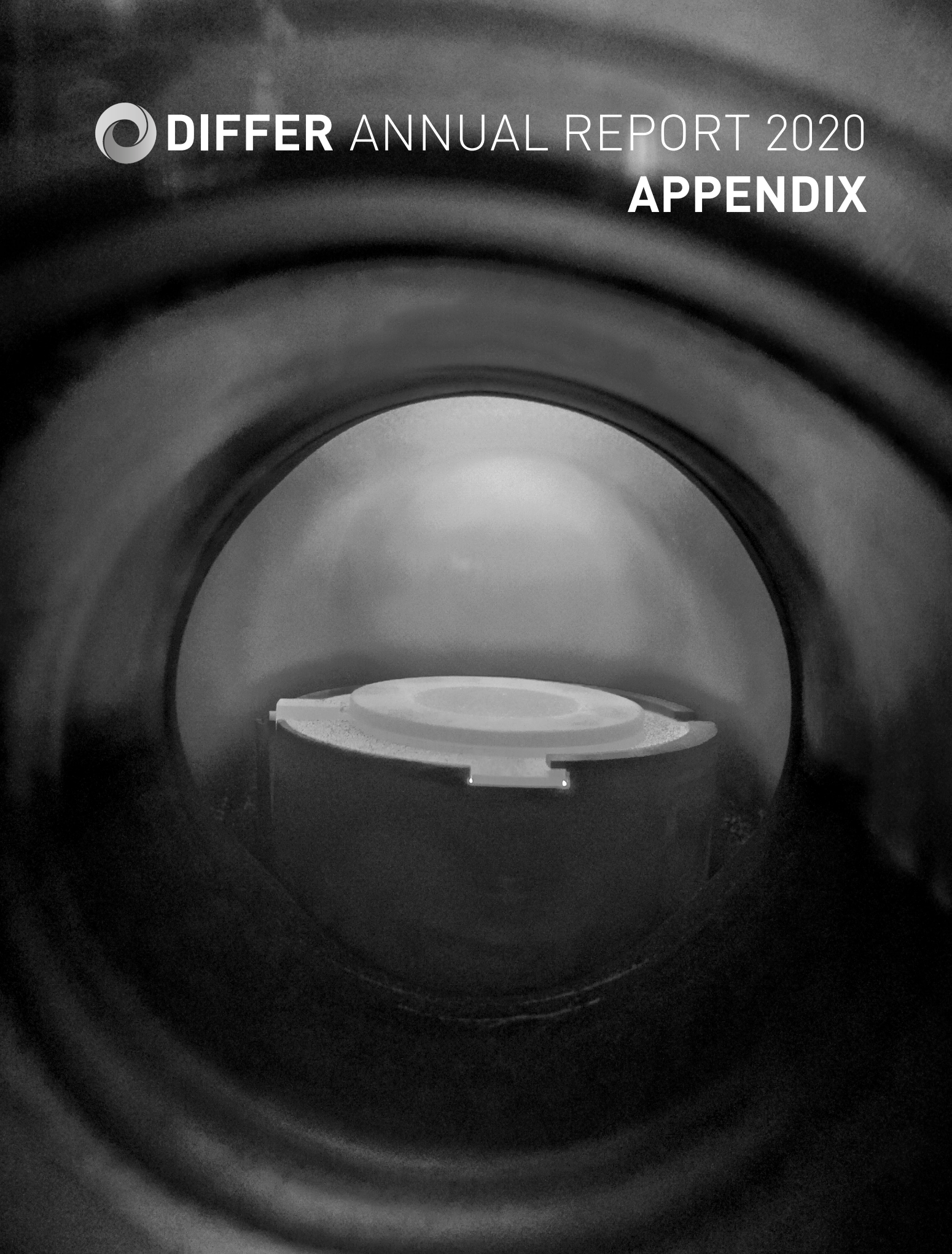
DIFFER ANNUAL REPORT 2020
APPENDIX



APPENDIX

This appendix to the DIFFER annual report 2020 lists the scientific output at DIFFER.
The annual report and appendices can be found at www.differ.nl/about-us/annual-reports

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2. *Marco de Baar nieuwe directeur DIFFER, Technisch Weekblad, 2020/05/28, General coverage*
3. *Marco de Baar nieuwe directeur DIFFER, TU/e Cursor, 2020/05/27, Interview with Marco de Baar*
4. *Werkbezoek GroenLinks aan DIFFER, Drimble.nl, 2020/02/12, Interview with Richard. van de Sanden*

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1. ITER: Chemie uitgeschakeld, *C2W, 2020/12/03, Interview with I. Classen, T. Morgan*
2. "Ik besefte dat mijn onderzoek meerwaarde heeft", *Elsevier Weekblad, 2020/12/01, Interview with T. Wijkamp*
3. Inside JET: The world's biggest nuclear fusion experiment *(Video interview), Wired UK, 2020/11/18, Interview with T. Donné*
4. 'Almost every publication I write causes hassle', *NWO Onderzoek, Edition #5 autumn 2020, Interview with M. van Berkel*
5. Wanneer halen we eindelijk stroom uit het samensmelten van atomen?, *New Scientist NL, 2020/09/24, General coverage*
6. Kernfusie: de eeuwige belofte, *De Ingenieur, 2020/09/22, Interview with T. Morgan*
7. De moeilijkste 3D-puzzel ter wereld, *LabTechnology.nl, 2020/09/21, General coverage*
8. Beeld-highlight: start van de bouw van de ITER-tokamak, *KIJK Magazine, 2020/09/05, General coverage*
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11. Bouw van ITER-kernfusiereactor in Franse Cadarache gaat van start, *Tweakers.net, 2020/07/29, General coverage*
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16. Kernfusie in de maak, *De Morgen, 2020/07/28, General coverage*
17. Bouw miljarden kostende testreactor voor kernfusie van start, *de Volkskrant, 2020/07/28, Interview with M. de Baar*
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21. Wall Material for Fusion Reactor Survives Hellish Conditions, *EUROfusion, 2020/04/28, Interview with T. Morgan*

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1. *P. Horn, Inclusion of physics constraints in neural network surrogate models for fusion simulation, Master thesis Eindhoven University of Technology, 2020, Mentor: K.L. van de Plassche, J. Citrin*
2. *J.T. Lammers, Towards control-oriented modeling, estimation, and iterative learning control for tokamak start-up, Master thesis Eindhoven University of Technology, 2020, Mentor: T. Ravensbergen, M.R. de Baar*

3. *R.W.H. Hutschemakers, Determination of the rotational velocity profiles in Magnum-PSI using a spectrometer for improvement of B2.5-Eunomia, Master thesis Eindhoven University of Technology, 2020, Mentor: J. van den Berg, G.J. van Rooij*
4. *J. de Vries, Uncertainty propagation from noisy parameters in the cylindrical heat equation, Master internship report Eindhoven University of Technology, 2020, Mentor: M. van Berkel, M.R. de Baar*
5. *B.J.J. Kremers, Neural network training data optimization for turbulence modelling, Master thesis Eindhoven University of Technology, 2020, Mentor: A. Ho, J. Citrin*
6. *J. Koenders, Towards model-based control of divertor detachment. Control-oriented modelling and dynamical analysis on TCV, Master thesis Eindhoven University of Technology, 2020, Mentor: T. Ravensbergen, M. van Berkel, M.R. de Baar*
7. *T.A. Wijkamp, Synchrotron radiation detection and 2D emissivity profile reconstruction in TCV: exploring the power of multispectral imaging systems in runaway electron studies, Master thesis Eindhoven University of Technology, 2020, Mentor: A. Perek*
8. *J.T.S. Beune, Influence of hydrogen and helium plasma on the recrystallization kinetics of tungsten, Master thesis Eindhoven University of Technology, 2020, Mentor: T.W. Morgan, Y. Li*
9. *P.L. Joostens, Mapping the topology of the warm plasma dispersion relation to allow for speed-up using neural network substitution, Master thesis Eindhoven University of Technology, 2020, Mentor: E. Westerhof*
10. *J.R. Cuperus, Experiments on redeposition and gross erosion in Magnum-PSI, Master thesis Eindhoven University of Technology, 2020, Mentor: T.W. Morgan*

Publications in peer-reviewed scientific journals: 45

1. *M. Balden, S. Elgeti, T.W. Morgan, S. Brezinsek, G. De Temmerman, Scanning electron microscopy analyses of an ITER plasma-facing unit mockup exposed to extreme ion fluences in Magnum-PSI, Phys. Scr. 95 (2020) 014026*
2. *M. van Berkel, R.J.R. van Kampen, G. Vandersteen, T. Kobayashi, T. Ravensbergen, H. Igami, J.T. Lammers, G. Oosterwegel, C. Galperti, F. Felici, Correcting for non-periodic behaviour in perturbative experiments: application to heat pulse propagation and modulated gas-puff experiments, Plasma Phys. Control. Fusion 62 (2020) 094001*
3. *F.J. Casson, H. Patten, C. Bourdelle, S. Breton, J. Citrin, F. Koechl, M. Sertoli, C. Angioni, Y. Baranov, R. Bilato, Predictive multi-channel flux-driven modelling to optimise ICRH tungsten control and fusion performance in JET, Nucl. Fusion 60 (2020) 066029*
4. *Y. Li, T.W. Morgan, D. Terentyev, S. Ryelandt, A. Favache, S. Wang, M. Wirtz, J.P.M. Hoefnagels, J.A.W. van Dommelen, G. De Temmerman, Three mechanisms of hydrogen-induced dislocation pinning in tungsten, Nucl. Fusion 60 (2020) 086015*
5. *T. Ravensbergen, M. van Berkel, S.A. Silburn, J.R. Harrison, A. Perek, K. Verhaegh, W.A.J. Vijvers, C. Theiler, A. Kirk, M.R. de Baar, Development of a real-time algorithm for detection of the divertor detachment radiation front using multi-spectral imaging, Nucl. Fusion 60 (2020) 066017*
6. *M. Yajima, S. Kajita, N. Ohno, S. Masuzaki, N. Yoshida, D.U.B. Aussems, T.W. Morgan, K. Bystrov, H.J. van der Meiden, Dust formation from arc spots on nanostructured tungsten surface, Plasma Fusion Res. 15 (2020) 1205061*
7. *M.J. Pueschel, D.R. Hatch, M. Kotschenreuther, A. Ishizawa, G. Merlo, Multi-scale interactions of microtearing turbulence in the tokamak pedestal, Nucl. Fusion 60 (2020) 124005*
8. *W.Q. Chen, X . Y. Wang, Y.L. Chiu, T.W. Morgan, W.G. Guo, K.L. Li, Y. Yuan, B. Xu, W. Liu, Growth mechanism of subsurface hydrogen cavities in tungsten exposed to low-energy high-flux hydrogen plasma, Acta Mater. 193 (2020) 19-27*
9. *W.Q. Chen, X . Y. Wang, K.L. Li, Y.N. Wang, T.W. Morgan, B. Xu, Y.L. Chiu, W. Liu, Nucleation mechanism of intra-granular blisters in tungsten exposed to hydrogen plasma, Scr. Mater. 187 (2020) 243-249*
10. *Z. Chen, Y. Li, Y.Y. Lian, F. Feng, J.B. Wang, Y. Tan, T.W. Morgan, L.Z. Cai, X. Liu, M. Xu, Response of yttria dispersion strengthened tungsten simultaneously exposed to steady-state and transient hydrogen plasma, Nucl. Fusion 60 (2020) 046020*

11. *P. Diomede, S. Longo, Effect of gas temperature on CO_2+ ion transport in CO_2, Plasma Sources Sci. Technol. 29 (2020) 045010*
12. *J. Fu, J. van Slingerland, J.C. Brouwer, V. Bliznuk, I.M. Richardson, M.J.M. Hermans, Applicability study of pulsed laser beam welding on ferritic-martensitic ODS eurofer steel, Met. 10 (2020) 736*
13. *S.C. Jardin, I. Krebs, N.M. Ferraro, A new explanation of the sawtooth phenomena in tokamaks, Phys. Plasmas 27 (2020) 032509*
14. *S. Kajita, G.R.A. Akkermans, K. Fujii, H.J. van der Meiden, M.C.M. van de Sanden, Emission spectroscopy of He lines in high-density plasmas in Magnum-PSI, AIP Adv. 10 (2020) 025225*
15. *R. Kembleton, A.W. Morris, G. Federici, A.J.H. Donné, Design issues for fusion commercialization, IEEE Trans. Plasma Sci. 48 (2020) 1703-1707*
16. *M. Kong, O. Sauter, F. Felici, G.M.D. Hogeweij, A. Merle, S. Nowak, TCV team, On the triggerless onset of 2/1 neoclassical tearing modes in TCV, Nucl. Fusion 60 (2020) 026002*
17. *I. Krebs, F.J. Artola, C.R. Sovinec, S.C. Jardin, K.J. Bunkers, M. Hoelzl, N.M. Ferraro, Axisymmetric simulations of vertical displacement events in tokamaks: A benchmark of M3D-C1, NIMROD and JOREK, Phys. Plasmas 27 (2020) 022505*
18. *Y. Li, T.W. Morgan, J.A.W. van Dommelen, S. Antusch, M. Rieth, J.P.M. Hoefnagels, D. Terentyev, G. De Temmerman, K. Verbeken, M.G.D. Geers, Fracture behavior of tungsten-based composites exposed to steady-state/transient hydrogen, Nucl. Fusion 60 (2020) 046029*
19. *K.L. Li, Y. Li, W.Q. Chen, C. Zhao, Y. Yuan, L. Cheng, T.W. Morgan, W. Liu, Z.J. Shen, Effect of Ta addition on the fuzz formation of additively manufactured W based materials, Nucl. Fusion 60 (2020) 064004*
20. *A. Litnovsky, J. Schmitz, F. Klein, K. De Lannoye, S. Weckauf, A. Kreter, M. Rasinski, J.W. Coenen, C. Linsmeier, T.W. Morgan, Smart tungsten-based alloys for a first wall of DEMO, Fusion Eng. Des. 159 (2020) 111742*
21. *P. Mantica, C. Angioni, N. Bonanomi, J. Citrin, B.A. Grierson, F. Köchl, A. Mariani, G.M. Staebler, JET Contributors, EUROfusion MST1 Team, Progress and challenges in understanding core transport in tokamaks in support to ITER operations, Plasma Phys. Control. Fusion 62 (2020) 014021*
22. *M. Marin, J. Citrin, C. Bourdelle, Y. Camenen, F.J. Casson, A. Ho, F. Koechl, M. Maslov, JET Contributors, First-principles-based multiple-isotope particle transport modelling at JET, Nucl. Fusion 60 (2020) 046007*
23. *J. Miskovicova, M. Angus, H.J. van der Meiden, P. Veis, Selection of molybdenum lines by quantitative analysis of molybdenum-zirconium-titanium alloy by CF-LIBS for future fusion applications, Fusion Eng. Des. 153 (2020) 111488*
24. *T.W. Morgan, M. Balden, T. Schwartz-Selinger, Y. Li, T. Loewenhoff, M. Wirtz, S. Brezinsek, G. De Temmerman, ITER monoblock performance under lifetime loading conditions in Magnum-PSI, Phys. Scr. 95 (2020) 014065*
25. *Y.S. Na, Y.H. Lee, C.S. Byun, S.K. Kim, C.Y. Lee, M.S. Park, S.M. Yang, B. Kim, Y.M. Jeon, J. Citrin, On hybrid scenarios in KSTAR, Nucl. Fusion 60 (2020) 086006*
26. *C. Onwudinanti, G. Brocks, J.M.V.A. Koelman, T.W. Morgan, S.X. Tao, Hydrogen diffusion out of ruthenium - an ab initio study of the role of adsorbates, Phys. Chem. Chem. Phys. 22 (2020) 7935-7941*
27. *W. Ou, R.S. Al, J.W.M. Vernimmen, S. Brons, P. Rindt, T.W. Morgan, Deuterium retention in Sn-filled samples exposed to fusion-relevant flux plasmas, Nucl. Fusion 60 (2020) 026008*
28. *K.L. van de Plassche, J. Citrin, C. Bourdelle, Y. Camenen, F.J. Casson, V.I. Dagnelie, F. Felici, A. Ho, S. Van Mulders, Fast modelling of turbulent transport in fusion plasmas using neural networks, Phys. Plasmas 27 (2020) 022310*
29. *N. Vianello, D. Carralero, C.K. Tsui, V. Naulin, M. Agostini, I. Cziegler, B. Labit, C. Theiler, E. Wolfrum, T. Ravensbergen, Scrape-off layer transport and filament characteristics in high-density tokamak regimes, Nucl. Fusion 60 (2020) 016001*
30. *P. Viegas, A. Bourdon, Numerical study of Jet-target interaction: influence of dielectric permittivity on the electric field experienced by the target, Plasma Chem. Plasma Process. 40 (2020) 661–683*
31. *X. Yang, P. Manas, C. Bourdelle, J.F. Artaud, R. Sabot, Y. Camenen, J. Citrin, F. Clairet, C. Desgrange, P. Devynck, Core tungsten transport in WEST long pulse L-mode plasmas, Nucl. Fusion 60 (2020) 086012*
32. *M. Hoppe, G. Papp, T. Wijkamp, A. Perek, J. Decker, B. Duval, O. Embreus, T. Fülöp, U. Sheikh, TCV team, Runaway electron synchrotron radiation in a vertically translated plasma, Nucl. Fusion 60 (2020) 094002*

33. *L.Z. Cai, X.X. Zeng, M. Liu, J.B. Wang, J.P. Song, B . Y. Yan, Z. Chen, X. Huang, Y. Li, T.W. Morgan, Preliminary development of a conceptual first wall for DEMO, Nucl. Fusion 60 (2020) 096015*
34. *M.J. Pueschel, R.D. Sydora, P.W. Terry, B. Tyburska-Pueschel, M. Francisquez, F. Jenko, B. Zhu, Pair plasma instability in homogeneous magnetic guide fields, Phys. Plasmas 27 (2020) 102111*
35. *H. Weisen, C.F. Maggi, M. Oberparleiter, F.J. Casson, Y. Camenen, S. Menmuir, L. Horvath, F. Auriemma, T. Bache, M. Marin, Isotope dependence of energy, momentum and particle confinement in tokamaks, J. Plasma Phys. 86 (2020) 905860501*
36. *S. Pamela, A. Bhole, G.T.A. Huijsmans, B. Nkonga, M. Hoelzl, I. Krebs, E. Strumberger, JET Contributors, Extended full-MHD simulation of non-linear instabilities in Tokamak plasmas, Phys. Plasmas 27 (2020) 102510*
37. *J.E. Rice, J. Citrin, N.M. Cao, P.H. Diamond, M.J. Greenwald, B.A. Grierson, Understanding LOC/SOC phenomenology in tokamaks, Nucl. Fusion 60 (2020) 105001*
38. *L. Vialetto, P. Viegas, S. Longo, P. Diomede, Benchmarking of Monte Carlo flux simulations of electrons in CO_2, plasma sources Sci. Technol. 29 (2020) 115006*
39. *H. Tanaka, Y. Hayashi, S. Kajita, H.J. van der Meiden, M. Yoshikawa, J.W.M. Vernimmen, J. Scholten, I. Classen, T.W. Morgan, N. Ohno, Cross-field transport in detached helium plasmas in Magnum-PSI, Plasma Phys. Control. Fusion 62 (2020) 115021*
40. *C. Cowley, P. Fuller, Y. Andrew, L. James, L. Simons, M. Sertoli, T. Morgan, S. Brons, J. Scholten, J. Vernimmen, Robust impurity detection and tracking for tokamaks, Phys. Rev. E 102 (2020) 043311*
41. *H.J. van der Meiden, J.W.M. Vernimmen, J. van den Berg, I.G.J. Classen, Incoherent and collective Thomson scattering for the determination of electron and ion properties in low-temperature plasma, J. Fusion Energy 39 (2020) 251–260*
42. *G.R.A. Akkermans, I.G.J. Classen, R. Perillo, H.J. van der Meiden, G. Federici, S. Brezinsek, The role of hydrogen molecular effects on detachment in Magnum-PSI, Phys. Plasmas 27 (2020) 102509*
43. *S.S. Denk, R. Fischer, E. Westerhof, T. Luda di Cortemiglia, J. Hobirk, O. Maj, S.K. Nielsen, E. Poli, J. Rasmussen, M. Stejner, Momentum-space-resolved measurements using oblique electron cyclotron emission for the validation of the quasi-linear theory of electron cyclotron current drive, Plasma Phys. Control. Fusion 63 (2020) 015003*
44. *M.J. Dunn, T.W. Morgan, J.W. Genuit, T. Loewenhoff, A.J. Thornton, K.J. Gibson, Magnum-PSI team, Thermographic investigation of the effect of plasma exposure on the surface of a MAST upgrade divertor tile in Magnum-PSI, Nucl. Mater. Energy 25 (2020) 100832*
45. *P. Reichherzer, J. Becker Tjus, E.G. Zweibel, L. Merten, M. Pueschel, Turbulence-level dependence of cosmic ray parallel diffusion, Mon. Not. Roy. Astron. Soc. 498 (2020) 5051-5064*

Publications in other journals and conference proceedings: 5

1. *J. Fu, J.C. Brouwer, R.W.A. Hendrikx, I.M. Richardson, M.J.M. Hermans, Microstructure characterisation and mechanical properties of ODS Eurofer steel subject to designed heat treatments, Materials Science and Engineering A 770 (2020) 138568*
2. *J. Fu, J.C. Brouwer, I.M. Richardson, M.J.M. Hermans, Solid state diffusion bonding of ODS Eurofer steel by spark plasma sintering, Minerals, Metals and Materials Series 2020 (2020) 2095-2102*
3. *M. van Berkel, G. Oosterwegel, M. Anthonissen, H.J. Zwart, G. Vandersteen, A novel frequency domain maximum likelihood approach for estimating transport coefficients in cylindrical geometry for nuclear fusion devices, Proceedings 2019 IEEE 58th Conference on Decision and Control (CDC) (2020) 3220-3226*
4. *R.J.R. van Kampen, A. Das, S. Weiland, M. van Berkel, Complex Gaussian process regression for estimating spatially, varying coefficients in thermal transport, Book of Abstracts 39th Benelux Meeting on Systems and Control (2020) 38*
5. *L. Vialetto, P. Viegas, S. Longo, P. Diomede, Monte Carlo Flux modelling of electron kinetics in CO_2, Publications of the Astronomical Observatory Belgrade 99 (2020) 150*

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1. *T.W. Morgan, Testrit met de ITER-divertor, Nederlands Tijdschrift voor Natuurkunde, 86 (2020) 28-31, Issue 11*

Invited lectures at conferences and meetings: 13

1. *DIT Nuclear Showcase, 2020/03/02-2020/03/03, London, UK, A.J.H. Donné, Overview of the International Fusion Landscape*
2. *30th International Symposium on the Physics of Ionized Gases (SPIG 2020, online), 2020/08/24-2020/08/28, Sabac, Serbia, A.J.H. Donné, Challenges and progress on the path towards fusion electricity*
3. *4th Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2020), 2020/11/26-2020/11/31, e-Conference, Korea, A.J.H. Donné, Challenges and progress on the path towards fusion electricity, PL-7*
4. *4th Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2020), 2020/11/26-2020/11/31, e-Conference, Korea, K.L. van de Plassche, J. Citrin, C. Bourdelle, Y. Camenen, F.J. Casson, V.I. Dagnelie, F. Felici, A. Ho, S. Van Mulders, JET Contributors, Fast surrogate modelling of turbulent transport in fusion plasmas with physics-informed neural networks, MF1-I21*
5. *31st Symposium on Fusion Technology (online) SOFT 2020, 2020/09/20-2020/09/25, Dubrovnik, Croatia, H.J.N. van Eck, Performance of tungsten plasma-facing components under ITER-relevant loading conditions in the Magnum-PSI linear plasma facility*
6. *31st Symposium on Fusion Technology (online) SOFT 2020, 2020/09/20-2020/09/25, Dubrovnik, Croatia, A.J.H. Donné, Challenges and progress on the path towards fusion energy*
7. *73rd Gaseous Electronics Conference (GEC 2020), 2020/10/05-2020/10/09, e-conference, USA, J. Citrin, C. Bourdelle, Y. Camenen, F. Felici, A. Ho, P. Horn, B.J.J. Kremers, K. van de Plassche, Neural network surrogate modelling of tokamak plasma turbulence, BM3.00003*
8. *FuseNet PhD Event 2020, 2020/11/23-2020/11/24, e-conference, Germany, A.J.H. Donné, EUROfusion in Horizon Europe, Keynote*
9. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, J. Citrin, Fast and accurate turbulence modelling for fusion plasmas with neural networks, FW10.2*
10. *7th International Workshop on Plasma Science Entrepreneurship 2020, 2020, Bochem, Germany, G.J. van Rooij, Electrification and circularity - a plasma chemistry perspective*
11. *15th online Kudowa Summer School "Towards Fusion Energy", 2020/06/29-2020/07/03, Kudowa Zdroj, Poland, A.J.H. Donné, Progress in European fusion research*
12. *15th online Kudowa Summer School "Towards Fusion Energy", 2020/06/29-2020/07/03, Kudowa Zdroj, Poland, M.R. de Baar, M. van Berkel, T.C. Blanken, F. Felici, B. Maljaars, T. Ravensbergen, Model based plasma operations and control*
13. *38th ITPA Diagnostics TG Meeting, 2020/10/12-2020/10/15, remote, France, M.R. de Baar Realtime SWG Report: From Synthetic Thomson scattering diagnostic to control oriented analysis*

Invited seminars (2)

1. *PSFC Seminar, Plasma Science and Fusion Center, MIT, USA, 2020/10/19, e-seminar, MA, USA, M.R. de Baar, A systems and control perspective on fusion plasmas*
2. *Online seminar TU/e University, 2020/12/10, Eindhoven, Netherlands, M.R. de Baar, A systems and control perspective on fusion plasmas*

Other oral and poster presentations at (international) conferences and meetings: 40

1. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, J. van den Berg, H.J. van der Meiden, J. Vernimmen, I. Classen, Thomson scattering near the high-fluence target surface of the Magnum-PSI linear plasma generator, PosterP8.008*
2. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, R. Chandra, P. Diomede, Plasma exhaust for fusion reactors: numerical simulation and comparison with plasma beam experiments, OralPW7.7*
3. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, A. Ho, J. Citrin, Accelerating tokamak plasma turbulence predictions through the use of neural networks, OralPW7.4*
4. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, I. Krebs, Theoretical model for magnetic flux pumping in hybrid tokamak discharges, OralPW7.9*
5. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, Y. Li, T.W. Morgan, Fracture behavior of tungsten-based composites exposed to steady-state/transient hydrogen plasma, Poster P8.026*
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7. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, C. Onwudinanti, G. Brocks, J.M.V.A. Koelman, T.W. Morgan, S.X. Tao, Hotel Ruthenium - how hydrogen checks in and never leaves, Poster P5.036*
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9. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, A. Perek, W.A.J. Vijvers, I.G.J. Classen, T. Ravensbergen, Y. Andrebe, B.P. Duval, B. Linehan, K. Verhaegh, M.R. de Baar, Quantitative analysis of Balmer series using multispectral imaging in detached conditions of TCV, Poster P8.028*
10. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, K.L. van de Plassche, J. Citrin, M. Gemmell, A. Ho, P. Horn, B.J.J. Kremers, R. Winkeler, Fast turbulence simulations of fusion experiments. Bridging twelve orders of magnitude of speed using machine learning, Poster P8.022*
11. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, T. Ravensbergen, M. van Berkel, Feedback control of the impurity emission front during divertor detachment in tokamaks, Oral PW7.5*
12. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, P. Rindt, S. Askes, T. Morgan, Liquid metal and 3D-printed tungsten: solving the heat load problem in fusion reactors, Oral PW7.6*
13. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, G. Snoep, J. Citrin, C. Bourdelle, Validation of reduced order turbulent transport modelling of tokamak plasma near-edge conditions, Poster P8.024*
14. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, L. Vialetto, S. Longo, P. Diomede, Monte Carlo Flux simulations of electron velocity distribution function in CO_2, Poster P8.016*
15. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, P. Viegas, P. Diomede, Numerical modelling of plasma chemistry in a microwave reactor for CO_2 conversion, Poster P8.010*
16. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, S.C. Wang, T.W. Morgan, et al., Plasma-induced deuterium retention in Ru-capped materials, Poster P8.002*
17. *39th Benelux Meeting on Systems and Control 2020, 2020/03/10-2020/03/11, Elspeet, Netherlands, R.J.R. van Kampen , A. Das, S. Weiland, M. van Berkel, Complex Gaussian Process Regression for Estimating Spatially Varying Coefficients in Thermal Transport, Oral TuA04-3*
18. *28th meeting of ITPA Topical Group SOL and Divertor Physics (DivSOL), 2020/01/13-2020/01/16, Jeju, Korea, T. Morgan, Tungsten recrystallization studies in Magnum-PSI, Oral*
19. *28th meeting of ITPA Topical Group SOL and Divertor Physics (DivSOL), 2020/01/13-2020/01/16, Jeju, Korea, T. Ravensbergen, M.R. de Baar, M. van Berkel, M. Bernert, A. Perek, C. Galperti, R.J.R. van Kampen, J.T. Lammers, J. Koenders, O. Fevrier, Real-Time reconstruction and control of the radiation front location during detachment in ASDEX Upgrade and TCV, Oral*

20. *30th International Symposium on the Physics of Ionized Gases (SPIG 2020, online), 2020/08/24-2020/08/28, Sabac, Serbia, L. Vialetto, P. Viegas, S. Longo, P. Diomede, Monte Carlo Flux modelling of electron kinetics in CO_2, Oral, Low temperature plasmas/Progress Reports*
21. *Applied Computational Sciences (ACOS) symposium 2020, 2020/10/28, Eindhoven, Netherlands, D. Nieuwenhuizen, K.L. van de Plassche, J. Citrin, V. Menkovski, J.M.V.A. Koelman, Deep Generative Modelling of Tokamak Fusion, Online Poster and Pitch*
22. *Applied Computational Sciences (ACOS) symposium 2020, 2020/10/28, Eindhoven, Netherlands, P. Horn, K.L. van de Plassche, J. Citrin, B. Koren, M. Anthonissen, Inclusion of Physics Constraints in Neural Network Surrogate Models for Fusion Plasma Turbulence, Online Poster and Pitch*
23. *4th Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2020), 2020/11/26-2020/11/31, e-Conference, Korea, I. Krebs, Magnetic flux pumping in the hybrid tokamak scenario: Nonlinear MHD simulations and ASDEX Upgrade discharges, OralMF1-04*
24. *28th meeting of ITPA Topical Group SOL and Divertor Physics (DivSOL), 2020/01/13-2020/01/16, Jeju, Korea, L. Cheng , T.W. Morgan, Plasma and ion beam effects on tungsten recrystallization, Oral*
25. *JET Task Force Meeting, 2020/10/13, Culham, UK, K.L. van de Plassche, J. Citrin, C. Bourdelle, Y. Camenen, F.J. Casson, F. Felici, P. Horn, A. Ho, S. Van Mulders, F. Koechl, Fast surrogate modelling of turbulent transport in fusion plasmas with physics-informed neural networks, Oral*
26. *73rd Gaseous Electronics Conference (GEC 2020), 2020/10/05-2020/10/09, e-conference, USA, G. Smith, J. Ellis, T. Gans, J. Dedrick, J. Achard, R. Issaoui, S. Doyle, A. Gibson, P. Diomede, M.J. Kushner, Increasing the surface production of negative ions from nitrogen doped diamond in low pressure hydrogen plasmas, OralTR3.00003*
27. *73rd Gaseous Electronics Conference (GEC 2020), 2020/10/05-2020/10/09, e-conference, USA, L. Vialetto, P. Viegas, S. Longo, P. Diomede, Fast and accurate simulations of electrons in CO_2 using Monte Carlo Flux, OralMW3.00004*
28. *73rd Gaseous Electronics Conference (GEC 2020), 2020/10/05-2020/10/09, e-conference, USA, P. Viegas, F.J.J. Peeters, A.J. Wolf, A.W. van de Steeg, L. Vialetto, P.W.C. Groen, W.A. Bongers, G.J. van Rooij, M.C.M. van de Sanden, P. Diomede, Spatially-resolving Discharge Parameters in Microwave Plasmas for CO_2 Conversion from Atomic Oxygen Emission, OralFT2.00004*
29. *FuseNet PhD Event 2020, 2020/11/23-2020/11/24, e-conference, Germany, K.L. van de Plassche, J. Citrin, C. Bourdelle, Y. Camenen, F.J. Casson, F. Felici, P. Horn, A. Ho, M. Marin, S. Van Mulders, Fast surrogate modelling of turbulent transport using neural networks trained on HPC generated datasets, Oral*
30. *25th (remote) meeting of ITPA Topical Group Transport and Confinement, 2020/10/20-2020/10/23, Cadarache, France, C. Stephens, F. Jenko, J. Citrin, K.L. van de Plassche, C. Bourdelle, T. Tala, A. Salmi, JET Contributors, Improving QuaLiKiz's Collisional Model, Oral*
31. *25th (remote) meeting of ITPA Topical Group Transport and Confinement, 2020/10/20-2020/10/23, Cadarache, France, C. Gillot, G. Dif-Pradalier, Y. Sarazin, J. Citrin, P. Manas, F. Widmer, C. Bourdelle, Y. Camenen, X. Garbet, P. Ghendrih, Comparing degrees of turbulence self-organization: potential implications for reduced modelling, Oral*
32. *24th meeting of ITPA Topical Group Transport and Confinement, 2020/06/29-2020/07/03, Garching, Germany, K.L. van de Plassche, C. Bourdelle, Y. Camenen, F.J. Casson, F. Felici, P. Horn, A. Ho, J. Citrin, M. Marin, S. Van Mulders, Update on QuaLiKiz-neural-network 10D, and applications, Oral*
33. *24th meeting of ITPA Topical Group Transport and Confinement, 2020/06/29-2020/07/03, Garching, Germany, J. Citrin, S. Maeyama, Y. Camenen, C. Angioni, F. Casson, N. Bonanomi, T. Görler, P. Mantica, A. Mariani, M. Sertoli, Comparison of GENE and QuaLiKiz in ETG studies on the JET hybrid scenario, Oral*
34. *24th meeting of ITPA Topical Group Transport and Confinement, 2020/06/29-2020/07/03, Garching, Germany, A. Ho, J. Citrin, Y. Camenen, K.L. van de Plassche, C. Bourdelle, Y. Camenen, F.J. Casson, JET Contributors, Update on QuaLiKiz-neural-network 15D based on JET data, Oral*
35. *24th meeting of ITPA Topical Group Transport and Confinement, 2020/06/29-2020/07/03, Garching, Germany, M. Marin, J. Citrin, L. Garzotti, M. Valovic, M. Maslov, A. Ho, C. Bourdelle, Y. Camenen, F.J. Casson, F. Koechl, Update on multiple-pellet JET simulations with QuaLiKiz, Oral*

36. *24th meeting of ITPA Topical Group Transport and Confinement, 2020/06/29-2020/07/03, Garching, Germany, G. Snoep, J. Citrin, C. Bourdelle, F. Jenko, A. Ho, M. Marin, E. Delabie, M.J. Puesche , F. Koechl, E.R. Solano, GENE studies of JET L-mode edge and QuaLiKiz validation, Oral*
37. *25th ITPA Transport and Confinement Topical Group (remote) Meeting, 2020/10/20-2020/10/23, Cadarache, France, M.J. Pueschel, On the impact of RMPs on L- and H-mode edge microturbulence, Oral*
38. *62nd Annual Meeting of the APS Division of Plasma Physics, 2020/11/09-2020/11/13, Memphis, TN, USA, M.J. Pueschel, D.R. Hatch, M. Kotschenreuther, S. Mahajan, Multiscale MT-ETG Turbulence in the Pedestal, Oral*
39. *Lorentz Workshop Extreme Physics, Extreme Data, 2020/01/13-2020/01/17, Leiden, Netherlands, J. Citrin, C. Bourdelle, Y. Camenen, A. Ho, K.L. van de Plassche, F. Felici, Fusion plasma turbulence simulation with neural network surrogate models, Oral*
40. *Lorentz Workshop Extreme Physics, Extreme Data, 2020/01/13-2020/01/17, Leiden, Netherlands, K.L. van de Plassche, A. Ho, J. Citrin, C. Bourdelle, Y. Camenen, F. Felici, Speeding up tokamak plasma simulations, Oral Pitch*

Positions, including editorships: 28

1. *A.J.H. Donné, Member of the Editorial Board of Nuclear Fusion (since 2011)*
2. *H.J.N. van Eck, Chair of the Editorial Board of NEVAC magazine (since 2012)*
3. *M.R. de Baar, Member of the Fusion for Energy (F4E) Governing Board (since 2019)*
4. *M.R. de Baar, Member executive board of ITER-NL consortium (since 2014)*
5. *M.R. de Baar, Leader ITER-NL work package 2: ITER Upper port Electron Cyclotron Current Drive launcher (since 2007)*
6. *M.R. de Baar, Chair Realtime Specialists Working Group (RT-SWG) of ITPA framework for ITER (2018-2021)*
7. *M.R. de Baar, Member of the Advisory Board FONTYS Applied Natural Sciences (since 2018)*
8. *M.R. de Baar, Professor at Eindhoven University of Technology (since 2012)*
9. *M.R. de Baar, Lecturer Course series at Eindhoven University of Technology (since 2015)*
10. *H.J. de Blank, Lecturer Course series at Eindhoven University of Technology (since 2015)*
11. *H.J. de Blank, Member of the Organizing Committee of the Carolus Magnus Summer School on Plasma Physics (since 2014)*
12. *J. Citrin, Chair ITPA Topical Group on Transport & Confinement (since 2017)*
13. *J. Citrin, Associate Professor Eindhoven University of Technology (since 2019)*
14. *A.J.H. Donné, Appointed EUROfusion Consortium Programme Manager (since 2014)*
15. *A.J.H. Donné, Co-chair of the DEMO Project Board (since 2018)*
16. *A.J.H. Donné, Member ITER Science and Technology Advisory Committee (since 2016)*
17. *A.J.H. Donné, Member Coordinating Committee ITER IO-Broader Approach agreement (since 2020)*
18. *A.J.H. Donné, Member IFMIF-DONES Prep Council (Int. Fusion Materials Irradiation Facility/DEMO Oriented NEutron Source) (since 2020)*
19. *A.J.H. Donné, Chair (now member) IEA Technology Collaboration Programmes for Co-operation on Tokamak Programmes (since 2017)*
20. *A.J.H. Donné, Member of the Wendelstein 7-X Programme Committee (since 2016)*
21. *A.J.H. Donné, Member of the International Advisory Committee of EAST (Hefei, China) (since 2015)*
22. *A.J.H. Donné, Chair of Coordinating Committee of the International Tokamak Physics Activity (ITPA-CC) (since 2014)*
23. *A.J.H. Donné, Chair Marconi-Fusion High Performance Computer Project Committee (since 2016)*
24. *A.J.H. Donné, Member International Scientific Committee of the AAPPS-DPP Conference (Association of Asia Pacific Physical Societies) (since 2017)*
25. *A.J.H. Donné, Member of the International Scientific Advisory Board (Fachbeirat) of the Max-Planck-Institut for Plasma Physics (since 2014)*

26. *P. Diomede, Chair of handpicked Focus session 'Challenges in plasma physics' at conference Physics@FOM Veldhoven 2020, Netherlands*
27. *T.W. Morgan, Associate Professor Eindhoven University of Technology (since 2019)*
28. *B. Tyburska-Pueschel, Member Euratom Scientific and Technical Committee (since 2020)*

Solar Fuels

Media appearances: 20

1. Vliegen we straks op gerecycleerde CO_2?, *De Standaard, 2020/12/29, Interview with R. van de Sanden*
2. Waterstof: potentieel groen, maar nu nog peperduur, *NRC,2020/12/01, General coverage*
3. Stroomprijs stijgt 35 procent door waterstofplannen van Noord-Nederland, *NRC,2020/12/01, General coverage*
4. Customer case study around a demanding plasma vacuum application *(blog), Website Pressure Control Solutions.nl, 2020/11/24, Interview with T. Righart*
5. Huidige waterstofplannen niet realistisch, *NOS Nieuwsuur, 2020/10/27, Interview with R. van de Sanden*
6. "Plannen groene waterstof alleen mogelijk met grijze stroom", *NOS Nieuwsuur website, 2020/10/26, Interview with R. van de Sanden*
7. Kan CO_2 uit de lucht gehaald en hergebruikt worden?, *Nu.nl, 2020/09/29, Interview with M. Gleeson*
8. DIFFER leads search for better electrolysers, *Bits & Chips, 2020/09/18, Interview with M. Tsampas*
9. Gerard van Rooij legt uit hoe een opslag ammoniumnitraat kon exploderen in Beiroet, *BNR Nieuwsradio, 2020/08/05, Interview with G. van Rooij*
10. Eindhoven Engine geeft groen licht aan vijf innovatieprojecten, *Mechatronica & Machinebouw, 2020/07/13, General coverage*
11. Projects worth €16.8 million get the green light, *Eindhovennews.com, 2020/07/13, General coverage*
12. Eindhoven Engine geeft groen licht aan projecten t.w.v. €16,8 miljoen, *ANP Press Support, 2020/07/08, General coverage*
13. Opnieuw vijf innovatieve projecten bij Eindhoven Engine, *Eindhovens Dagblad, 2020/07/08, General coverage*
14. Duurzame kerosine nog te schaars voor impact, *NEMO Kennislink, 2020/06/23, Interview with R. van de Sanden, A. Goede*
15. Inzet van zink kan leiden tot een circulaire productie, *BNR Nieuwsradio, 2020/05/11, Interview with R. van de Sanden*
16. Zink helpt CO_2 afvangen, *De Ingenieur, 2020/05/08, Interview with M. Gleeson*
17. DIFFER haalt met zink meer CO_2 uit rookgas, *Eindhovens Dagblad, 2020/05/07, Interview with R. van de Sanden*
18. Vleugje zink haalt tot 50% meer CO_2 uit rookgas, *Engineers Online, 2020/05/07, Interview with R. van de Sanden*
19. Vleugje zink haalt tot 50% meer CO_2 uit rookgas, *Link Magazine, 2020/05/06, Interview with M. Gleeson, R. van de Sanden*
20. We moeten van het gas af en tegelijk gaan we veel meer gas verstoken, *Volkskrant, 2020/02/14, Interview with R. van de Sanden*

PhD theses: 6

1. *R. Sinha, Structure-property-performance relationships in photoanode materials, PhD thesis at the Eindhoven University of Technology, 2020/01/13, Promotor: M.C.M. van de Sanden; Co-promotor: A. Bieberle*
2. *R. Kamarudheen, Plasmon-Driven Synthesis of Hierarchical Nanostructures, PhD thesis at the Eindhoven University of Technology, 2020/07/06, Promotors: J. Gomez Rivas, A. Baldi*
3. *G. Zafeiropoulos, Making hydrogen out of thin air, PhD thesis at the Eindhoven University of Technology, 2020/06/24, Promotor: M.C.M. van de Sanden; Co-promotor: M. Tsampas*
4. *K. George, Modeling water oxidation at photoanodes: A multiscale approach, PhD thesis at the Eindhoven University of Technology, 2020/10/16, Promotor: M.C.M. van de Sanden; Co-promotor(s): A. Bieberle; M. van Berkel*
5. *M. Parente, 0D and 1D Metals: Plasmonic Sensors and Charge Conductors, PhD thesis at the Eindhoven University of Technology, 2020/10/15, Promotor: J. Gomez Rivas; Co-promotor: A. Baldi*

6. *A.J. Wolf, Thermal aspects of CO_2 conversion in the vortex-stabilized microwave plasma, PhD thesis at the Eindhoven University of Technology, 2020/10/16, Promotor: M.C.M. van de Sanden; Co-promotor: W.A. Bongers*

MSc and BSc theses: 7

1. *B. van Kuyck, Temperature mapping of plasmonic nanoparticles, HBO Bachelor thesis Fontys Hogeschool, Eindhoven, 2020/02/01, Mentor: R. Hamans, R. Kamarudheen, A. Baldi*
2. *G.J. W. Aalbers, Discriminating the mechanisms in plasmon-activated chemical reactions via a light-driven Au@Ag core@ shell nanorod synthesis, HBO Bachelor thesis Fontys Hogeschool, Eindhoven, 2020/01/13, Mentor: R. Kamarudheen, A. Baldi*
3. *N. Viswanathan, High-throughput DFT calculations on single atom catalysts for solar fuel generation, Master thesis Eindhoven University of Technology, 2020/03/31, Mentor: S. Er*
4. *M. Nuijen, Synthesis of colloidal nanoparticles for 2D and 3D self-assembled arrays, HBO Bachelor thesis Fontys Hogeschool, Eindhoven, 2020/01/31, Mentor: R. Kamarudheen, R.F. Hamans, A. Baldi*
5. *M. van Helvert, Minimization of the by-products in the polyol synthesis of silver nanowires: the role of gas formation and the nature of metal halides, HBO Bachelor thesis Fontys Hogeschool, Eindhoven, 2020/06/15, Mentor: M. Parente, A. Baldi*
6. *B. Braakhekke, Detection of ammonia from a CO_2-neutral nitrogen fixation process, HBO Bachelor internship report Fontys Hogeschool, Eindhoven, 2020/08/13, Mentor: S. Welzel, M. Tsampas*
7. *S. Vervloedt, Nitrogen fixation in a plasma electrocatalytic reactor: A study on ammonia formation using electrochemical and plasma chemistry, HBO Bachelor thesis Fontys Hogeschool, Eindhoven, 2020/01/13, Mentor: S. Welzel, M. Tsampas*

Publications in peer-reviewed scientific journals: 69

1. *S. van Alphen, V. Vermeiren, T.D. Butterworth, D.C.M. van den Bekerom, G.J. van Rooij, A. Bogaerts, Power pulsing to maximize vibrational excitation efficiency in N_2 microwave plasma: A combined experimental and computational study, J. Phys. Chem. C 124 (2020) 1765-1779*
2. *A. Anastasopoulou, R. Keijzer, S. Butala, J. Lang, G.J. van Rooij, V. Hessel, Eco-efficiency analysis of plasma-assisted nitrogen fixation, J. Phys. D: Appl. Phys. 53 (2020) 234001*
3. *G. Baffou, I. Bordacchini, A. Baldi, R. Quidant, Simple experimental procedures to distinguish photothermal from hot-carrier processes in plasmonics, Light Sci. Appl. 9 (2020) 108*
4. *A. Caglar, D. Duzenli, I. Onal, I. Tezsevin, D. Sahin, H. Kivrak, A comparative experimental and density functional study of glucose adsorption and electrooxidation on the Au-graphene and Pt-graphene electrodes, Int. J. Hydrogen Energy 45 (2020) 490-500*
5. *M.J. Dyson, M. Verhage, X. Ma, G. Simone, D. Tordera, R.A.J. Janssen, G.H. Gelinck, Color determination from a single broadband organic photodiode, Adv. Opt. Mater. 8 (2020) 1901722*
6. *R.H. Godiksen, S.J. Wang, T.V. Raziman, M.H.D. Guimaraes, J. Gomez Rivas, A.G. Curto, Correlated exciton fluctuations in a two-dimensional semiconductor on a metal, ACS Nano Lett. 20 (2020) 4829-4836*
7. *L.A. Hamlow, Y. Nei, R.R. Wu, J. Gao, J.D. Steill, G. Berden, J. Oomens, M.T. Rodgers, Influence of the local environment on the intrinsic structures of gas-phase cytidine-5'-monophosphates, Int. J. Mass Spectrom. 447 (2020) 116234*
8. *G.H.L. Heintges, A. Bolduc, S.C.J. Meskers, R.A.J. Janssen, Relation between the Electronic properties of regioregular donor-acceptor terpolymers and their binary copolymers, J. Phys. Chem. C 124 (2020) 3503-3516*
9. *Y.A. Hugo, W. Kout, F. Sikkema, Z. Borneman, K. Nijmeijer, In situ long-term membrane performance evaluation of hydrogen-bromine flow batteries, J. Energy Storage 27 (2020) 101068*

