

## Publikationsliste

**Matthias Hackert-Oschätzchen**

Privatdozent

Doktoringenieur habitatus

Diplomphysiker

info@matthiashackert.de

www.matthiashackert.de

## Veröffentlichungen

N. Lehnert, A. Martin, **M. Hackert-Oschätzchen**, A. Schubert, R. Morgenstern, T. Lampke: *Multiphysics Simulation of Localised Anodisation of Aluminium*, Proceedings of the 18th euspen International Conference, accepted for publication

N. Lehnert, G. Meichsner, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Study on the Influence of the Processing Speed in the Generation of Complex Geometries in Aluminium Matrix Composites by Electrochemical Precision Machining*, Procedia CIRP, accepted for publication

T. Berger, H.-P. Schulze, **M. Hackert-Oschätzchen**, M. Herzig, O. Kröning, A. Schubert: *Design of a High Dynamic Piezo Module for Resource-efficient Electrothermal Precision Ablation*, Procedia CIRP, accepted for publication

A. Martin, **M. Hackert-Oschätzchen**, N. