

Andere Artikel

Populärwissenschaftliche Artikel

6. W. G. Bessler, „Wie lange lebt die Brennstoffzelle? Ein EU-Forschungsprojekt zu Wasserstoffautos“, campus Magazin der Hochschule Offenburg 38, Sommer 2015, 90-91 (2015).
5. W. G. Bessler, „Lithiumrevolution für Energiewende und Elektromobilität“, campus Magazin der Hochschule Offenburg, Winter 2013/2014, 26-27 (2013).
4. W. G. Bessler, „Karriereplanung von promovierten Physikochemikern: Ein Rückblick auf das Karriereforum 2011,“ Bunsen-Magazin 13, 155-156 (2011).
3. W. G. Bessler, A. Brockhinke, K. Domke, L. Grill, H. Hoster, T. Jacob, G. Jung, J. Küpper, T. Risse, and T. Zeuch, "Ein Blick aus der Perspektivlosigkeit promovierter Wissenschaftler," Bunsen-Magazin 11, 134-136 (2009).
2. W. G. Bessler, "Stickoxide im Laserlicht. Auf dem Weg zu schadstoffarmer Verbrennung", Ruperto Carola 3, Universität Heidelberg (2005).
1. W. G. Bessler, "Solarzellen und Chlorchemie?", Solarbrief 3/1999, Mitteilungsblatt des Solarenergie-Fördervereins (1999).

Andere Artikel

Im Druck

70. B. Weißhar and W. G. Bessler, "Model-Based Degradation Assessment of Lithium-Ion Batteries in a Smart Microgrid," International Conference on Smart Grid and Clean Energy Technologies, Offenburg, Germany, 10/2015, IEEE Xplore (in press).

2015

69. D. Grübl, B. Bergner, J. Janek, and W. G. Bessler, "Dynamic Modeling of the Reaction Mechanism in a Li/O₂ Cell: Influence of a Redox Mediator," ECS Trans. 69, 11-21 (2015).
68. A. Weidlich, U. Hochberg, W. G. Bessler, „Power-to-Gas optimiert einsetzen“, forschung im fokus, Hochschule Offenburg, 124-125 (2015).

2014

67. W. G. Bessler, „Computergestützte Batterie- und Brennstoffzellentechnik“, forschung im fokus, Hochschule Offenburg, 77-79 (2014).
66. D. Grübl, T. Danner, V. P. Schulz, A. Latz, W. G. Bessler, "Multi-methodology modeling and design of lithium-air cells with aqueous electrolyte," ECS Trans. 62, 137-149 (2014).
65. V. Yurkiv, J. P. Neidhardt, W. G. Bessler, „Elementary kinetic modeling of (electro-)chemical degradation mechanisms of the SOFC anode,“ Proceedings of the 11th European SOFC Forum, Lucerne, Switzerland, p. B0609 (2014).

2013

64. V. Yurkiv, A. Latz, and W. G. Bessler, "Modeling and Simulation the Influence of Solid Carbon Formation on SOFC Performance and Degradation," ECS Trans. 57, 2637-2647 (2013).
63. J. P. Neidhardt, R. J. Kee, and W. G. Bessler, "Electrode reoxidation in solid-oxide cells: Detailed modeling of nickel oxide film growth," ECS Trans. 57, 2573-2582 (2013).

62. T. Jahnke and W. G. Bessler, "Modeling ruthenium dissolution in direct-methanol fuel cells," Proceedings of the 5th International Conference Fundamentals and Development of Fuel Cells (FDfC), Karlsruhe, Germany, p. SPS206 (2013).

61. J. P. Neidhardt, V. Yurkiv, and W. G. Bessler, "Spatiotemporal simulation of nickel oxide and carbon phases formation in solid oxide fuel cells (SOFC)," Proceedings of the 5th International Conference Fundamentals and Development of Fuel Cells (FDfC), Karlsruhe, Germany, p. P104 (2013).

2012

60. R. Costa, R. Spotorno, N. Wagner, Z. Ilhan, V. Yurkiv, W. G. Bessler, and A. Ansar, "Development and Characterization of LSCF/CGO composite cathodes for SOFCs," Proceedings of the 10th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. B04-48 (2012).

59. J. P. Neidhardt and W. G. Bessler, "Oxidation of nickel in solid oxide fuel cell anodes: A 2D kinetic modeling approach," Proceedings of the 10th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. B05-17 (2012).

58. V. Yurkiv, R. Costa, Z. Ilhan, A. Ansar, and W. G. Bessler, "Elementary Kinetics and Mass Transport in LSCF-Based Cathodes: Modeling and Experimental Validation," Proceedings of the 10th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. B10-6 (2012).

57. A. Gorski, V. Yurkiv, W. G. Bessler, and H.-R. Volpp, "CO Oxidation at the SOFC Ni/YSZ Anode: Langmuir-Hinshelwood and Mars-van-Krevelen versus Eley-Rideal Reaction Pathways," Proceedings of the 10th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. B10-81 (2012).

56. J. P. Neidhardt, D. N. Fronczek, T. Jahnke, T. Danner, B. Horstmann, and W. G. Bessler, "A flexible modeling framework for multi-phase management in SOFCs and other electrochemical cells," Proceedings of the 10th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. B10-130 (2012).

55. C. Willich, M. Henke, C. Westner, F. Leucht, W. G. Bessler, J. Kallo, and K. Andreas Friedrich, "Fuel Variation in a Pressurized SOFC," Proceedings of the 10th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. B11-123 (2012).

54. S. Hink, N. Wagner, W. G. Bessler, E. Roduner, "Impedance spectroscopic investigation of proton conductivity in Nafion using transient electrochemical atomic force microscopy (AFM)," Membranes 2, 237-252 (2012).

2011

53. C. Hellwig, S. Sörgel, and W. G. Bessler, "A multi-scale electrochemical and thermal model of a LiFePO₄ battery," ECS Trans. 35, 215-228 (2011).

52. R. Coulon, A. A. Franco, and W. G. Bessler, "Influence of nature and concentration of iron ions on the degradation of PEMFCs: a modeling study," Proceedings of the European Fuel Cell Forum, A1306, Lucerne, Switzerland (2011).

51. A. Bertei, C. Nicoletta, F. Delloro, W. G. Bessler, N. Bundschuh, and A. S. Thorel, "Mathematical Modeling and Simulation for Optimization of IDEAL-Cell Performance," ECS Trans. 35, 883-893 (2011).

50. W. G. Bessler, "Multi-Scale Modeling of Solid Oxide Fuel Cells: From Patterned Anodes to a Power Plant System," ECS Trans. 35, 859-869 (2011).

49. A. Gorski, V. Yurkiv, W. G. Bessler, and H.-R. Volpp, "Combined theoretical and experimental studies of H₂ and CO Oxidation over YSZ Surface," ECS Trans. 35, 727-737 (2011).

48. J. Neidhardt, M. Henke, and W. G. Bessler, "Kinetic modeling of nickel oxidation in SOFC anodes," ECS <https://www.ees.hs-offenburg.de/nc/publikationen/andere-artikel/>

Trans. 35, 1621-1629 (2011).

47. A. Weber, A. Utz, J. Joos, E. Ivers-Tiffée, H. Störmer, D. Gerthsen, V. Yurkiv, H.-R. Volpp, and W. G. Bessler, "Electrooxidation of Reformate Gases at Model Anodes," ECS Trans. 35, 1513-1528 (2011).

46. V. Yurkiv, A. Utz, A. Weber, E. Ivers-Tiffée, H.-R. Volpp, and W. G. Bessler, "Elementary kinetic numerical simulation of electrochemical CO oxidation on Ni/YSZ pattern anodes," ECS Trans. 35, 1743-1751 (2011).

45. F. Leucht, S. Seidler, M. Henke, J. Kallo, W. G. Bessler, U. Maier, and K. A. Friedrich, "Solid Oxide Fuel Cells: From Pressurized Cell Tests to System Dynamics Assessment, Proceedings of the International Colloquium on Environmentally Preferred Advanced Generation (ICEPAG), 2011-4406 (2011).

2010

44. M. Vogler, H. Störmer, D. Gerthsen, A. Utz, A. Weber, E. Ivers-Tiffée, and W. G. Bessler, "Electrochemistry and mechanism of hydrogen oxidation at Ni/YSZ patterned anodes," Proceedings of the 9th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. 9-94 (2010).

43. G. Schiller, W. G. Bessler, C. Willich, and K. A. Friedrich, "Application of In-Situ Diagnostic Methods for the Study of SOFC Operational Behaviour," Proceedings of the 9th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland (2010).

42. F. Leucht, W. G. Bessler, J. Kallo, and K. A. Friedrich, "Pressurized SOFC System Simulation for Hybrid Power Plant Operation," Proceedings of the 9th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p.3-53 (2010).

41. V. Yurkiv, H.-R. Volpp, and W. G. Bessler, "Heterogeneous chemistry and electrochemistry of carbon monoxide at a Ni/YSZ anode," Proceedings of the 9th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. 9-1 (2010).

40. C. Willich, S. Gewies, W. G. Bessler, and G. Schiller, "Experimental and Modelling Study of a Segmented SOFC Operated with Methane-Steam Mixtures," Proceedings of the 9th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. 6-88 (2010).

39. T. Ou, C. Nicoletta, F. Delloro, W. G. Bessler, N. Bundschuh, and A. Thorel, "Mathematical Modelling and Experimental Validation for the IDEAL-Cell Proof-of-Concept," Proceedings of the 9th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, p. 6-16 (2010).

2009

38. R. Coulon, W. G. Bessler, and A. A. Franco, "Modeling Chemical Degradation of a Polymer Electrolyte Membrane and its Impact on Fuel Cell Performance," ECS Transactions 25 (35), 259-273 (2009).

37. T. Ou, F. Delloro, C. Nicoletta, W. G. Bessler, and A. Thorel, "Mathematical model of mass and charge transport and reaction in the central membrane of the IDEAL-Cell," ECS Transactions 25, 1295-1304 (2009).

36. M. Vogler and W. G. Bessler, "The role of interstitial hydrogen species in Ni/YSZ patterned anodes: A 2D modeling study," ECS Transactions 25, 1957-1966 (2009).

35. G. Schiller, W. G. Bessler, K. A. Friedrich, S. Gewies, and C. Willich, "Spatially Resolved Electrochemical Performance in a Segmented Planar SOFC," ECS Transactions 17, 79-87 (2009).

2008

34. G. Schiller, N. Bayer Botero, W. G. Bessler, K. A. Friedrich, S. Gewies, and C. Willich, "Spatially Resolved Electrochemical Performance in a Segmented Planar SOFC," Proceedings of the Fuel Cell Seminar & Exposition, Phoenix, AZ, USA (2008).

33. W. G. Bessler, "Hydrocarbon direct oxidation or internal reforming? A critical discussion from an elementary kinetic viewpoint," Proceedings of the 8th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, B1101 (2008).
32. W. G. Bessler, "Rapid impedance modeling via potential step and current relaxation simulations," Proceedings of the 8th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, A0215 (2008).
31. M. Vogler, C. Hellwig, and W. G. Bessler, "Surface diffusion and adsorbate spillover at Ni/YSZ and Pt/YSZ catalysts," Proceedings of the 8th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, A0523 (2008).
30. G. Schiller, K. A. Friedrich, C. Willich, S. Gewies, N. Bayer Botero, and W. G. Bessler, "Spatial distribution of electrochemical performance in a planar segmented SOFC," Proceedings of the 8th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, A0306 (2008).
29. J. Rossmeisl and W. G. Bessler, "Trends in catalytic activity for SOFC anode materials," Proceedings of the 8th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, A0503 (2008).

2007

28. W. G. Bessler, S. Gewies, and M. Vogler, "A new approach for elementary-kinetic modeling of internal-reforming SOFCs," ECS Transactions 7, Tenth International Symposium on Solid Oxide Fuel Cells (SOFC-X), 1801-1810 (2007).
27. S. Gewies, W. G. Bessler, V. Sonn, and E. Ivers-Tiffée, "Experimental and modeling study of the impedance of Ni/YSZ cermet anodes," ECS Transactions 7, Tenth International Symposium on Solid Oxide Fuel Cells (SOFC-X), 1573-1582 (2007).
26. M. Vogler, D. Barzan, H. Kronemayer, C. Schulz, M. Horiuchi, S. Suganuma, Y. Tokutake, J. Warnatz, and W. G. Bessler, "Direct-Flame Solid-Oxide Fuel Cell (DFFC): A Thermally Self-Sustained, Air Self-Breathing, Hydrocarbon-Operated SOFC System in a Simple, No-Chamber Setup," ECS Transactions 7, Tenth International Symposium on Solid Oxide Fuel Cells (SOFC-X), 555-564 (2007).