10. *D.C. M. van den Bekerom, A.W. van de Steeg, M.C.M. van de Sanden, G.J. van Rooij, Mode resolved heating dynamics in pulsed microwave CO_2 plasma from laser Raman scattering, J. Phys. D: Appl. Phys. 53 (2020) 054002*
11. *T.T. Belete, M.C.M. van de Sanden, M.A. Gleeson, Performance of transition metal-doped $CaCO_3$ during cyclic CO_2 capture-and-release in low-pressure H_2O vapour and H_2O plasma, Sustain. Mater. Techn. 25 (2020) e00163*
12. *R. Chaudhary, G.J. van Rooij, S. Li, Q. Wang, E. Hensen, V. Hessel, Low-temperature, atmospheric pressure reverse water-gas shift reaction in dielectric barrier plasma discharge, with outlook to use in relevant industrial processes, Chem. Eng. Sci. 225 (2020) 115803*
13. *M. Li, H. Bin, X.C. Jiao, M.M. Wienk, H. Yan, R.A.J. Janssen, Controlling the microstructure of conjugated polymers in high-mobility monolayer transistors via the dissolution temperature, Angew. Chem. - Int. Edit. 59 (2020) 846-852*
14. *M.M. Li, P.J. Leenaers, M.M. Wienk, R.A.J. Janssen, The effect of alkyl side chain length on the formation of two semi-crystalline phases in low band gap conjugated polymers, J. Mater. Chem. C 8 (2020) 5856-5867*
15. *M. Mas-Montoya, P. Gomez, D. Curiel, I. da Silva, J. Wang, R.A.J. Janssen, A Self-assembled small-molecule-based hole-transporting material for inverted perovskite solar cells, Chem. Eur. J. 26 (2020) 10276-10282*
16. *B.S. Patil, A.S.R. Van Kaathoven, F.J.J. Peeters, A. Chernakov, J. Lang, Q. Wang, V. Hessel, Deciphering the synergy between plasma and catalyst support for ammonia synthesis in a packed dielectric barrier discharge reactor, J. Phys. D: Appl. Phys. 53 (2020) 144003*
17. *D. Pintossi, C.L. Chen, M. Saakes, Z. Borneman, K. Nijmeijer, Influence of sulfate on anion exchange membranes in reverse electrodialysis, NPJ Clean Water 3 (2020) 29*
18. *A. Shamu, H. Miedema, Z. Borneman, K. Nijmeijer, The effect of supercritical CO_2 on the permeation of dissolved water through PDMS membranes, J. CO_2 Util. 35 (2020) 145-152*
19. *C. Simoes, D. Pintossi, M. Saakes, Z. Borneman, W. Brilman, K. Nijmeijer, Electrode segmentation in reverse electrodialysis: Improved power and energy efficiency, Desalination 492 (2020) 114604*
20. *A. Gallo, A. Sepetys, J. Romazanov, Y. Marandet, S. Brezinsek, H. Bufferand, G. Ciraolo, Y. Corre, S. Ertmer, G.J. van Rooij, First efforts in numerical modeling of tungsten migration in WEST with SolEdge2D-EIRENE and ERO2.0, Phys. Scr. 95 (2020) 014013*
21. *N. van Hoof, M. Parente, A. Baldi, J. Gomez Rivas, Terahertz time-domain spectroscopy and near-field microscopy of transparent silver nanowire networks, Adv. Opt. Mater. 8 (2020) 1900790*
22. *R. Kamarudheen, G. Kumari, A. Baldi, Plasmon-driven synthesis of individual metal@semiconductor core@shell nanoparticles, Nat. Commun. 11 (2020) 3957*
23. *R. Kamarudheen, G.J.W. Aalbers, R.F. Hamans, L.P.J. Kamp, A. Baldi, Distinguishing among all possible activation mechanisms of a plasmon-driven chemical reaction, ACS Energy Lett. 5 (2020) 2605–2613*
24. *G. Simone, M.J. Dyson, S.C.J. Meskers, R.A.J. Janssen, G.H. Gelinck, Organic photodetectors and their application in large area and flexible image sensors: The role of dark current, Adv. Funct. Mater. 30 (2020) 1904205*
25. *G. Simone, M.J. Dyson, C.H.L. Weijtens, S.C.J. Meskers, R. Coehoorn, R.A.J. Janssen, G.H. Gelinck, On the origin of dark current in organic photodiodes, Adv. Opt. Mater. 8 (2020) 1901568*
26. *G. Simone, D. Tordera, E. Delvitto, B. Peeters, A.J.J.M. van Breemen, S.C.J. Meskers, R.A.J. Janssen, G.H. Gelinck, High-accuracy photoplethysmography array using near-infrared organic photodiodes with ultralow dark current, Adv. Opt. Mater. 8 (2020) 1901989*
27. *A. Uthayakumar, A. Pandiyan, S. Mathiyalagan, A.K. Keshri, S.B.K. Moorthy, The effect of space charge on blocking grain boundary resistance in an yttrium-doped barium zirconate electrolyte for solid oxide fuel cells, J. Phys. Chem. C 124 (2020) 5591-5599*
28. *J. Wang, K. Datta, J. Li, M.A. Verheijen, D. Zhang, M.M. Wienk, R.A.J. Janssen, Understanding the film formation kinetics of sequential deposited narrow-bandgap Pb–Sn hybrid perovskite films, Adv. Energy Mater. 10 (2020) 2000566*
29. *B.W.H. Saes, M.M. Wienk, R.A.J. Janssen, Photochromic organic solar cells based on diarylethenes, RSC Adv. 10 (2020) 30176-30185*

30. *P.J. Leenaers, M.M. Wienk, R.A.J. Janssen, Structural design of asymmetric diketopyrrolopyrrole polymers for organic solar cells processed from a non-halogenated solvent, Org. Electron. 86 (2020) 105914*
31. *H.J. Bin, I. Angunawela, B.B. Qiu, F.J.M. Colberts, M.M. Li, M.J. Dyson, M.M. Wienk, H. Ade, Y.F. Li, R.A.J. Janssen, Precise control of phase separation enables 12% efficiency in all small molecule solar cells, Adv. Energy Mater. 10 (2020) 2001589*
32. *P.J. Leenaers, H. van Eersel, J.Y. Li, M.M. Wienk, R.A.J. Janssen, Influence of regioregularity on the optoelectronic properties of conjugated diketopyrrolopyrrole polymers comprising asymmetric monomers, Macromolecules 53 (2020) 7749-7758*
33. *B.T. Feleki, S. Chandrashekar, R.K.M. Bouwer, M.M. Wienk, R.A.J. Janssen, Development of a Perovskite solar cell architecture for opaque substrates, Sol. RRL 4 (2020) 2000385*
34. *E. Kontoleta, A. Tsoukala, S.H.C. Askes, E. Zoethout, E. Oksenberg, H. Agrawal, E.C. Garnett, Using hot electrons and hot holes for simultaneous cocatalyst deposition on plasmonic nanostructures, ACS Appl. Mater. Interfaces 12 (2020) 35986-35994*
35. *V. Kyriakou, D. Neagu, G. Zafeiropoulos, R.K. Sharma, C. Tang, K. Kousi, I.S. Metcalfe, M.C.M. van de Sanden, M.N. Tsampas, Symmetrical exsolution of Rh nanoparticles in solid oxide cells for efficient syngas production from greenhouse gases, ACS Catal. 10 (2020) 1278-1288*
36. *A. Pandiyan, V. di Palma, V. Kyriakou, W.M.M. Kessels, M. Creatore, M.C.M. van de Sanden, M.N. Tsampas, Enhancing the electrocatalytic activity of redox stable perovskite fuel electrodes in solid oxide cells by atomic layer-deposited Pt nanoparticles, ACS Sustainable Chem. Eng. 8 (2020) 12646–12654*
37. *M. Parente, M. van Helvert, R.F. Hamans, R. Verbroekken, R. Sinha, A. Bieberle-Hütter, A. Baldi, A simple and fast high-yield synthesis of silver nanowires, ACS Nano Lett. 20 (2020) 5759–5764*
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51. *C.J. Weststrate, D. Sharma, D. Garcia Rodriguez, M.A. Gleeson, H.O.A. Fredriksson, J.W. Niemantsverdriet, Reactivity of C_3Hx adsorbates in presence of co-adsorbed CO and hydrogen: Testing Fischer–Tropsch chain growth mechanisms, Top. Catal. 63 (2020) 1412–1423*
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61. *W. Yu, Y. Lim, S. Lee, A. Pandiyan, G.Y. Cho, S.W. Cha, Low-temperature, high-performance thin-film solid oxide fuel cells with tailored nano-column structures of a sputtered Ni anode, J. Mater. Chem. A 8 (2020) 21668-21679*
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65. *E. Devid, D. Zhang, D.P. Wang, M. Ronda-Lloret, Q. Huang, G. Rothenberg, N.R. Shiju, A.W. Kleyn, Dry reforming of methane under mild conditions using radio frequency plasma, Energy Technol. 8 (2020) 1900886*
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67. *E. Cortes, L.V. Besteiro, A. Alabastri, A. Baldi, G. Tagliabue, A. Demetriadou, P. Narang, Challenges in Plasmonic Catalysis, ACS Nano 14 (2020) 16202-16219*
68. *Q. Zhang, A. Khetan, S. Er, Comparison of computational chemistry methods for the discovery of quinone-based electroactive compounds for energy storage, Sci. Rep. 10 (2020) 22149*

69. *A.F. Silva, A.S. Morillo, A. Tejero-del-Caz, L.L. Alves, O. Guaitella, V. Guerra, A reaction mechanism for vibrationally-cold low-pressure CO_2 plasmas, Plasma Sources Sci. Technol. 29 (2020) 125020*

Professional publications: 1

1. *A. Goede, KEROGREEN - Production of sustainable aircraft grade kerosene In: Towards Climate-Neutral Aviation. Contributions from Horizon 2020 projects implemented by INEA,2020/10/26,p.24, ISBN: 9789292081003*

