, P.A. Zeijlmans van Emmichoven*
Postdoc	*S.C. Bardin, T.W. Morgan*
PhD student	*D.U.B. Aussems, G.G. van Eden, M.H.J. 't Hoen, V. Kvon, I. Tanyeli*
MSc student	*A.E. Huisman, A. Gallo, J.W.M. Vernimmen*
BSc student	*K.L. Nicolai*
Guest researcher	*L. Cheng, K. Jesko, Y. Zayachuk*
Advisor	*W.M. Arnold Bik, A.W. Kleijn*

Plasma Surface Interactions - Facilities and Instrumentation (PSI-FI)

Program leader	*A.J.H. Donné a.i. (until May 2014), H.J.N. van Eck (per May 2014)*
Research engineer	*R.S. Al, S. Alonso van der Westen, M.A. van den Berg, S. Brons, K. Bystrov, M.J. van de Pol, J. Scholten, C.J. Tito, E.G.P. Vos*
Advisor	*O.G. Kruijt, P.R. Prins*

Computational Plasma Physics - High Temperature (CPP-HT)

Program leader	*E. Westerhof*
Senior scientist	*H.J. de Blank, G.M.D. Hogeweij*
Postdoc	*J. Citrin, T.P.C. Klaver*
PhD student	*F.F.E. Jaulmes, W. Weymiens, D.A. Zhelyazov, B. van Es*
BSc student	*J.D. Paton*
Advisor	*J.P. Goedbloed*

Plasma Diagnostics (PD)

Program leader	*A.J.H. Donné a.i. (until May 2014), M.R. de Baar a.i. (from May 2014)*
Senior scientist	*E.G. Delabie, M.G. Tsalas*
Postdoc	*A.E. Shumack*
PhD student	*J.D. Hawke*

Tokamak Physics (TP)

Program leader	*M.R. de Baar*
Senior scientist	*I.G.J. Classen, M. Kantor (also Ioffe and FZJ)*
Industrial Liaison officer	*A.G.A. Verhoeven*
Research engineer	*T.C. Blanken, B.S.Q. Elzendoorn, J.F. Koning, D.M.S. Ronden*
PhD student	*M. van Berkel, H. Boessenkool, A. Bogomolov, H. van den Brand, B. van Es, G. Hommen, M. Lauret, A. Kappatou, J. van Oosterhout*
BSc student	*D.J. Bult, K. Paykardjoe K. Schoute, K. Schuijtemaker, D. Smedinga, R. Visser*
Guest researcher	*M.G.V. von Hellermann, P.W. Schoen, F.C. Schuller*

Solar fuels - sustainable energy storage

Theme leader	M.C.M. van de Sanden

Materials and Materials Processing for Solar Fuels - Experimental (MaSF-E)

Program leader	*M.C.M. van de Sanden*
Senior scientist	*A. Baldi, A.J. Boer , W.A. Bongers, A. Bieberle , M.A. Gleeson, G.J. van Rooij, M. Tsampas*
Research engineer	*M.F. Graswinckel, P. Sallé, E. Zoethout*
Technician	*W.K. van der Graaf*
Postdoc	*S.A. Starostin, A.J. Walsh, S. Welzel, T. Zaharia*
PhD student	*D.C.M. van den Bekerom, T.T. Belete, N. den Harder, R. van Lent, T. Minea, R. Sinha*
MSc student	*R. van Lent, F.J.J. Peeters*
BSc student	*P.C. Govers, B. van Hemert, G.F.W.M. Frissen, P. van Wanrooij, S.A. van der Zon*
Advisor	*A.P.H. Goede*

Atmospheric Plasma Processing for Functional Films (APPFF)

Program leader	*H.W. de Vries*
PhD student	*Y. Liu, A. Meshkova*
MSc student	*F. Elam*

Nanolayer surface and interface physics (nSI)

Theme leader	F. Bijkerk

Advanced Application of XUV Optics (AXO)

Group leader	*E. Louis*
Postdoc	*Q. Huang*
BSc student	*Y. Lou*

Extreme UV Laboratory (EUV-Lab)

Group leader	*C. J. Lee*
PhD students	*R. van den Bos, A. Dolgov, A. Gao, M. Pachecka, F. Liu*
Undergraduate student	*B. van Albada*
Guest reseacher	*J.M. Sturm*

Thin Film & Multilayer Physics (TFM)

Group leader	*A.E. Yakshin*
Senior scientist	*R.W.E. van de Kruijs*
Postdoc	*T. Zaharia*
PhD students	*R. Coloma Ribera, S. Huber, V. Medvedev*
BSc students	*M. Bolhuis, S. Kokke*

Support Facilities and Staff

Division head	W.R. Koppers

Communication

Group leader	*F.T.M.E. de Vries*
Personnel	*A.P. Visser*

Financial Administration

Group leader	*M.P.M. Schoonen*
Personnel	*D. Nguyen, N. Nobbenhuis-Versluis, W. Mensink, S. Werner*

Management Support

Group leader	*W.R. Koppers*
Personnel	*E.M. Khan, E. Langereis, A.A.M. Oomens, J.G. Stroet, M.J. van Veenendaal, C.M. Visser, M.D. van der Vlis, E.C.M. van Wijk, P. Delmee*

Personnel Services (Human Resources)

Group leader	*A.M.A. van Oploo (until June 2014), W.R. Koppers (a.i. until Nov 2014), H.J. Tamsma*
Personnel	*J.M. van Achthoven*

Electronics & ICT

Group leader	*A. Broekema*
Personnel	*M.T. Breugem, J.W. Genuit, P.W.C. Groen, G.W. Hendriks, G. Kaas, J.J. Kamp, B.J.M. Krijger, G. Land, W. Melissen, A.J. Poelman, J.J.B. Stakenborg, C.J. Theunissen, J.W. Wahlbrinck, F. Wijnoltz, R.W. Zimmerman*

Mechanical Techniques

Group leader	*F.J. van Amerongen*
Personnel	*G. van der Bijl, A.G.M. van den Bogaard, J. Lagerweij, B. Lamers, L.W.E.G. Römers, A. Tamminga, C.R. Wolbeer, P.M. Wortman*
Apprentices	*T.D. Bax, J. van Ieperen, D. van der Meer, F. Noz, D.R. Roelofs*

Technical Facilities

Group leader	*K.T. Grootkarzijn*
Personnel	*M.H. Kloosterman*

Domestic Facilities

Group leader	*J.E. Kragten*
Personnel	*J.F. Alberts, J.C. Bleijenberg, F.F. Hekkenberg, N. Kodabaks, J.M. Rietveld, S. van Schaik, P. Stekelenburg, J.B. Uwland, L.M. van de Ven*

Gardens and Surroundings

Group leader	*A. Bikker*

appendix B

Output

DIFFER

Public events: 2

1. *Open day for the general public, 2014/10/05, Nieuwegein, the Netherlands*
2. *Open day for high school to university students, 2014/10/02, Nieuwegein, the Netherlands*

Media: 12

1. *Een Amsterdammer in Chengdu, Chemisch 2 Weekblad, 2014/09/26*
2. *Laatste open dag energieinstituut DIFFER in Nieuwegein op 5 oktober, Radio Stad Montfoort, 2014/09/26*
3. *Laatste open dag DIFFER in Nieuwegein, RTV9, 2014/07/10*
4. *Laatste open dag DIFFER in Nieuwegein, De Digitale Nieuwegeiner, 2014/09/19*
5. *Toekomst van energie, NCRV's Altijd Wat, 2014/08/19*
6. *Eerste steen voor DIFFER, EctorHoogstad.com, 2014/07/01*
7. *BIM vraagt om juiste hardware, Cobouw.nl, 2014/03/21*
8. *Excellent instituut, Cobouw.nl, 2014/03/14*
9. *Stevige impuls voor funderend energieonderzoek, Brainport.nl, 2014/04/08*
10. *TU/e en FOM gaan samenwerken binnen DIFFER, Aandrijftechniek AT, 2014/04/08*
11. *Differ en TU/e tot elkaar in Hannover, Eindhovens Dagblad, 2014/04/07*
12. *TU/e en FOM tekenen contract voor samenwerking binnen FOM-instituut DIFFER, EngineersOnline.nl, 2014/04/07*

Fusion - plasma surface interactions

PhD theses: 3

1. *K.E. Bystrov, Erosion and morphology changes of graphite under high flux and low temperature plasma bombardment, PhD thesis at the Eindhoven University of Technology, 2014/02/06, Promotor: M.C.M. van de Sanden*
2. *M.H.J. 't Hoen, Deuterium retention in radiation damaged tungsten exposed to high-flux plasma, PhD thesis at the Amsterdam University, 2014/05/06, Promotor: A.W. Kleijn*
3. *G.A. van Swaaij, Studies of impurity transport in high density, low temperature plasma with the ERO code, PhD thesis at the TU Eindhoven, 2014/04/23, Promotor: M.C.M. van de Sanden, W.J. Goedheer*

Master theses: 1

1. *Huisman, (Master thesis Eindhoven University of Technology) Effects of ITER-like transient heat loads on He-irradiated W-samples containing He-bubbles, 2014, Mentor: G.C. De Temmerman*

Bachelor theses: 3

1. *P.C. Govers, (Bachelor thesis Fontys Hogeschool, Eindhoven) Setting up a system for the determination of ion temperature by means of collective Thomson scattering in Pilot-PSI. Tests of optical systems, 2014, Mentor: H.J. van der Meiden*
2. *F. Noz, (Bachelor thesis Hogeschool Utrecht, Utrecht) Stage eindverslag Werktuigbouwkunde (IPD), 2014, Mentor: A. van den Bogaard*
3. *J. Vernimmen, (Bachelor thesis Fontys Hogeschool, Eindhoven) Measurement of the ion temperature in Pilot-PSI by means of Collective Thomsonscattering, 2014, Mentor: H.J. van der Meiden*