2006

25. M. Vogler, W. G. Bessler, J. Warnatz, A. Bieberle-Hütter, and L. J. Gauckler, "Towards an understanding of Ni anodes in solid oxide fuel cells: Electrochemical modeling and experimental validation using patterned anodes," Proceedings of the 7th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, B073 (2006).
24. W. G. Bessler, "Gas concentration impedance of SOFC anodes," Proceedings of the 7th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, P0707 (2006).
23. W. G. Bessler, D. G. Goodwin, and J. Warnatz, "The influence of equilibrium potential on electrochemical kinetics of SOFC anodes," Proceedings of the 7th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, P0708 (2006).
22. S. Gewies, W. G. Bessler, J. Warnatz, V. Sonn, and E. Ivers-Tiffée, "Coupled electrochemistry and transport in Ni/YSZ cermets: Impedance simulations and experimental validation," Proceedings of the 7th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, P0713 (2006).
21. H. Kronemayer, W. G. Bessler, M. Vogler, M. Horiuchi, S. Suganuma, Y. Tokutake, C. Schulz, and J. Warnatz, "A flame as fuel reformer for solid oxide fuel cells," Proceedings of the 7th European Solid Oxide Fuel Cell Forum, Lucerne, Switzerland, P1106 (2006).

2005

20. W. G. Bessler, "Gas dynamics impedance of solid oxide fuel cells," Proceedings of the Risø International Symposium on Materials Science: Solid State Electrochemistry, S. Linderoth, et al., Editors, p. 139-145, Risø <https://www.ees.hs-offenburg.de/nc/publikationen/andere-artikel/>

National Laboratory, Roskilde, Dänemark (2005).

19. W. G. Bessler, S. Gewies, and J. Warnatz. "Impedance simulations of SOFC pattern and cermet anodes from detailed electrochemical models," Proceedings of the Ninth international symposium on solid oxide fuel cells (SOFC-IX) (Quebec City, Canada, 2005), 708-718.

18. J. W. Daily, T. B. Settersten, W. G. Bessler, C. Schulz, and V. Sick. "A computer code to simulate laser excitation and collision dynamics in nitric oxide," Proc. of the 4th Joint meeting of the US sections of the combustion institute (Philadelphia, 2005).

17. T. Lee, W. G. Bessler, H. Kronemayer, C. Schulz, J. B. Jeffries, and R. K. Hanson. "Quantitative temperature measurements in high-pressure flames with multi-line nitric oxide (NO)-LIF thermometry," Proc. of the 4th Joint meeting of the US sections of the combustion institute (Philadelphia, 2005).

16. T. B. Settersten, B. D. Patterson, H. Kronemayer, V. Sick, W. G. Bessler, C. Schulz, and J. W. Daily. "Population cycling in saturated laser-induced fluorescence detection of nitric oxide," Proc. of the 4th Joint meeting of the US sections of the combustion institute (Philadelphia, 2005).

2004

15. W. G. Bessler and J. Warnatz. "Calculation of impedance by transient numerical simulation of SOFC elementary electrochemistry," Proc. of the 6th European SOFC Forum (Lucerne, Switzerland, 2004), 754-763.

14. T. Lee, J. B. Jeffries, R. K. Hanson, W. G. Bessler, and C. Schulz. "Carbon dioxide UV laser-induced fluorescence imaging in high-pressure flames," in 42nd AIAA Aerospace Sciences Meeting and Exhibit, January 5-8 (Reno, NV, 2004), Paper No. 2004-0386.

13. J. W. Daily, W. G. Bessler, C. Schulz, and V. Sick. "Role of non-stationary collisional dynamics in determining nitric oxide LIF spectra," in 42nd AIAA Aerospace Sciences Meeting and Exhibit, January 5-8 (Reno, NV, 2004), Paper No. 2004-0389.

12. G. Suck, J. Jakobs, S. Nicklitzsch, T. Lee, W. G. Bessler, M. Hofmann, F. Zimmermann, and C. Schulz, "NO laser-induced fluorescence imaging in the combustion chamber of a spray-guided direct-injection gasoline engine," SAE Technical Paper No. 2004-01-1918 (2004).