Publications aimed at the general public: 1

1. *Tien redenen om geen biomassa te verbranden. Hout als energiebron is schadelijk voor het klimaat, betogen 35 wetenschappers, 2020, L. Vet, M. Katan, M.C.M. van de Sanden, et al., Opinion Letter in Dutch newspaper Trouw, 2020/10/10*

Publications in other journals and conference proceedings: 5

1. *N. van Hoof, S. ter Huurne, M. Parente, A. Baldi, J. Gomez Rivas, Non-invasive Local (photo)conductivity measurements of metallic and semiconductor nanowires in the near-field, 2019 44th International Conference on Infrared, Millimeter, and Terahertz Waves IRMMW-THz (2019) Th-PM2-6-4*
2. *Q. Ong, Plasma catalysis as vibrational activation of surface interactions for the RWGS reaction, Abstracts of Papers of the American Chemical Society 257 (2019) 176*
3. *F.J.J. Peeters, A.J. Wolf, T. Righart, V. Reddy, Y. Liu, P.W.C. Groen, M.C.M. van de Sanden, W.A. Bongers, CO_2 microwave plasma: efficient production of CO at moderate pressures, Abstracts of Papers of the American Chemical Society 257 (2019) 592*
4. *G.J. van Rooij, D.C.M. van den Bekerom, A.W. van de Steeg, Q. Ong, T. Minea, M.C.M. van de Sanden, CO_2 reduction by microwave plasma enabling efficient power-to-X conversion, Abstracts of Papers of the American Chemical Society 257 (2019) 343*
5. *M. Tsampas, H. Patel, R. Sharma, A. Pandiyan, V. Kyriakou, S. Welzel, M.C.M. van de Sanden, Plasma aided electrocatalysis for nitrogen fixation, Abstracts of Papers of the American Chemical Society 257 (2019) 221*

Book (chapter): 2

1. *A. Bogaerts, X. Tu, G.J. van Rooij, M.C.M. van de Sanden, Plasma-based CO_2 conversion, Carbon Dioxide Utilization: From Fundamentals to Production Processes, De Gruyter, 2019, p. 585-634*
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Invited lectures at conferences and meetings: 11

1. *Online Workshop on Plasma Chemistry and Catalysis, 2020/04/16, Karlsruhe, Germany, M.C.M. van de Sanden, Plasma activation of CO_2 in a vortex stabilized microwave flow reactor: the prominent role of thermal chemistry and transport processes*

2. *Special PSE 2020 based on the 17th International Conference on Plasma Surface Engineering, 2020/09/07-2020/09/10, Erfurt, Germany, M.C.M. van de Sanden, Plasma activated electrochemical conversion for the electrification of the (chemical) industry, ORD201*
3. *21st meeting EASAC Energy Steering Panel / online workshop The future for synthetic fuels, hydrogen and batteries in the energy transition, 2020/05/28, Halle, Germany, M.C.M. van de Sanden, Hydrogen & synthetic fuels. Scaling by the numbers or by the size? Consequences for the Green Deal?*
4. *Online webinar in series RAPID manufacturing of Delaware Energy Institute, 2020/11/06, Newark, DE, USA, M.C.M. van de Sanden, Recent trends in renewable energy driven chemistry for energy conversion and storage: plasma assisted (electro-) chemistry as the special case*
5. *FEHAC Congres 2020 (Federatie Historische Automobiel- en Motorfiets Clubs), 2020/11/27, Bunnik, Netherlands, M.C.M. van de Sanden, E-fuel, schone en hernieuwbare brandstof voor de toekomst? Voor het mobiele erfgoed begint die toekomst vandaag!*
6. *2nd Energy Alumni Event 2020 Technische Universiteit Eindhoven, 2020/01/16, Eindhoven, Netherlands, M.C.M. van de Sanden, The energy transition challenges, solutions and rationalization*
7. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, S. Er, Autonomous energy materials discovery, FW10.3*
8. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, A. Baldi, Plasmonics for chemistry: sensing and driving chemical reactions at the nanoscale using light, FW10.1*
9. *Schrödinger's Virtual UGM 2020 Stream 1 - Materials Science, 2020/10/27, New York, NY, USA, S. Er, Computational explorations on a vast chemical space of electroactive compounds for energy storage*
10. *7th International Workshop on Plasma Science Entrepreneurship 2020, 2020/10/02, Bochem, Germany, G.J. van Rooij, Electrification and circularity - a plasma chemistry perspective*
11. *RegisterPolymeerKundige (RPK) Course, 2020/01/17, Utrecht, Netherlands, R.A.J. Janssen, Tutorials: Polymers and solar energy*

Other oral and poster presentations at (international) conferences and meetings: 29

1. *Online nanoGe conference Shape-Controlled Nanocrystals: Synthesis, Characterization Methods and Applications 2020, 2020/05/07, Ghent, Belgium, R. Kamarudheen, G. Kumari, A. Baldi, A nanoscale plasmonic reactor: light driven synthesis of individual core@shell nanoparticles, Poster*
2. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, P. Anguita, M.C.M. van de Sanden, M.N. Tsampas, S. Welzel, M.A. Gleeson, CO_2 hydrogenation under electro-promoting conditions: in-situ tuning of products selectivity, PosterP5.029*
3. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, S. Askes, N.J. Schilder, E. Zoethout, A. Polman, E.C. Garnett, Tunable plasmonic HfN nanoparticles and arrays, PosterP3.065*
4. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, R. Kamarudheen, A. Baldi, Plasmon-driven synthesis of single core@shell nanoparticles, OralPW2.6*
5. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, S. Kandhasamy, M.C.M. van de Sanden, M.N. Tsampas, Solvent pretreatment influences the catholyte properties and performance of the IT-NaS battery, PosterP3.039*
6. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, Q. Liang, G. Brocks, X.Q. Zhang, A. Bieberle-Hütter, The singular role of nickel doped monolayer nitrides as efficient catalysts for water oxidation, PosterP5.007*
7. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, U. Mushtaq, R. Sharma, M.C.M. van de Sanden, S. Welzel, M.N. Tsampas, Development and characterization of planar protonic ceramic based electrochemical cells, PosterP5.012*
8. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, A. Pandiyan, V. Kyriakou, R. Sharma, S. Welzel, M.N. Tsampas, Electrochemical oxygen separation after CO_2 plasmolysis using solid oxide electrolysis cell, PosterP5.019*

9. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, R. Sharma, H. Patel, V. Kyriakou, A. Pandiyan, S. Welzel, M.C.M. van de Sanden, M.N. Tsampas, Plasma activated electrolysis for cogeneration of nitric oxide and hydrogen from water and nitrogen, PosterP5.013*
10. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, M. Tsampas, D. Neagu, V. Kyriakou, M. Aouine, L. Roiban, A. Caravaca, C. Tang, K. Kousi, I.S. Metcalfe, P. Vernoux, In situ observation of nanoparticle exsolution from perovskite oxides, PosterP3.018*
11. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, G. Zafeiropoulos, L. Kamphuis, P. Varadhan, M.C.M. van de Sanden, M.N. Tsampas, Porous BiVO4 photoanodes doped with W or Mo for efficient photoelectrochemical water oxidation, PosterP1.050*
12. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, Q. Zhang, A. Khetan, S. Er, A multi-scale computational framework for electroactive materials discovery for redox flow batteries, PosterP3.088*
13. *Physics Veldhoven 2020, 2020/01/21-2020/01/22, Veldhoven, Netherlands, X. Zhou, A. Khetan, S. Er, A multi-scale computational framework for organic electrode materials discovery for Li-ion batteries, PosterP3.085*
14. *Karlsruher Institut für Technologie (KIT) online workshop on Plasma Chemistry, 2020/06/16, Karlsruhe, Germany, A.J. Wolf, F.J.J. Peeters, W.A. Bongers, M.C.M. van de Sanden, Plasma activation of CO_2 in a vortex stabilized microwave reactor: getting to grips with nonuniformity and transport, Oral*
15. *126th Meeting of the Catalysis Society of Japan (Online), 2020/09/16-2020/09/18, Shizuokadaigaku, Japan, S. Feng, S. Kajita, M. Higashi, A. Bieberle-Hütter, T. Yoshida, N. Ohno, Photoelectrochemical properties of plasma-induced nanostructured tungsten oxide, Poster*
16. *Applied Computational Sciences (ACOS) symposium 2020, 2020/10/28, Eindhoven, Netherlands, G. Timmermans, J.M.V.A. Koelman, Permeability upscaling using neural networks, Online Poster and Pitch*
17. *Applied Computational Sciences (ACOS) symposium 2020, 2020/10/28, Eindhoven, Netherlands, D. Mullaj, M.C. Sorkun, S. Er, ChemPlot: A python library for chemical space visualization, Online Poster and Pitch*
18. *Applied Computational Sciences (ACOS) symposium 2020, 2020/10/28, Eindhoven, Netherlands, Q. Liang, G. Brocks, X.Q. Zhang, A. Bieberle-Hütter, Monolayer nitrides doped with transition metals as efficient catalysts for water oxidation: the singular role of nickel, Online Poster and Pitch*
19. *Photonics Online Meetup, 2020/06/22, Zurich, Switzerland, R.F. Hamans, M. Parente, G.W. Castellanos, M. Ramezani, J. Gomez Rivas, A. Baldi, Super-resolution mapping of plasmon-enhanced processes, Oral*
20. *30th International Symposium on the Physics of Ionized Gases (SPIG 2020, online), 2020/08/24-2020/08/28, Sabac, Serbia, A.F. Silva, A.S. Morillo, O. Guaitella, V. Guerra, A reaction mechanism for vibrationally cold CO_2 plasmas, OralLow temperature plasmas/Progress Reports*
21. *73rd Gaseous Electronics Conference (GEC 2020), 2020/10/05-2020/10/09, e-conference, USA, A.J. Wolf, F.J.J. Peeters, P.W.C. Groen, T.W.H. Righart, W.A. Bongers, M.C.M. van de Sanden, Reconsidering the importance of vibrations and translations: a new perspective on efficient plasma activation of CO_2, OralQW4.00004*
22. *CHAINS 2020 (CHemistry As INnovating Science), 2020/12/08-2020/12/09, Veldhoven, The Netherlands, Q. Liang, G. Brocks, X. Zhan , A. Bieberle-Hütter, Monolayer nitrides doped with transition metals as efficient catalysts for water oxidation: the singular role of nickel, Poster*
23. *International Conference on Electrocatalysis for Energy Applications and Sustainable Chemicals (EcoCat 2020), 2020/11/23-2020/11/25, e-conference, Spain, Q. Liang, G. Brocks, X.Q. Zhang, A. Bieberle-Hütter, Monolayer nitrides doped with transition metals as efficient catalysts for water oxidation: the singular role of nickel, Oral*
24. *73rd Gaseous Electronics Conference (GEC 2020), 2020/10/05-2020/10/09, e-conference, USA, F. Peeters, G. Raposo, J. Gao, A.W. van de Steeg, P. Viegas, L. Vialetto, E. Mercer, P.W.C. Groen, T.W.H. Righart, A.J. Wolf, Evaluating chemical kinetic schemes for a CO_2 microwave reactor: using the afterglow with forethought, OralQW4.00003*
25. *73rd Gaseous Electronics Conference (GEC 2020), 2020/10/05-2020/10/09, e-conference, USA, A.W. van de Steeg, P. Viegas, F.Peeters, A.F. Sovelas da Silva, P. Diomede, M.C.M. van de Sanden, G.J. van Rooij, Transport and chemistry in CO_2 microwave plasma unraveled by in-situ laser scattering, OralQW4.00005*