Publications in peer-reviewed scientific journals: 24

1. *T. Abrams, M.A. Jaworski, R. Kaita, D.P. Stotler, G. De Temmerman, T.W. Morgan, M.A. van den Berg, H.J. van der Meiden, Erosion of lithium coatings on TZM molybdenum and graphite during high-flux plasma bombardment, Fusion Eng. Des. 89 (2014) 2857 - 2863*
2. *D.U.B. Aussems, D. Nishijima, C. Brandt, R.P. Doerner, N.J. Lopes Cardozo, Spectroscopic characterization and imaging of laser- and unipolar arc-induced plasmas, J. Appl. Phys. 116 (2014) 063301*
3. *L. Buzi, G. De Temmerman, B. Unterberg, M. Reinhart, A. Litnovsky, V. Philipps, G. van Oost, S. Möller, Influence of particle flux density and temperature on surface modifications of tungsten and deuterium retention, J. Nucl. Mater. 455 (2014) 316 - 319*
4. *K. Bystrov, M.C.M. van de Sanden, C. Arnas, L. Marot, D. Mathys, F. Liu, L.K. Xu, X.B. Li, A.V. Shalpegin, G. De Temmerman, Spontaneous synthesis of carbon nanowalls, nanotubes and nanotips using high flux density plasmas, Carbon 68 (2014) 695 - 707*
5. *J.W. Coenen, G. De Temmerman, G. Federici, V. Philipps, G. Sergienko, G. Strohmayer, A. Terra, B. Unterberg, T. Wegener, D.C.M. van den Bekerom, Liquid metals as alternative solution for the power exhaust of future fusion devices: status and perspective, Phys. Scr. 2014 (2014) 014037*
6. *H.J.N. van Eck, T. Abrams, M.A. van den Berg, S. Brons, G.G. van Eden, M.A. Jaworski, R. Kaita, H.J. van der Meiden, T.W. Morgan, M.J. van de Pol et al., Operational characteristics of the high flux plasma generator Magnum-PSI, Fusion Eng. Des. 89 (2014) 2150-2154*
7. *G.G. van Eden, T.W. Morgan, H.J. van der Meiden, J. Matejicek, T. Chraska, M. Wirtz, G. De Temmerman, The effect of high-flux H plasma exposure with simultaneous transient heat loads on tungsten surface damage and power handling, Nucl. Fusion 54 (2014) 123010*
8. *O. El-Atwani, S. Gonderman, M. Efe, G. De Temmerman, T. Morgan, K. Bystrov, D. Klenosky, T. Qiu, J.P. Allain, Ultrafine tungsten as a plasma-facing component in fusion devices: effect of high flux, high fluence low energy helium irradiation, Nucl. Fusion 54 (2014) 083013*
9. *M.H.J. 't Hoen, M. Balden, A. Manhard, M. Mayer, S. Elgeti, A.W. Kleyn, P.A. Zeijlmans van Emmichoven, Surface morphology and deuterium retention of tungsten after low- and high-flux deuterium plasma exposure, Nucl. Fusion 54 (2014) 83014*
10. *S.H. Hong, E.N. Bang, S.T. Lim, J.Y. Lee, S.J. Yang, A. Litnovsky, M. Hellwig, D. Matveev, M. Komm, M.A. van den Berg et al., Preliminary test results on tungsten tile with castellation structures in KSTAR, Fusion Eng. Des. 89 (2014) 1704–1708*

11. *S. Kajita, G. De Temmerman, T.W. Morgan, G.G. van Eden, T.M. de Kruif, N. Ohno, Thermal response of nanostructured tungsten, Nucl. Fusion 54 (2014) 033005*
12. *C. Li, X. Wu, C. Zhang, H. Ding, G. De Temmerman, H.J. van der Meiden, Study of deuterium retention on lithiated tungsten exposed to high-flux deuterium plasma using laser-induced breakdown spectroscopy, Fusion Eng. Des. 89 (2014) 949–954*
13. *G.P. Maddison, C. Giroud, B. Alper, G. Arnoux, I. Balboa, M.N.A. Beurskens, A. Boboc, S. Brezinsek, M. Brix, M. Clever et al., Contrasting H-mode behaviour with deuterium fuelling and nitrogen seeding in the all-carbon and metallic versions of JET, Nucl. Fusion 54 (2014) 073016*
14. *T.W. Morgan, G.G. van Eden, T.M. de Kruif, M.A. van den Berg, J. Matejicek, T. Chraska, G. De Temmerman, ELM-induced melting: assessment of shallow melt layer damage and the power handling capability of tungsten in a linear plasma device, Phys. Scr. 2014 (2014) 014022*
15. *T.W. Morgan, T.M. de Kruif, H.J. van der Meiden, M.A. van den Berg, J. Scholten, W. Melissen, B.J.M. Krijger, S. Bardin, G. De Temmerman, A high-repetition rate edge localised mode replication system for the Magnum-PSI and Pilot-PSI linear devices, Plasma Phys. Control. Fusion 56 (2014) 095004*
16. *K.S.C. Peerenboom, J. van Dijk, W.J. Goedheer, G.M.W. Kroesen, A non-equilibrium simulation of thermal constriction in a cascaded arc hydrogen plasma, Plasma Sources Sci. Technol. 23 (2014) 025003*
17. *K. Piip, P. Paris, A.H. Hakola, K. Bystrov, G. De Temmerman, M. Aints, I. Jogi, J. Kozlova, M. Laan, J. Likonen et al., Influence of He/D-2 plasma fluxes on the morphology and crystallinity of tungsten coatings, Phys. Scr. 89 (2014) 044009*
18. *C. Ruset, H. Maier, E. Grigore, G. Matthews, G. De Temmerman, A. Widdowson, JET-EFDA contributors, Tungsten coatings under high thermal loads in JET and Magnum-PSI, Phys. Scr. 2014 (2014) 014025*
19. *G.A. van Swaaij, A. Kirschner, D. Borodin, W.J. Goedheer, K. Bystrov, G. De Temmerman, Erosion/re-deposition modeling in an ITER divertor-like high-density, low-temperature plasma beam, Plasma Phys. Control. Fusion 56 (2014) 095028*
20. *Y. Ueda, J.W. Coenen, G. De Temmerman, R.P. Doerner, J. Linke, V. Philipps, E. Tsitrone, Research status and issues of tungsten plasma facing materials for ITER and beyond, Fusion Eng. Des. 89 (2014) 901–906*
21. *W.A.J. Vijvers, G.P. Canal, B. Labit, H. Reimerdes, B. Tal, S. Coda, G.C. De Temmerman, B.P. Duval, T.W. Morgan, J.J. Zielinski, Power exhaust in the snowflake divertor for L- and H-mode TCV tokamak plasmas, Nucl. Fusion 54 (2014) 023009*
22. *H.Y. Xu, G.N. Luo, H. Schut, Y. Yuan, B.Q. Fu, A. Godfrey, W. Liu, G. De Temmerman, Enhanced modification of tungsten surface by nanostructure formation during high flux deuterium plasma exposure, J. Nucl. Mater. 447 (2014) 22 - 27*
23. *Y. Zayachuk, A. Manhard, M.H.J. 't Hoen, W. Jacob, P.A. Zeijlmans van Emmichoven, G. van Oost, Depth profiling of the modification induced by high-flux deuterium plasma in tungsten and tungsten–tantalum alloys, Nucl. Fusion 54 (2014) 123013*
24. *J.J. Zielinski, H.J. van der Meiden, T.W. Morgan, M.H.J. 't Hoen, D.C. Schram, G. De Temmerman, Self-shielding of a plasma-exposed surface during extreme transient heat loads, Appl. Phys. Lett. 104 (2014) 124102*

Publications in other journals and conference proceedings: 1

1. *B. Labit, G.P. Canal, T. Lunt, H. Reimerdes, W.A.J. Vijvers, S. Coda, B.P. Duval, G.C. De Temmerman, T.W. Morgan, B. Tal et al., Overview of recent snowflake divertor studies in TCV, 41th EPS Conference on Plasma Physics (2014) P5.021*

Invited lectures at conferences and meetings: 5

1. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, T. Loewenhoff, H. Greuner, J. Linke, H. Maier, G. Pintsuk, R.A. Pitts, B. Riccardi, G. De Temmerman, Impact of combined transient plasma/heat loads on tungsten performance, I4*
2. *CPP-IPR Workshop on Linear Tokamak Divertor Simulators for PSI Studies, 2014/11/24, Assam, India, H.J. van der Meiden, M.A. van den Berg, S. Brons, T.W. Morgan, M.J. van de Pol, J. Scholten, J. Vernimmen, G. De Temmerman, Measurements of electron and ion properties using Thomson scattering during plasma-wall interaction experiments in a linear plasma device, Invited*
3. *24th International Toki Conference on Expanding Horizons of Plasma and Fusion Science through Cross-fertilization, 2014/11/04, Toki-city, Japan, H.J. van der Meiden, M.A. van den Berg, S. Brons, T.W. Morgan, M.J. van de Pol, J. Scholten, J. Vernimmen, G. De Temmerman, Measurements of electron and ion properties using Thomson scattering during plasma-wall interaction experiments in a linear plasma device, I4*
4. *Lorentz Workshop Where no Material Dares to Go, 2014/01/06, Leiden, Netherlands, T. Morgan, D.C.M. van den Bekerom, G. De Temmerman, Power exhaust capabilities of liquid metals / Liquid metals as the divertor material for future fusion reactors*
5. *Lorentz Workshop Where no Material Dares to Go, 2014/01/06, Leiden, Netherlands, G. De Temmerman, Materials synthesis under extreme conditions.*

Other oral and poster presentations at (international) conferences and meetings: 43