2003

11. T. Lee, J. B. Jeffries, R. K. Hanson, W. G. Bessler, and C. Schulz. "Quantitative NO-LIF Temperature Imaging in High-Pressure Flames," in 41st AIAA Aerospace Sciences Meeting and Exhibit, January 6-9 (Reno, NV, 2003), Paper No. 2003-0583.

10. W. G. Bessler, C. Schulz, V. Sick, and J. W. Daily. "A versatile modeling tool for nitric oxide LIF spectra (<http://www.pci.uni-heidelberg.de/pci/lifsim>)," Proc. of the 3rd Joint meeting of the US sections of the combustion institute (Chicago, 2003), paper PI05.

9. W. G. Bessler and C. Schulz, "Strategien zur quantitativen, laser-gestützten NO-Diagnostik in der motorischen Verbrennung," in Berichte zur Energie- und Verfahrenstechnik (BEV), Heft 3.1, A. Leipertz, Editor (ESYTEC Energie- und Systemtechnik Erlangen GmbH, Haus der Technik e.V., 18./19. März, 2003), p. 239-250.

8. W. G. Bessler, T. Lee, C. Schulz, J. B. Jeffries, and R. K. Hanson. "Strategies for quantitative NO-concentration and temperature measurements by NO LIF in high pressure flames," in 3rd Joint meeting of the US sections of the combustion institute (Chicago, 2003), D33,1-6.

7. W. G. Bessler, T. Lee, C. Schulz, J. B. Jeffries, and R. K. Hanson. "UV laser-induced fluorescence of carbon dioxide in high-pressure flames," in 3rd Joint meeting of the US sections of the combustion institute (Chicago, 2003), D35, 1-6.

2002

6. T. Lee, D.-I. Shin, J. B. Jeffries, R. K. Hanson, W. G. Bessler, and C. Schulz. "Laser-Induced Fluorescence Detection of NO in High-Pressure Flames with A-X(0,0), (0,1), and (0,2) excitation," in 40th AIAA Aerospace Sciences Meeting and Exhibit (Reno, NV, January 14-17, 2002), Paper No. 2002-0399.
5. W. G. Bessler, C. Schulz, T. Lee, D. I. Shin, M. Hofmann, J. B. Jeffries, J. Wolfrum, and R. K. Hanson. "Quantitative NO-LIF imaging in high-pressure flames," in First International conference on optical and laser diagnostics (ICOLAD) (London, December 16-20, 2002).

2001

4. M. Hartmann, M. Schenk, J. Höffner, K. U. Reisenweber, W. Bessler, C. Schulz, F. Beyrau, J. Egermann, W. Ipp, and A. Leipertz, "Einfluss der Abgasrückführung auf die innermotorische NO-Bildung und Temperatur bei direkteinspritzenden Ottomotoren," in Berichte zur Energie- und Verfahrenstechnik (BEV), Heft 1, A. Leipertz, Editor (ESYTEC Energie- und Systemtechnik Erlangen GmbH, Haus der Technik e.V., 13./14. März, 2001), p. 417-428.
3. W. G. Bessler, C. Schulz, T. Lee, J. B. Jeffries, and R. K. Hanson. "Laser-induced-fluorescence detection of nitric oxide in high-pressure flames with A-X(0,1) excitation," Proceedings of the Western States Section of the Combustion Institute, Spring Meeting (Oakland, CA, 2001).
2. W. G. Bessler, C. Schulz, M. Hartmann, and M. Schenk, "Quantitative in-cylinder NO-LIF imaging in a direct-injected gasoline engine with exhaust gas recirculation," SAE Technical Paper Series No. 2001-01-1978 (2001).

2000

1. L. Herrmann, F. Keller, G. König, E. Wagner, W. Bessler, F. Hildenbrand, J. Schorr, C. Schulz, J. Wolfrum, J. Bolz, and D. Brüggemann, "Laserspektroskopische Methoden zur Untersuchung des Einflusses der Gemischbildung auf NO- und Russkonzentration im Dieselmotor," in Laserdiagnostische und plasmatechnologische Grundlagen zur Verminderung von Emissionen und Kraftstoffverbrauch von DI-Verbrennungsmotoren, ISBN 3-00-006781-7, VDI-TZ, Editor Düsseldorf, 2000), p. 89-104.