26. *1st International symposium on the DFT modelling of materials relevant for water splitting 2020 (COST Action), 2020/12/11, e-conference, Belgium, Q. Liang, G. Brocks, X.Q. Zhang, A. Bieberle-Hütter, Monolayer nitrides doped with transition metals as efficient catalysts for water oxidation: the Singular Role of Nickel, Oral*
27. *CHAINS 2020 (CHemistry As INnovating Science), 2020/12/08-2020/12/09, Veldhoven, The Netherlands, R.F. Hamans , M. Parente , A. Baldi, Super-resolution mapping of a plasmon-driven reaction, Oral*
28. *Applied Computational Sciences (ACOS) Online symposium 2020, 2020/10/28, Eindhoven, Netherlands, S. Er, Machine learning assisted materials design and discovery for energy applications, Oral*
29. *Mission Innovation Champions 2020, 2020/03/31, Remote, S. Er, Autonomous energy materials discovery, Oral Pitc*

Public events and industry contacts: 1

1. *Symposium Open Innovation in the Brainport region: some examples, 2020/01/10, Eindhoven, Netherlands, M.C.M. van de Sanden, The energy transition*

Awards: 5

1. *S. Er, Mission Innovation Champion The Netherlands 2020 in EUREC program Mission Innovation Champions*
2. *T.A. Wijkamp, Shell Graduation Award for Physics 2020*
3. *Q. Liang, 2020 ACOS Symposium Best Poster prize*
4. *R. Kamarudheen, Gold Winner Graduate Student Award 2020 MRS Spring Meeting*
5. *D. Mullaj, M.C. Sorkun, S. Er, 2020 ACOS Symposium Best Poster prize*

Positions, including editorships: 50

1. *M.C.M. van de Sanden, International Advisory Board for the journal Plasma Processes and Polymers (since 2002)*
2. *M.C.M. van de Sanden, Member of the Editorial Board of the Journal Applied Sciences (since 2016)*
3. *M.C.M. van de Sanden, Editorial Board member of the journal Global Transitions (since 2018)*
4. *M.C.M. van de Sanden, Senior Advisory Board Member of Plasma Sources: Science and Technology (since 2005, Senior since 2014)*
5. *M.C.M. van de Sanden, Member of the Euratom Programme Committee (Fusion) (since 2014)*
6. *M.C.M. van de Sanden, Member Advisory Committee of International Conference on Reactive Plasmas (ICRP) (since 2014)*
7. *M.C.M. van de Sanden, KNAW committee member Raad voor Natuur- en Technische Wetenschappen (RNTW) (since 2017)*
8. *M.C.M. van de Sanden, Fellow of the International Plasma Chemistry Society (since 2017)*
9. *M.C.M. van de Sanden, Chair Advisory Committee ECCM (Elektrochemische Conversie & Materialen) of Dutch Top Research Sections Energy, Chemistry and HTSM (since 2017)*
10. *M.C.M. van de Sanden, KNAW committee member Jury new members Science Division (since 2014)*
11. *M.C.M. van de Sanden, Member Koninklijke Hollandsche Maatschappij der Wetenschappen (since 2010)*
12. *M.C.M. van de Sanden, Member of the Royal Netherlands Academy of Arts and Sciences (KNAW) (since 2013)*
13. *M.C.M. van de Sanden, Member of the Scientific Advisory Board of the CNR Institute of Nanotechnology, Salento (since 2018)*
14. *M.C.M. van de Sanden, Scientific Advisory Board member Nanolab@TU/e TU Eindhoven (since 2013)*
15. *M.C.M. van de Sanden, KNAW ad hoc committee member Candidate selection new KNAW Board members (since 2019)*

16. *M.C.M. van de Sanden, Member Report Review Committee of the US National Academies of Sciences, Engineering, and Medicine for 2020 Plasma science report*
17. *M.C.M. van de Sanden, Member Scientific Board Netherlands Energy Research Alliance (NERA) (since 2017)*
18. *M.C.M. van de Sanden, Organizer AVS Conference - Program: Plasma Science and Technology division (since 2012)*
19. *M.C.M. van de Sanden, G.J. van Rooij, Member International Advisory Committee Summer school on Vacuum, electron and ion techonologies, Sozopol, Bulgaria (since 2017)*
20. *M.C.M. van de Sanden, Member KNAW Klankbordcommissie Noordzee (since 2019)*
21. *M.C.M. van de Sanden, Member of the EASAC Energy Steering Panel (European Academies) (since 2014)*
22. *M.C.M. van de Sanden, Parttime professorship in the Department of Applied Physics at the Eindhoven University of Technology (since 2011 after fulltime since 2000)*
23. *M.C.M. van de Sanden, S. Welzel, Consultants to PREMiERE Project - CO_2 Plasmas: a fRiEndly MEdium for Renewable Energy (since 2016)*
24. *M.C.M. van de Sanden, Executive Committee Member EERA (European Energy Research Alliance) for NERA (2019-2021)*
25. *M.C.M. van de Sanden, Nederlandse Natuurkundige Vereniging (NNV) vertegenwoordigend lid in de EPS divisie Energie*
26. *M.C.M. van de Sanden, KNAW committee member Evaluation elections new members (since 2014)*
27. *M.C.M. van de Sanden, Member WEST Governance Board in France (since 2014)*
28. *M.C.M. van de Sanden, Board member TKI Gas, Groningen (since 2014)*
29. *A.P.H. Goede, Coordinator European EU Horizon2020 project KEROGREEN (since 2017)*
30. *A.P.H. Goede, Coordinator European EERA Joint Programme Energy Storage, Subprogram 2 Chemical Energy Storage (since 2017)*
31. *A.P.H. Goede, Fellow of European Physical Society (since 2011)*
32. *A.P.H. Goede, Member of the Technical Advisory Board of the German BMBF KOPERNIKUS 10 year Programme P2X (since 2016)*
33. *A. Bieberle-Hütter, Member editorial board of the Dutch physics.org website (since 2018)*
34. *A. Bieberle-Hütter, Subprogram leader: Materials Science, European joined program AMPEA (since 2019)*
35. *A. Bieberle-Hütter, Member Advisory board Raad voor de Scheikunde (Dutch Chemistry Council) (since 2020)*
36. *A. Bieberle-Hütter, Leader Work Group "Microscale and Continuum Modeling" of COST Action Computational materials sciences for efficient water splitting with nanocrystals from abundant elements (2019-2023)*
37. *A. Bieberle-Hütter, Member User Commission ECCM Electrochemical Conversion Materials (since 2020)*
38. *A. Bieberle-Hütter, Member Evaluation Panel 2020 EUREC program Mission Innovation Champions*
39. *S. Er, Guest Editor for MDPI Batteries Special Issue on 'Material Design and Development for Redox Flow Batteries'*
40. *S. Er, Member Scientific Committee Applied Computational Science online symposium (ACOS 2020), Oct 28, 2020, Eindhoven, Netherlands*
41. *G.J. van Rooij, Member Editorial Board Nederlands Tijdschrift voor de Natuurkunde*
42. *G.J. van Rooij, Professor Plasma Chemistry at Faculty of Science & Engineering Maastricht University (since 2020)*
43. *G.J. van Rooij, Lecturer Course series Plasma Surface Interactions at Eindhoven University of Technology (since 2009)*
44. *G.J. van Rooij, Lecturer Course series Optical Diagnostics, Techniques and Applications at Eindhoven University of Technology (since 2018)*
45. *G.J. van Rooij, Member of the Organisational Committee of the Annual Dutch Symposium on Plasma Physics & Radiation Technology, Lunteren*
46. *G.J. van Rooij, International Scientific Advisory Committee International Summer School on Vacuum, Electron and Ion Technologies VEIT (since 2015)*
47. *E. Langereis, Member of NERA working group (Netherlands Energy Research Alliance)*
48. *E. Langereis, Co-organizer TU/e Energy Days (since 2013)*

49. *S. Welzel, Member of the Organizing Committee of the Workshop on the Exploration of Low Temperature Plasma Physics, Kerkrade, Netherlands (since 2012)*
50. *S. Welzel, Lecturer Course series Optical Diagnostics, techniques and applications at Eindhoven University of Technology: Infrared Absorption Spectroscopy: Theory, techniques & applications (since 2014)*