1. *21st PSI Conference 2014, 2014/05/26, Kanazawa, Japan, T. Abrams, M.A. Jaworski, R. Kaita, J.H. Nichols, D.P. Stotler, G. De Temmerman, M.A. van den Berg, H.J. van der Meiden, T.W. Morgan, Re-deposition of lithium and boron coatings under high-flux plasma bombardment at normal and grazing magnetic incidence, Poster, P1-030*
2. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, D.U.B. Aussems, D. Nishijima, C. Brandt, G. De Temmerman, R.P. Doerner, N.J. Lopes Cardozo, The Occurrence and Damage of Unipolar Arcing on Fuzzy Tungsten, and Possible Implications for ITER, Poster, P3-017*
3. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, D.U.B. Aussems, D. Nishijima, C. Brandt, G. De Temmerman, N.J. Lopes Cardozo, The Occurrence and Damage of Arcing on Fuzzy Tungsten, and Possible Implications for ITER, Poster, A1*
4. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, M. Balden, S. Elgeti, V.K. Alimov, K. Sugiyama, J. Roth, O. Ogorodnikova, G. Matern, H. Maier, Y. Hatano, M. Oyaidzu et al., Surface modifications of RAFM steels by deuterium exposure: Variation from coral-like/fuzz-like to blister-like features, Poster, P3-020*
5. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, S. Bardin, T.W. Morgan, R.A. Pitts, G. De Temmerman, Evolution of transient melt damaged tungsten under ITER - relevant divertor plasma heat loading, Oral, O6*
6. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, L. Buzi, G. De Temmerman, M. Reinhart, D. Matveev, B. Unterberg, G. van Oost, Influence of tungsten microstructureand ion flux on deuterium plasma-induced surface modifications and deuterium retention, Poster, P3-006*
7. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, L. Cheng, G. De Temmerman, P.A. Zeijlmans van Emmichoven, G. Ji, H.B. Zhou, B. Wang, Y. Zhang, Z.H. Zhao, K.G. Zhu, G.H. Lu, Effect of Neon Plasma Pre-Irradiation on Deuterium Retention in Tungsten, Poster, P1-042*
8. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, R. Doerner, G. De Temmerman, N. Ohno, Contributions of Linear Plasma Devices to PMI Research, Poster, MPT/P7-29*
9. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, G.G. van Eden, T.W. Morgan, G. De Temmerman, Effect of high-flux H plasma exposure on tungsten surface damage during transient heat loads, Poster, B24*
10. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, A. Gallo, M. Passoni, D. Dellasega, A. Pezzoli, P.A. Zeijlmans van Emmichoven, Surface modifications and deuterium retention of W and WO3 thin films after high-flux deuterium plasma exposure, Poster, A21*
11. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, S. Gonderman, G. De Temmerman, T.W. Morgan, J.P. Allain, A multi-scale study from extreme-fine grained to large-grain tungsten to elucidate radiation tolerance in fusion plasma-surface interactions, Poster, P2-014*
12. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, M. Groth, M. Clever, K. Lawson, A. Meigs, M. Stamp, J. Svensson, P.S.A. Belo, S. Brezinsek, M. Brix, J.W. Coenen et al., Steps in Validating Scrape-off Layer Simulations of Detached Plasmas in the JET ITER-like Wall Configuration, Poster, TH/P5-35*
13. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, N. den Harder, S. Brezinsek, G.F. Matthews, S. Marsen, A. Meigs, M.F. Stamp, I. Nunes, P. Monier-Garbet, L. Aho-Mantila, C. Giroud et al., An ELM resolved study on divertor erosion in the JETITER like wall, Poster, P26*
14. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, N. den Harder, S. Brezinsek, G.F. Matthews, S. Marsen, A. Meigs, M.F. Stamp, I. Nunes, C. Giroud, P. Monier-Garbet, L. Aho-Mantila et al., ELM induced tungsten sputtering in the JET divertor by in- and extrinsic impurities, Poster, P2-094*
15. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, M.H.J. 't Hoen, A.W. Kleyn, D. Dellasega, M. Passoni, P.A. Zeijlmans van Emmichoven, Deuterium retention and surface modifications of tungsten films exposed to high-flux plasmas, Poster, P1-038*
16. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, M.A. Jaworski, T. Abrams, R. Goldston, R. Kaita, A. Khodak, D.P. Stotler, G. De Temmerman, J. Scholten, M.A. van den Berg, H.J. van der Meiden, High-temperature liquid lithium divertor targets: analysis and experiments in support of NSTX-U and next-step devices, Poster, P3-014*
17. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, Y.Z. Jia, H.Y. Xu, G. De Temmerman, G.N. Luo, C. Li, B.Q. Fu, W. Liu, Surface Morphology and Deuterium Retention in Tungsten Exposed to High Flux D Plasma at High Temperatures, Poster, P2-004*

18. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, A. Kreter, L. Buzi, G. De Temmerman, T. Dittmar, R. Doerner, C. Linsmeier, D. Nishijima, M. Reinhart, B. Unterberg, Fuel Retention and Erosion of Metallic Plasma-Facing Materials under the Influence of Plasma Impurities, Oral, EX/4-3*
19. *FuseNet PhD Event 2014, 2014/11/18, Lisbon, Portugal, V. Kvon, T.W. Morgan, D.C.M. van den Bekerom, G. De Temmerman, Tin erosion experiments towards an alternative material for the DEMO divertor, Poster, 32 II*
20. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, B. Labit, G.P. Canal, T. Lunt, H. Reimerdes, W.A.J. Vijvers, S. Coda, B.P. Duval, G.C. De Temmerman, T.W. Morgan, B. Tal et al., Overview of recent snowflake divertor studies in TCV, Poster*
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Fusion - control in burning plasma

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1. *G. Hommen, Optical boundary reconstruction for shape control of tokamak plasmas, PhD thesis at Eindhoven University of Technology, 2014/08/27, Promotor: M.R. de Baar*
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Master theses: 1

1. *J. Paton, (Master thesis Amsterdam University College, Amsterdam) Determining the Optimal Path to Fusion at the Joint European Torus, 2014, Mentor: G.M.D. Hogeweij*

Bachelor theses: 1

1. *D. Bult, (Bachelor thesis Haagse Hogeschool, Delft) Replacement of the ECH UL M3 Mirror, 2014, Mentor: D.M.S. Ronden*

Publications in peer-reviewed scientific journals: 47

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1. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, J. Citrin, J. Garcia, T. Görler, F. Jenko, P. Mantica, D. Told, C. Bourdelle, D.R. Hatch, G.M.D. Hogeweij, T. Johnson et al., The significant role of fast ions in nonlinear electromagnetic stabilization of tokamak mictroturbulence, O1*
2. *U.S. Transport Task Force Workshop (USTTF), 2014/04/22, San Antonio, TX, USA, J. Citrin, J. Garcia, T. Görler, F. Jenko, P. Mantica, D. Told, C. Bourdelle, R. Dumont, J.W. Haverkort, G.M.D. Hogeweij et al., Nonlinear stabilization of tokamak microturbulence by fast ions, 16*
3. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, J. Citrin, F. Jenko, P. Mantica, D. Told, C. Bourdelle, J. Garcia, J.W. Haverkort, G.M.D. Hogeweij, T. Johnson, M.J. Püschel, Simulation and reality: recent advances in tokamak turbulence modelling, M1*
4. *35th Annual Meeting and Symposium of the Fusion Power Associates 'Fusion Energy: Recent Progress and The Road Ahead', 2014/12/16, Washington, USA, A.J.H. Donné, ITER risk mitigation and Conceptual Design of DEMO*
5. *First Fusionstag, 2014/11/21, Graz, Austria, A.J.H. Donné, EUROfusion and the Fusion Roadmap*
6. *Common meeting of the Nordic Research Units in EuroFusion, 2014/06/10, Stockholm, Sweden, A.J.H. Donné, EUROfusion and the Fusion Roadmap*
7. *11th Kudowa Summer School ''Towards Fusion Energy", 2014/06/09, Kudowa Zdroj, Poland, A.J.H. Donné, Challenges in Magnetic Confinement Fusion, IL-x*
8. *Forschungszentrum Jülich Symposium on the occasion of 30 years TEXTOR, 2014/03/28, Jülich, Germany, A.J.H. Donné, From TEXTOR to TECTOR*
9. *Workshop on Burning Plasma Diagnostics, 2014/01/09, Toki, Japan, A.J.H. Donné, About 15 orders of magnitude and other Dutch diagnostics developments*
10. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, D. Douai, S. Brezinsek, G.J.M. Hagelaar, S.H. Hong, D. Kogut, P.J. Lomas, A. Lyssoivan, I. Nunes, R.A. Pitts, V. Rohde et al., Wall conditioning for ITER: current experimental and modeling, I20*
11. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, N. Fedorczak, P. Monier-Garbet, S. Brezinsek, M. Goniche, E. Joffrin, E. Lerche, B. Lipschultz, E. de la Luna, G. Maddison, C. Maggi et al., Tungsten sources and transport control in JET-ILW H-modes, I9*
12. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, V. Igochine, A. Gude, S. Günter, K. Lackner, Q. Yu, L. Barrera Orte, A. Bogomolov, I. Classen, R.M. McDermott, N.C. Luhmann, Jr. et al., Slow conversion of the ideal MHD perturbations intoa tearing mode after a sawtooth crash, O4.117*
13. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, P.T. Lang, H. Meyer, G. Birkenmeier, A. Burckhart, I. Carvalho, E. Delabie, L. Frassinetti, G. Huijsmans, G. Kocsis, A. Loarte et al., ELM control at the L-H transition achieved by pellet pacing in the all-metal wall tokamaks ASDEX Upgrade and JET, O3.114*
14. *Plasma Conference 2014, 2014/11/18, Niigata, Japan, X. Litaudon, R. Albanese, M. Beurskens, S. Brezinsek, F. Castejon, S. Coda, A. Dinklage, A.J.H. Donné, T. Eich, G. Falchetto et al., European efforts for addressing long pulses issues of magnetically confined plasmas*
15. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, J. Mailloux, M. Beurskens, I. Chapman, I. Nunes, M. Tsalas, M. Baruzzo, P.S.A. Belo, E. Belonohy, J. Bernardo, P. Buratti et al., Effect of 'baseline' and 'hybrid' operational parameters on plasma confinement and stability in JET with a Be/W ITER-Like Wall, O4.127*
16. *9th International Workshop "Strong Microwaves and Terahertz Waves: Sources and Applications" SMTW9, 2014/07/24, Nizhny Novgorod, Russia, S.K. Nielsen, M. Salewski, E. Westerhof, W. Bongers, S.B. Korsholm, F. Leipold, D. Moseev, M. Stejner, TEXTOR Team, Strong scattering of mm-waves in tokamaks, H.10*
17. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, C. Reux, V.V. Plyusnin, B. Alper, D. Alves, B. Bazylev, E. Belonohy, S. Brezinsek, J. Decker, S. Devaux, P. de Vries et al., Runaway beam studies during disruptions at JET-ILW, I19*

Other oral and poster presentations at (international) conferences and meetings: 60

1. *Seminar ITER plasma operations group, 2014/06/20, Cadarache, France, M.R. de Baar, Control of the plasmas position, current distribution and MHD modes, Oral*
2. *4th Asia Pacific Transport Working Group (APTWG), 2014/06/10, Kasuga, Japan, M. van Berkel, H.J. Zwart, G.M.D. Hogeweij, G. Vandersteen, H. van den Brand, M.R. de Baar, ASDEX Upgrade team, Estimation of the thermal diffusion coefficient in fusion plasmas taking frequency measurement uncertainties into account, Poster, CP5*

3. *18th Joint Workshop on Electron Cyclotron Emission and Electron Cyclotron Resonance Heating (EC-18), 2014/04/22, Nara, Japan, M. van Berkel, M. de Baar, D. Hogeweij, H. van den Brand, H. Zwart, G. Vandersteen, How to do more with ECE noise?, Oral, Theory 5th oral*
4. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, A.V. Bogomolov, I.G.J. Classen, J.E. Boom, A.J.H. Donné, E. Wolfrum, W. Suttrop, N.C. Luhmann, Jr., ASDEX Upgrade team, Study of the ELM fluctuation characteristics during the mitigation of type-I ELMs, Poster, P2.009*
5. *SOFT 2014 28th Symposium on Fusion Technology, 2014/09/29, San Sebastian, Spain, F. Bouquey, A. Armitano, V. Bruno, M. de Baar, E. Corbel, D. Garnier, G. Giruzzi, M. Lennholm, X. Litaudon, R. Magne et al., Validation on Test Bed of the Tore Supra Electron Cyclotron Launcher Upgrade, Poster, P1.028*
6. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, C. Bourdelle, N. Fedorczak, A. Loarte, F. Militello, C. Maggi, G. Dif-Pradalier, X. Garbet, J. Citrin, L to H Mode Transition: Parametric Dependencies of the Temperature Threshold, Poster, TH/P4-10*
7. *19th Joint EU-US Transport Task Force Meeting (TTF 2014), 2014/09/08, Culham, UK, C. Bourdelle, P. Beyer, L. Chôné, J. Citrin, G. Dif-Pradalier, N. Fedorczak, G. Fuhr, X. Garbet, A. Loarte, C.F. Maggi et al., L to H mode transition: Parametric dependencies of the temperature threshold, Poster, P2.21*
8. *18th Joint Workshop on Electron Cyclotron Emission and Electron Cyclotron Resonance Heating (EC-18), 2014/04/22, Nara, Japan, H. van den Brand, M.R. de Baar, M. van Berkel, W.A. Bongers, N. Doelman, L. Giannone, W. Kasparek, J.K. Stober, E. Westerhof, ASDEX Upgrade team, Detection of MHD instabilities with ECE, Oral, ECE 3rd oral*
9. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, H. van den Brand, M.R. de Baar, M. van Berkel, W.A. Bongers, L. Giannone, W. Kasparek, Microwave detection of instabilities in fusion plasmas, Poster, A5*
10. *19th Joint EU-US Transport Task Force Meeting (TTF 2014), 2014/09/08, Culham, UK, J. Citrin, H. Arnichand, J. Bernardo, C. Bourdelle, X. Garbet, S. Hacquin, R. Sabot, Progress in understanding quasi-coherent modes through gyrokinetic simulation, Poster, P2.20*
11. *20th Topical Conference on High-Temperature Plasma Diagnostics (HTPD 2014), 2014/06/01, Atlanta, GA, USA, I. Classen, C.W. Domier, N.C. Luhmann, Jr., A.V. Bogomolov, W. Suttrop, J.E. Boom, B.J. Tobias, A.J.H. Donné, ASDEX Upgrade team, Dual Array 3D Electron Cyclotron Emission Imaging at ASDEX Upgrade, Poster, P2.2.18*
12. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, E. Delabie, C. Maggi, H. Meyer, T.M. Biewer, C. Bourdelle, M. Brix, I.S. Carvalho, M. Clever, P. Drewelow, N. Hawkes et al., Overview and Interpretation of L-H Threshold Experiments on JET with the ITER-like Wall, Poster, EX/P5-24*
13. *19th Joint EU-US Transport Task Force Meeting (TTF 2014), 2014/09/08, Culham, UK, E. Delabie, C.F. Maggi, H. Meyer, T.M. Biewer, C. Bourdelle, M. Brix, I. Carvalho, P. Drewelow, N.C. Hawkes, J. Hillesheim et al., L-H transitions on JET with the ITER-like Wall, Oral, O_2 .5*
14. *SOFT 2014 28th Symposium on Fusion Technology, 2014/09/29, San Sebastian, Spain, D. Dellasega, A. Pezzoli, V. Russo, A. Gallo, P. Zeijlmans van Emmichoven, M. Passoni, Amorphous tungsten oxide layers exposed to Magnum-PSI divertor-like plasma: retention, morphology and structural properties, Poster, P4.089*
15. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, F. Felici, B. Maljaars, P. Geelen, M.R. de Baar, M. Steinbuch, Real-time tokamak simulations for plasma state reconstruction with minimal diagnostics, Poster, A8*
16. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, L. Frassinetti, E. Joffrin, P. Tamain, P. Maget, S. Saarelma, J.E. Boom, J. Flanagan, C. Giroud, E. Delabie, M. Kempenaars et al., Effect of the divertor geometry on the pedestal confinement in JET-ILW, Poster, P1.030*
17. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, J. Garcia, J. Citrin, T. Görler, N. Hayashi, F. Jenko, P. Maget, P. Mantica, M. Pueschel, D. Told, C. Bourdelle et al., Core Microturbulence and Edge MHD Interplay and Stabilization by Fast Ions in Tokamak Confined Plasmas, Oral, TH/5-2*
18. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, B. Geiger, I. Classen, M. Garcia-Munoz, C. Hopf, P. Lauber, S.K. Nielsen, M. Reich, F. Ryter, P.A. Schneider, M. Schneller et al., Experimental Quantification of the Impact of Large and SmallScale Instabilities on Confined Fast Ions in ASDEX Upgrade, Poster, EX/P1-20*
19. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, S. Gerasimov, R. Albanese, M. Baruzzo, T. Hender, G. Rubinacci, M. Tsalas, F. Villone, L. Zakharov, JET Asymmetrical Disruptions, Poster, EX/P5-33*
20. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, C. Giroud, S. Jachmich, P. Jacquet, A. Järvinen, E. Lerche, F.G. Rimini, L. Aho-Mantila, I. Balboa, E. Delabie, G. van Rooij et al., Towards Baseline Operation Integrating ITER-Relevant Core and Edge Plasma within the Constraint of the ITER-like Wall at JET, Poster, EX/P5-25*

21. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, J. Hawke, R. Scannell, A. Kirk, Impact of resonant magnetic perturbations on the MAST pedestal, Poster, P5.042*
22. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, J. Hawke, R. Scannell, M. Maslov, J.B. Migozzi, JET-EFDA contributors, Correction of the Spectral Calibration of the JET Core LIDAR Thomson Scattering Diagnostic Using Ray Tracing, Poster, A11*
23. *SOFT 2014 28th Symposium on Fusion Technology, 2014/09/29, San Sebastian, Spain, C. Heemskerk, D. Ronden, B. Elzendoorn, G. Grossetti, J. Koning, J. van Oosterhout, Mapping ITER Port Plug maintenance workflow, Poster, P2.105*
24. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, J. Heres, J. Pratt, E. Westerhof, Nonlinear growth of tearing modes validating the generalized Rutherford equation, Poster, P2.045*
25. *Seminar CEA, Cadarache, France, 2014/11/05, Cadarache, France, G.M.D. Hogeweij, Impact of W on scenario simulations for ITER, Oral*
26. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, D. Hogeweij, V. Leonov, J. Schweinzer, A.C.C. Sips, C. Angioni, G. Calabro, R. Dux, A. Kallenbach, E. Lerche, C. Maggi et al., Impact of W on Scenario Simulations for ITER, Poster, EX/P3-17*
27. *JET TF-E1E2 Meeting, 2014/04/01, Culham, UK, G.M.D. Hogeweij, G. Calabro, A.C.C. Sips, C.F. Maggi, G.M. De Tommasi, E. Joffrin, A. Loarte, F. Maviglia, J. Mlynar, F.G. Rimini et al., ITER-like current ramps in JET with ILW: experiments, modelling and consequences for ITER, Oral*
28. *12th IOS-TG Meeting, 2014/03/31, Cambridge, USA, G.M.D. Hogeweij, V. Leonov, J. Schweinzer, A.C.C. Sips, C. Angioni, G. Calabro, R. Dux, A. Kallenbach, E. Lerche, C. Maggi et al., Impact of W on scenario simulations for ITER (include action- Update on modelling W in ITER scenarios), Oral*
29. *JET TF-E1E2 Meeting, 2014/02/25, Culham, UK, G.M.D. Hogeweij, V. Leonov, J. Schweinzer, A.C.C. Sips, C. Angioni, G. Calabro, R. Dux, A. Kallenbach, E. Lerche, C. Maggi et al., Interpretation of W evolution in JET and AUG and implications for ITER, Oral*
30. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, A. Huber, S. Brezinsek, G. Sergienko, M. Groth, P.C. de Vries, G. Arnoux, M.N.A. Beurskens, G. Calabro, M. Clever, H.G. Esser et al., Density Limit of H-mode plasmas on JET, Oral, O17*
31. *Theory of Fusion Plasmas Joint Varenna - Lausanne international workshop, 2014/09/01, Varenna, Italy, F. Jaulmes, E. Westerhof, Comparison of analytical estimates of TAE growth rate with results from kinetic simulations, Poster, P-11*
32. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, F. Jaulmes, S.D. Pinches, E. Westerhof, JET-EFDA contributors, Consequences of sawteeth on TAE activity in fusion plasmas, Poster, P1.020*
33. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, F. Jaulmes, E. Westerhof, B. Geiger, ASDEX Upgrade team, Consequences of the sawtooth reconnection on fast ions in the ASDEX Upgrade tokamak, Oral, O2*
34. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, F. Jenko, J. Citrin, T. Görler, D. Told, J. Abiteboul, A. Banon Navarro, C. Bourdelle, R. Bravenec, F.J. Casson, H. Doerk et al., Can Gyrokinetics Really Describe Transport in L-Mode Core Plasmas?, Poster, TH/P2-7*
35. *19th Joint EU-US Transport Task Force Meeting (TTF 2014), 2014/09/08, Culham, UK, A. Kappatou, R.M. McDermott, C. Angioni, T. Pütterich, E. Viezzer, M. Cavedon, R. Fischer, M. Willensdorfer, G. Tardini, ASDEX Upgrade team, Helium transport investigations in ASDEX Upgrade, Oral*
36. *18th Joint Workshop on Electron Cyclotron Emission and Electron Cyclotron Resonance Heating (EC-18), 2014/04/22, Nara, Japan, W. Kasparek, B. Plaum, C. Lechte, Z. Wu, H. Wang, M. Maraschek, J. Stober, D. Wagner, M. Schubert, G. Grünwald et al., Development of Resonant Diplexers for high-power ECRH - Status, Applications, Plans, Oral, Technology3 1st oral*
37. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, M. Lennholm, D. Frigione, J. Graves, P. Beaumont, T. Blackman, I.S. Carvalho, M. Tsalas, I. Chapman, R. Dumont, R. Felton et al., Real-Time Control of ELM and Sawtooth Frequencies:Similarities and Differences, Poster, EX/P5-30*
38. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, E. Lerche, M. Goniche, P. Jacquet, D. van Eester, V. Bobkov, M. Tsalas, I. Monakhov, C. Noble, T. Blackman, F. Rimini et al., ICRH for Mitigation of Core Impurity Accumulation in JET-ILW, Poster, EX/P5-22*
39. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, C.F. Maggi, H. Meyer, C. Bourdelle, E. Delabie, P. Drewelow, I.S. Carvalho, F. Rimini, P. Siren, JET-EFDA contributors, Role of low-Z impurities in L-H transitions in JET, Poster, P1.004*
40. *20th Topical Conference on High-Temperature Plasma Diagnostics (HTPD 2014), 2014/06/01, Atlanta, GA, USA, S. Menmuir, C. Giroud, T.M. Biewer, I.H. Coffey, E. Delabie, N.C. Hawkes, M. Sertoli, JET-EFDA contributors, Re-examination of charge exchange analysis in the JET-ILW environment, Poster, P3.2.08*

41. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, H. Meyer, E. Delabie, C.F. Maggi, C. Bourdelle, P. Drewelow, I. Carvalho, P. Lang, F. Rimini, JET-EFDA contributors, The role of divertor and SOL physics for access to H-mode on JET, Poster, P1.013*
42. *2014 Joint ICTP-IAEA Conference on Models and Data for Plasma-Material Interaction in Fusion Devices, 2014/11/03, Trieste, Italy, S. Numazawa, T.P.C. Klaver, B.J. Thijsse, Multi-time-scale modeling of helium-induced early fuzz formation on tungsten surfaces, Poster*
43. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, R. Sabot, H. Arnichand, S. Hacquin, A. Krämer-Flecken, X. Garbet, C. Bourdelle, J. Citrin, J. Giacalone, G. Hornung, C. Bottereau et al., Discriminating the Trapped Electron Mode Contribution in Density Fluctuation Spectra and Turbulent Transport, Poster, EX/P5-38*
44. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, A. Salmi, T. Tala, C. Bourdelle, P. Mantica, L. Meneses, S. Mordjick, H. Bufferand, M. Clever, J. Svensson, P. Tamain et al., Gas puff modulation experiments in JET L- and H-mode plasmas, Poster, P1.008*
45. *SOFT 2014 28th Symposium on Fusion Technology, 2014/09/29, San Sebastian, Spain, P. Schoen, J. Thomas, C. Heemskerk, H. Boessenkool, Measuring robustness of maintenance schedules in Fusion Remote Handling, Poster, P2.104*
46. *20th Topical Conference on High-Temperature Plasma Diagnostics (HTPD 2014), 2014/06/01, Atlanta, GA, USA, A.E. Shumack, J. Rzadkiewicz, M. Chernyshova, K. Jakubowska, M. Scholz, A. Byszuk, R. Cieszewski, T. Czarski, W. Dominik, L. Karpinski et al., X-Ray crystal spectrometer upgrade for tungsten measurements at JET, Poster, P3.2.12*
47. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, E.R. Solano, E.A. Autricque, I. Coffey, E. Delabie, E. de la Luna, P. Drewelow, E. Lerche, L. Frassinetti, M. Clever, I. Nunes et al., Effect of fuelling location on pedestal and ELMs in JET, Poster, P1.006*
48. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, P. Tamain, E. Joffrin, H. Bufferand, S. Brezinsek, M. Beurskens, G. Ciraolo, M. Clever, C. Giroud, R. Dejarnac, P. Drewelow et al., Investigation of the influence of divertor recycling on global plasma confinement in JET, Oral, O33*
49. *EU-NORM2 Symposium, 2014/06/17, Prague, Czech Republic, C.P. Tanzi, H.J. de Blank, NORM bulk and external radiation: a proof of the sum rule for point sources at site boundaries, Oral, Tuesday 14:30*
50. *20th Topical Conference on High-Temperature Plasma Diagnostics (HTPD 2014), 2014/06/01, Atlanta, GA, USA, B. Tobias, B.A. Grierson, C.M. Muscatello, X. Ren, C.W. Domier, N.C. Luhmann, Jr., S.E. Zemedkun, T.L. Munsat, I.G.J. Classen, Velocity-space representations of MHD modes and imaging diagnostic data, Poster, P2.2.32*
51. *SOFT 2014 28th Symposium on Fusion Technology, 2014/09/29, San Sebastian, Spain, M. Turnyanskiy, R. Albanese, C. Bachmann, S. Brezinsek, A.J.H. Donné, T. Eich, G. Falchetto, D. Kalupin, M. Mayoral, D. McDonald et al., A roadmap to the realization of fusion energy: mission for solution on heat-exhaust systems, Poster, P1.017*
52. *12th IOS-TG Meeting, 2014/03/31, Cambridge, USA, I. Voitsekhovitch, I. Ivanova-Stanik, R. Zagorski, F. Köchl, P. da Silva Aresta Belo, J. Citrin, E. Fable, J. Garcia, L. Garzotti, J. Hobirk et al., Integrated Core-SOL-Divertor Modelling for ITER Including Impurity- Effect of Tungsten on Fusion Performance in H-mode and Hybrid Scenario, Oral*
53. *18th Joint Workshop on Electron Cyclotron Emission and Electron Cyclotron Resonance Heating (EC-18), 2014/04/22, Nara, Japan, D. Wagner, W.A. Bongers, W. Kasparek, F. Leuterer, F. Monaco, M. Münich, H. Schütz, J. Stober, M. Thumm, H. van den Brand, A Multifrequency Notch Filter for Millimeter Wave Plasma Diagnostics Based on Photonic Bandgaps in Corrugated Circular Waveguides, Oral, Technology3 2nd oral*
54. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, T. Wauters, A. Lyssoivan, D. Douai, S. Brezinsek, E. Belonohy, T. Blackman, V. Bobkov, K. Crombe, E. Delabie, D. Aleksander et al., ICRF Discharge Production for Ion Cyclotron Wall Conditioningon JET, Poster, EX/P5-21*
55. *21th PSI Conference 2014, 2014/05/26, Kanazawa, Japan, T. Wauters, D. Douai, D. Kogut, A. Lyssoivan, S. Brezinsek, E. Belonohy, T. Blackman, V. Bobkov, K. Crombe, E. Delabie et al., Isotope Exchange by Ion Cyclotron Wall Conditioning on JET, Poster, P1-055*
56. *18th Joint Workshop on Electron Cyclotron Emission and Electron Cyclotron Resonance Heating (EC-18), 2014/04/22, Nara, Japan, E. Westerhof, J. Pratt, B. Ayten, Closure of the single fluid magnetohydrodynamic equations in presence of electron cyclotron current drive, Oral, Theory 4th oral*
57. *41th EPS Conference on Plasma Physics, 2014/06/23, Berlin, Germany, W. Weymiens, H.J. de Blank, G.M.D. Hogeweij, S. Paquay, Radially resolved bifurcation theory for L-H mode transition dynamics, Poster, P1.055*
58. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, W. Weymiens, S. Paquay, H.J. de Blank, G.M.D. Hogeweij, Radially resolved bifurcation theory for L-H mode transition dynamics, Poster, A4*
59. *Physics@FOM Veldhoven 2014, 2014/01/21, Veldhoven, Netherlands, W. Weymiens, H. de Blank, D. Hogeweij, S. Paquay, Bifurcation theory: L-H transition dynamics unraveled, Oral, PA17.08*

60. *25th Fusion Energy Conference (IAEA), 2014/10/13, Saint Petersburg, Russia, R. Zagorski, I. Voitsekhovitch, I. Ivanova-Stanik, F. Köchl, J. Citrin, E. Fable, J. Garcia, L. Garzotti, J. Hobirk, D. Hogeweij et al., Integrated Core-SOL-Divertor Modelling for ITER IncludingImpurity: Effect of Tungsten on Fusion Performance in H-Mode and Hybrid Scenario, Poster, TH/P3-45*

Public events: 12

1. *Symposium Nuclear Fusion Energy "Physicist's dream, engineer's nightmare?" at Technical University Eindhoven, 2014/10/30, Eindhoven, Netherlands, M.R. de Baar, Fusion research in NL*
2. *Lunch presentatie at Probusclub Bilthoven, 2014/09/09, Bilthoven, Netherlands, M.R. de Baar, Kernfusie*
3. *Seminar at IPP Greifswald, 2014/07/29, Greifswald, Germany, M.R. de Baar, Advanced sensors and models for control of nuclear fusion reactions*
4. *Seminar at IPP, FZ Jülich, 2014/06/18, Jülich, Germany, M.R. de Baar, Advanced sensors and models for control of nuclear fusion reactions*
5. *Seminar Scala College, 2014/11/27, Alphen Aan den Rijn, Netherlands, A.J.H. Donné, Fusion: energy from the stars brought to Earth*
6. *Rijksuniversiteit Gent, Department of Applied Physics, 2014/11/03, Gent, Belgium, A.J.H. Donné, Plasma diagnostics in view of ITER*
7. *Symposium Nuclear Fusion Energy "Physicist's dream, engineer's nightmare?" at Technical University Eindhoven, 2014/10/30, Eindhoven, Netherlands, A.J.H. Donné, Fusion Research in Europe*
8. *Seminar Haagse Hogeschool, 2014/09/22, Delft, Netherlands, A.J.H. Donné, Fusion: from science fiction to reality*
9. *Seminar Consorzio-RFX, 2014/08/29, Padova, Italy, A.J.H. Donné, EUROfusion and the Fusion Roadmap*
10. *Seminar at ENEA, 2014/08/28, Frascati, Italy, A.J.H. Donné, EUROfusion and the Fusion Roadmap*
11. *Seminar Ministerie van Onderwijs, Cultuur en Wetenschap (OCW), 2014/05/15, Den Haag, Netherlands, A.J.H. Donné, Challenges in fusion research with particular emphasis on the role of the Netherlands*
12. *Seminar Radboud University Nijmegen, 2014/02/06, Nijmegen, Netherlands, A.J.H. Donné, Harnessing the energy of the sun*

Media: 13

1. *Compacte kernfusie in de maak, Technisch Weekblad, 2014/10/31, Interview with: M.R. de Baar*
2. *ITER, de wondere wereld van kernfusie, Signalement, technology sector magazine, 2014/03/31, Interview with: M.R. de Baar*
3. *Calming fusion's stormy seas, www.lbl.gov, 2014/04/23, Interview with: J. Citrin*
4. *JET operations secured through 2018, Nuclear Engineering International, 2014/07/10, Interview with: A.J.H. Donné*
5. *Tony Donné over kernfusie in Europa, de Volkskrant, 2014/05/03, Interview with: A.J.H. Donné*
6. *TU/e hoogleraar hoofd Eurofusion, Eindhovens Dagblad, 2014/04/29, Interview with: A.J.H. Donné*
7. *Tony Donne appointed EUROfusion programme manager, Phys.org, 2014/04/29, Interview with: A.J.H. Donné*
8. *Nederlandse natuurkundige Tony Donné gaat Europees fusieonderzoek leiden, www.engineersonline.nl, 2014/04/28, Interview with: A.J.H. Donné*
9. *Heter dan de zon, Nederlands Tijdschrift voor Natuurkunde, 2014/03/01, Interview with: A.J.H. Donné, W. Weymiens, H. van den Brand*
10. *Een zonnetje op aarde, NRC Handelsblad, 2014/02/15, Interview with: A.J.H. Donné*
11. *Laserfusie geeft eindelijk energie, de Volkskrant, 2014/02/13, Interview with: A.J.H. Donné, M.R. de Baar*
12. *Kernfusie: voor het eerst opbrengst van energie, NRC Handelsblad, 2014/02/13, Interview with: A.J.H. Donné*
13. *Kernfusie-experiment levert voor het eerst energie op, www.nrc.nl, 2014/02/13, Interview with: A.J.H. Donné*

Solar fuels - sustainable energy storage

Awards: 1

1. *M.C.M. van de Sanden, AVS Plasma Prize 2014, 2014*

Bachelor theses: 2

1. *B. van Hemert, (Bachelor thesis Haagse Hogeschool, Den Haag) The Inductively Coupled Plasma Source, 2014, Mentor: W.A. Bongers*
2. *P. van Wanrooij, (Bachelor thesis Fontys Hogescholen, Eindhoven) Plasma impedance determination and optical spectroscopy, 2014, Mentor: W.A. Bongers, S. Welzel, M.F. Graswinckel*

Publications in peer-reviewed scientific journals: 14

1. *F.J.H. van Assche, S. Unnikrishnan, J.J. Michels, A.M.B. van Mol, P. van de Weijer, M.C.M. van de Sanden, M. Creatore, On the intrinsic moisture permeation rate of remote microwave plasma-deposited silicon nitride layers, Thin Solid Films 558 (2014) 54 - 61*
2. *A. Baldi, T.C. Narayan, A.L. Koh, J.A. Dionne, In situ detection of hydrogen-induced phase transitions in individual palladium nanocrystals, Nat. Mater. 13 (2014) 1143-1148*
3. *F. Brehmer, S. Welzel, M.C.M. van de Sanden, R. Engeln, CO and byproduct formation during CO_2 reduction in dielectric barrier discharges, J. Appl. Phys. 116 (2014) 123303*
4. *I. Dogan, S.L. Weeks, S. Agarwal, M.C.M. van de Sanden, Nucleation of silicon nanocrystals in a remote plasma without subsequent coagulation, J. Appl. Phys. 115 (2014) 244301*
5. *A.M. Fortunato, A. Princivalle, C. Capdeillayre, N. Petigny, C. Tardivat, C. Guizard, M.N. Tsampas, F.M. Sapountzi, P. Vernoux, Role of Lattice Oxygen in the Propane Combustion Over Pt/Yttria-Stabilized Zirconia : Isotopic Studies, Top. Catal. 57 (2014) 1277-1286*
6. *A.P.H. Goede, W.A. Bongers, M.F. Graswinckel, M.C.M. van de Sanden, M. Leins, J. Kopecki, A. Schulz, M. Walker, Production of solar fuels by CO_2 plasmolysis, EPJ Web Conf. 79 (2014) 01005*
7. *E. Obeid, M.N. Tsampas, S. Jonet, A. Boréave, L. Burel, M.C. Steil, G. Blanchard, K. Pajot, P. Vernoux, Isothermal catalytic oxidation of diesel soot on Yttria-stabilized Zirconia, Solid State Ionics 262 (2014) 253-256*
8. *Y.T. Pei, A.R. Eivani, T. Zaharia, A.V. Kazantzis, M.C.M. van de Sanden, J.T.M. De Hosson, High throughput deposition of hydrogenated amorphous carbon coatings on rubber with expanding thermal plasma, Surf. Coat. Tech. 245 (2014) 74 - 83*
9. *A. Perrotta, E.R.J. van Beekum, G. Aresta, A. Jagia, W. Keuning, M.C.M. van de Sanden, W.M.M. Kessels, M. Creatore, On the role of nanoporosity in controlling the performance of moisture permeation barrier layers, 188 (2014) 163 - 171*
10. *A. Scherrer, A. Evans, A.J. Santis-Alvarez, B. Jiang, J. Martynczuk, H. Galinski, M. Nabavi, M. Prestat, R. Tölke, A. Bieberle et al., A thermally self-sustained micro-power plant with integrated micro-solid oxide fuel cells, micro-reformer and functional micro-fluidic carrier, J. Power Sources 258 (2014) 434 - 440*
11. *I. Tanyeli, L. Marot, M.C.M. van de Sanden, G. De Temmerman, Nanostructuring of Iron Surfaces by Low-Energy Helium Ions, ACS Appl. Mater. Interfaces 6 (2014) 3462-3468*
12. *M.N. Tsampas, F.M. Sapountzi, A. Boréave, P. Vernoux, Investigation of the Electrochemical Promotion of Catalysis origins on electrochemical catalysts with oxygen ion conductive supports: Isotopic labeling mechanistic studies, Solid State Ionics 262 (2014) 257 - 261*
13. *J.W. Weber, A.A. Bol, M.C.M. van de Sanden, An improved thin film approximation to accurately determine the optical conductivity of graphene from infrared transmittance, Appl. Phys. Lett. 105 (2014) 013105*
14. *E. Zoethout, Influence of surface morphology on angular photo-electron spectroscopy measurements of nanometer thin overlayers, Surf. Interface Anal. 46 (2014) 1047–1050*

Publications in other journals and conference proceedings: 1

1. *M.C.M. van de Sanden, M. Dimitrova, C. Ghelev, VEIT 2014, Journal of Physics: Conference Series 514 (2014) 011001*

Book chapters: 1

1. *J. Röpcke, P.B. Davies, J.H. van Helden, M. Hübner, N. Lang, S. Welzel, Fundamental and Applied Studies of Molecular Plasmas Using Infrared Absorption Techniques, Complex Plasmas, Springer Series on Atomic, Optical, and Plasma Physics, Springer Switzerland, 2014, 235-266*

Invited lectures at conferences and meetings: 15

1. *E-MRS Fall Meeting 2014, 2014/09/15, Warsaw, Poland, A. Bieberle, Experiments, Modelling and Simulations of Electrochemical Interfaces: from Solid Oxide Fuel Cells to Solar Fuel Conversion, 14A*
2. *Seminar at Technical University Eindhoven, Applied Physics, Physics of Nanostructures, 2014/07/01, Eindhoven, Netherlands, A. Bieberle, Photoelectrochemical Solar Fuel Conversion at DIFFER*
3. *9th International Workshop "Strong Microwaves and Terahertz Waves: Sources and Applications" SMTW9, 2014/07/24, Nizhny Novgorod, Russia, W. Bongers, A.P.H. Goede, M.F. Graswinckel, S. Welzel, M. Leins, J. Kopecki, A. Schulz, M. Walker, M.C.M. van de Sanden, Developments in power efficient dissociation of CO_2 using non-equilibrium microwave plasma activation for solar fuels from sustainable energy, A15*
4. *TU Delft Faculteit Technologie, Bestuur en Management. Design of Systems in Energy and Industry, TBM Master course, 2014/12/15, Delft, Netherlands, A.P.H. Goede, CO_2 Neutral Fuels*
5. *Joint EPS-SIF International School on Energy 2014, 2014/07/16, Varenna, Italy, A.P.H. Goede, CO_2 Neutral Fuels*
6. *International Workshop on Energy Storage in the Grid: Low, Medium and Large Scale Requirements, 2014/01/08, Barcelona, Spain, A.P.H. Goede, W.A. Bongers, M.F. Graswinckel, M.C.M. van de Sanden, M. Leins, J. Kopecki, A. Schulz, M. Walker, Chemical Energy Storage by CO_2 Plasmolysis, Jan 9th 11:00*
7. *M2i Annual Conference, 2014/12/01, Sint Michielsgestel, Netherlands, M.C.M. van de Sanden, Materials challenges in energy production and storage, Keynote*
8. *Darcy center of Eindhoven University symposium Chemical Storage: A Key In The Future Energy System, 2014/11/27, Eindhoven, Netherlands, M.C.M. van de Sanden, Sustainable Energy Storage: The DIFFER Solar Fuels program*
9. *HTSM-Roadmapevent 2014 R&D for Societal Challenges, 2014/09/23, Den Bosch, Netherlands, M.C.M. van de Sanden, The production of CO_2 -neutral fuels: a High Tech Systems and Materials Challenge?*
10. *2014 International Symposium on Plasmas for Catalyses and Energy Materials (ISPCEM-2014), 2014/09/13, Tianjin, China, M.C.M. van de Sanden, CO_2 neutral fuels for energy storage: a plasma perspective*
11. *Royal Society conference Do we need a global project on artificial photosynthesis (solar fuels and chemicals)?, 2014/07/08, London, UK, M.C.M. van de Sanden, Energy storage in CO_2 Neutral Fuels*
12. *Annual event Strategic Area Energy Solar Plus, 2014/04/17, Eindhoven, Netherlands, M.C.M. van de Sanden, The potential of CO_2 -neutral fuels*
13. *Solvay Workshop on "Plasmas for Environmental Applications", 2014/03/31, Brussels, Belgium, M.C.M. van de Sanden, Energy storage in CO_2 Neutral Fuels*
14. *Outreach Symposium Institute for Complex Molecular Systems Eindhoven University of Technology, 2014/01/23, Eindhoven, Netherlands, M.C.M. van de Sanden, Nonequilibrium vibrational kinetics: new routes for energy efficient gas conversion*
15. *Innovationen in der Plasmatechnik - (20.) Jubiläumsworkshop des AK-ADP, 2014/05/22, Weimar, Germany, H.W. de Vries, Atmospheric Plasma: A Perspective for Energy Applications. Is there a role for DBD's?*

Other oral and poster presentations at (international) conferences and meetings: 57

1. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, D.C.M. van den Bekerom, G. Berden, A. Berthelot, R. Engeln, N. den Harder, T. Minea, M.C.M. van de Sanden, G.J. van Rooij, FTIR-measurement of rotationaland vibrational temperatures in a CO_2 microwave plasma, Poster, P3*
2. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, D.C.M. van den Bekerom, N. den Harder, M.C.M. van de Sanden, G.J. van Rooij, Implementation of an alkali metal seeder for plasma temperature control, Poster, A2*
3. *E-MRS Spring Meeting 2014, 2014/05/26, Lille, France, A. Bieberle, I. Tanyeli, R. Lavrijsen, Q. Ma, R. van de Kruijs, E. Zoethout, J. Kohlhepp, G. De Temmerman, M.C.M. van de Sanden, Thin Film Metal Oxide Photoelectrodes by Plasma Nanostructuring, Poster, Z.P9*
4. *AVS 61th Annual International Symposium and Exhibition, 2014/11/09, Baltimore, MD, USA, W.A. Bongers, A.P.H. Goede, M.F. Graswinckel, S. Welzel, M. Leins, J. Kopecki, A. Schulz, M. Walker, M.C.M. van de Sanden, Developments in Power Efficient Dissociation of CO_2 using Non-Equilibrium Plasma Activation, Poster, EN-TuP6*
5. *Solvay Workshop on Plasmas for environmental applications, 2014/03/31, Brussels, Belgium, W.A. Bongers, A.P.H. Goede, M.F. Graswinckel, S. Welzel, M. Leins, J. Kopecki, A. Schulz, M. Walker, M.C.M. van de Sanden, Developments in power efficient dissociation of CO_2 using non-equilibrium plasma activation, Poster*

6. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, T. Boumans, C. Douat, O. Guaitella, S. Ponduri, S. Welzel, R. Engeln, Effect of oxygen on the CO_2 to CO dissociation in a CO_2 /O_2 DBD, Poster, P4*
7. *ESCAMPIG Europhysics Conference on Atomic & Molecular Physics of Ionized Gases, 2014/07/15, Greifswald, Germany, F.K. Brehmer, S. Welzel, B.L.M. Klarenaar, M.C.M. van de Sanden, R. Engeln, Spectroscopic studies on CO_2 dissociation in dielectric barrier discharges, Poster, P3-05-02*
8. *Physics@FOM Veldhoven 2014, 2014/01/21, Veldhoven, Netherlands, F. Brehmer, S. Welzel, B. Klarenaar, M.C.M. van de Sanden, R. Engeln, Excitation mechanisms in dielectric barrier discharges operating on CO_2 studied by time-resolved in-situ diagnostics, Oral, PA17.02*
9. *AVS 61th Annual International Symposium and Exhibition, 2014/11/09, Baltimore, MD, USA, I. Dogan, R. Gresback, T. Nozaki, M.C.M. van de Sanden, Raman Spectroscopy as Diagnostics for Size Distribution and Surface Chemistry of Remote Plasma Synthesized Silicon Nanocrystals, Oral, PS-ThA1*
10. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, C. Douat, O. Guaitella, S. Ponduri, T. Boumans, S. Welzel, R. Engeln, Study of the influence of the gas mixture on the CO density in a DBD, Oral, O18*
11. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, F.M. Elam, S.A. Starostin, J.B. Bouwstra, M.C.M. van de Sanden, H.W. de Vries, Atmospheric pressure dielectric barrier discharge assisted-PECVD synthesised silica-like thin films: A polarised ATRFTIR study of thin film morphology, Poster, P6*
12. *67th Annual Gaseous Electronics Conference (Bulletin Vol.59, no.17), 2014/11/02, Raleigh, NC, USA, R. Engeln, F. Brehmer, S. Welzel, B.L.M. Klarenaar, M.C.M. van de Sanden, Plasma activated dissociation of CO_2 studied in a dielectric barrier discharge, Oral, CT3.00003*
13. *SET Plan Conference 2014 (7th Conference of the European Strategic Energy Technology Plan), 2014/12/10, Rome, Italy, A.P.H. Goede, W.A. Bongers, M.F. Graswinckel, J. Kopecki, M. Leins, A. Schulz, M. Walker, M.C.M. van de Sanden, Chemical Energy Storage based on CO_2 Plasmolysis, Poster*
14. *E-MRS Spring Meeting 2014, Workshop R&D on CO_2 Utilisation in Europe, 2014/05/26, Lille, France, A.P.H. Goede, W.A. Bongers, M.F. Graswinckel, M.C.M. van de Sanden, M. Leins, J. Kopecki, A. Schulz, M. Walker, Win2Gas, Oral*
15. *Solvay Workshop on Plasmas for environmental applications, 2014/03/31, Brussels, Belgium, A.P.H. Goede, W.A. Bongers, M.F. Graswinckel, J. Kopecki, M. Leins, A. Schulz, M. Walker, M.C.M. van de Sanden, Chemical Energy Storage based on CO_2 Plasmolysis, Oral*
16. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, A.P.H. Goede, W.A. Bongers, M.F. Graswinckel, M.C.M. van de Sanden, M. Leins, J. Kopecki, A. Schulz, M. Walker, Chemical Energy Storage based on CO_2 Plasmolysis, Poster, A22*
17. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, P.W.C. Groen, W.A. Bongers, J. van Dijk, M.F. Graswinckel, K.S.C. Peerenboom, M.C.M. van de Sanden, G.M.W. Kroesen, Modelling of the DIFFER plasma reactor for CO_2 dissociationwith Plasimo, Poster, P7*
18. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, N. den Harder, D.C.M. van den Bekerom, G.J. van Rooij, Laser Scattering on a Solar Fuels Microwave Discharge, Poster, A10*
19. *Laser Applications to Chemical, Security and Environmental Analysis (LACSEA), 2014/07/13, Seattle, WA, USA, J.H. van Helden, P.B. Davies, M. Hübner, N. Lang, A. Rousseau, S. Welzel, J. Röpcke, On Recent Progress Applying Quantum Cascade Lasers in Plasma Diagnostics, Oral, LW1D.2*
20. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, B.L.M. Klarenaar, F. Brehmer, S. Welzel, H.J. van der Meiden, M.C.M. van de Sanden, R. Engeln, Rotational Raman scattering on CO_2 at elevated pressure in DBDs, Poster, P14*
21. *6th International Workshop on Plasma Spectroscopy (IPS 2014), 2014/06/15, Hoboken, NJ, USA, B.L.M. Klarenaar, F. Brehmer, S. Welzel, H.J. van der Meiden, M.C.M. van de Sanden, R. Engeln, Rotational Raman scattering on CO_2 at elevated pressure in DBDs, Poster*
22. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, B.L.M. Klarenaar, F. Brehmer, S. Welzel, H.J. van der Meiden, M.C.M. van de Sanden, R. Engeln, Rotational Raman scattering in atmospheric pressure DBDs in CO_2 , Oral, O4*

23. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, Y. Liu, S.A. Starostin, S. Welzel, H. de Vries, M.C.M. van de Sanden, J.B. Bouwstra, Spatio-temporal discharge behaviour of high-current DBDs in a roll-to-roll configuration under atmospheric pressure PECVD conditions, Poster, P11*
24. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, A. Meshkova, S.A. Starostin, B.C.A.M. van der Velden, S. Quan, M.C.M. van de Sanden, H.W. de Vries, The surface dynamic evolution of SiO_2-like films grown by AP-PECVD on polymeric substrate, Poster, P12*
25. *AVS 61th Annual International Symposium and Exhibition, 2014/11/09, Baltimore, MD, USA, F.J.J. Peeters, R.F. Rumphorst, M.C.M. van de Sanden, Dielectric Barrier Discharges: Statistical Analysis of Discrete Filaments and Multi-filament Dynamics, Oral, PS2-FrM10*
26. *ESCAMPIG Europhysics Conference on Atomic & Molecular Physics of Ionized Gases, 2014/07/15, Greifswald, Germany, C.D. Pintassilgo, S. Welzel, Time-dependent coupled kinetics and gas heating in N2-NO pulsed discharges, Poster, P2-06-02*
27. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, S. Ponduri, O. Guaitella, C. Douat, M.C.M. van de Sanden, R. Engeln, Characterization of electrical filaments in a CO_2 dielectricbarrier discharge, Poster, P17*
28. *67th Annual Gaseous Electronics Conference (Bulletin Vol.59, no.17), 2014/11/02, Raleigh, NC, USA, S. Ponduri, M.M. Becker, D. Loffhagen, S. Welzel, M.C.M. van de Sanden, R. Engeln, Modeling of vibrational kinetics in CO_2 dielectric barrier discharges, Oral, HW1.00004*
29. *ESCAMPIG Europhysics Conference on Atomic & Molecular Physics of Ionized Gases, 2014/07/15, Greifswald, Germany, S. Ponduri, M.M. Becker, D. Loffhagen, S. Welzel, M.C.M. van de Sanden, R. Engeln, Fluid modelling of CO_2 dielectric barrier discharge for solar fuels, Poster, P2-06-06*
30. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, S. Ponduri, M.M. Becker, D. Loffhagen, S. Welzel, M.C.M. van de Sanden, R. Engeln, Fluid modelling of CO_2 dielectric barrier discharge for solar fuels, Poster, B19*
31. *Annual event Strategic Area Energy Solar Plus Workshop, 2014/04/17, Eindhoven, Netherlands, G.J. van Rooij, Solar fuels synthesis by efficient plasma conversion, Oral*
32. *ESCAMPIG Europhysics Conference on Atomic & Molecular Physics of Ionized Gases, 2014/07/15, Greifswald, Germany, J. Röpcke, P.B. Davies, J.H. van Helden, M. Hübner, N. Lang, A. Rousseau, S. Welzel, On recent progress applying quantum cascade lasers in plasma diagnostics, Oral, GL4*
33. *Solvay Workshop on Plasmas for environmental applications, 2014/03/31, Brussels, Belgium, J. Röpcke, P.B. Davies, J.H. van Helden, M. Hübner, N. Lang, A. Rousseau, S. Welzel, On recent progress in studying chemical phenomena and surface interactions in plasmas using infrared absorption techniques, Poster*
34. *7th International Conference on Plasma Nano Technology and Science (IC-PLANTS 2014), 2014/03/02, Nagoya, Japan, J. Röpcke, P.B. Davies, J.H. van Helden, M. Hübner, N. Lang, A. Rousseau, S. Welzel, On recent progress in studying chemical phenomena and surface interactions in plasmas using infrared absorption techniques, Poster*
35. *20 Years of Quantum Cascade Laser Anniversary Workshop, ETH, 2014/01/16, Zurich, Switzerland, J. Röpcke, P.B. Davies, J.H. van Helden, N. Lang, M. Hübner, A. Rousseau, S. Welzel, Applying Quantum Cascade Laser Spectroscopy In Plasma Diagnostics, Poster*
36. *Annual event Strategic Area Energy Solar Plus Workshop, 2014/04/17, Eindhoven, Netherlands, M.C.M. van de Sanden, Introduction - The scientific challenges for solar fuels, Oral*
37. *AVS 61th Annual International Symposium and Exhibition, 2014/11/09, Baltimore, MD, USA, S.A. Starostin, B.C.A.M. van der Velden, S. Quan, A. Meshkova, M.C.M. van de Sanden, H.W. de Vries, Mechanisms of Moisture and Oxygen Transport through Thin Silica-like Barrier Films Deposited in Atmospheric Pressure Dielectric Barrier Discharge, Oral, TF-ThA10*
38. *Hakone XIV 14th International Symposium on High Pressure Low Temperature Plasma Chemistry, 2014/09/21, Zinnowitz, Germany, S.A. Starostin, S. Welzel, J.B. Bouwstra, M.C.M. van de Sanden, H. de Vries, Atmospheric Pressure High Current Dielectric Barrier Discharge between Cylindrical Electrodes for Roll-to-roll Deposition of Silica-like Gas Diffusion Barrier Films, Oral*
39. *PSE 2014 14th International Conference on Plasma Surface Engineering, 2014/09/15, Garmisch Partenkirchen, Germany, S.A. Starostin, J.B. Bouwstra, M. Creatore, M.C.M. van de Sanden, H. de Vries, Water vapor permeation properties of all SiO¬2 bi-layer films deposited in atmospheric pressure high current dielectric barrier discharge, Poster*
40. *PSE 2014 14th International Conference on Plasma Surface Engineering, 2014/09/15, Garmisch Partenkirchen, Germany, S.A. Starostin, S. Welzel, Y. Liu, M.C.M. van de Sanden, J.B. Bouwstra, H. de Vries, Formation and temporal evolution of the atmospheric pressure high current diffuse dielectric barrier discharge between cylindrical electrodes in PECVD rector, Oral, OR1902*

41. *ESCAMPIG Europhysics Conference on Atomic & Molecular Physics of Ionized Gases, 2014/07/15, Greifswald, Germany, S.A. Starostin, S. Welzel, J.B. Bouwstra, M.C.M. van de Sanden, H.W. de Vries, Thermometry of the atmospheric pressure high current dielectric barrier discharge in a cylindrical electrode geometry, Poster, P3-10-01*
42. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, S.A. Starostin, S. Welzel, J.B. Bouwstra, M.C.M. van de Sanden, H. de Vries, Formation and dynamics of the atmospheric pressure high current diffuse dielectric barrier discharge between cylindrical electrodes in PECVD reactor, Poster, B6*
43. *AVS 61th Annual International Symposium and Exhibition, 2014/11/09, Baltimore, MD, USA, I. Tanyeli, L. Marot, M.C.M. van de Sanden, G. De Temmerman, Nanostructuring of Metal Surfaces by Low Energy He Ions, Oral, PS-ThA9*
44. *26th Symposium Plasma Physics and Radiation Technology, 2014/03/11, Lunteren, The Netherlands, I. Tanyeli, L. Marot, M.C.M. van de Sanden, G.C. De Temmerman, Nanostructuring of metal surfaces by high fluxes of low energy He ionirradiation, Oral, O10*
45. *Physics@FOM Veldhoven 2014, 2014/01/21, Veldhoven, Netherlands, I. Tanyeli, L. Marot, R. van de Krol, M. De Respinis, M.C.M. van de Sanden, G. De Temmerman, Nanostructuring of metal surfaces by high fluxes of low energy He ion irradiation, Oral, PA17.06*
46. *Physics@FOM Veldhoven 2014, 2014/01/21, Veldhoven, Netherlands, H. de Vries, S. Welzel, S.A. Starostin, M. Creatore, M.C.M. van de Sanden, Challenges in atmospheric pressure plasma synthesized thin silica films on polymer substrates, Poster, P05.13*
47. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, S. Welzel, CO_2 -to-CO conversion in vortex-stabilised microwave plasmas, Oral, O17*
48. *17th Workshop on the Exploration of Low-Temperature Plasma Physics (WELTPP-17), 2014/11/20, Kerkrade, The Netherlands, S. Welzel, O. Guaitella, F. Brehmer, R. Engeln, M.C.M. van de Sanden, Role of surface processes in CO_2 containing DBDs, Poster, P24*
49. *AVS 61th Annual International Symposium and Exhibition, 2014/11/09, Baltimore, MD, USA, S. Welzel, F. Brehmer, B.L.M. Klarenaar, M.C.M. van de Sanden, R. Engeln, In Situ Diagnostic Studies of CO_2 containing Dielectric Barrier Discharges, Oral, PS+SE-ThA6*
50. *67th Annual Gaseous Electronics Conference (Bulletin Vol.59, no.17), 2014/11/02, Raleigh, NC, USA, S. Welzel, W.A. Bongers, M.F. Graswinckel, M.C.M. van de Sanden, CO_2 dissociation in vortex-stabilised microwave plasmas, Oral, SF2.00006*
51. *GRC Plasma Processing Science, 2014/07/27, Smithfield, RI, USA, S. Welzel, F. Brehmer, B.L.M. Klarenaar, M.C.M. van de Sanden, R. Engeln, In-situ diagnostics applied to dielectric barrier discharges containing CO_2 , Poster*
52. *ESCAMPIG Europhysics Conference on Atomic & Molecular Physics of Ionized Gases, 2014/07/15, Greifswald, Germany, S. Welzel, S.A. Starostin, H.W. de Vries, J.B. Bouwstra, R. Engeln, M.C.M. van de Sanden, Polydiagnostic Characterisation of High-Current DBDs Used for Plasma-Enhanced CVD of SiO_2 Thin Films, Poster, P3-05-01*
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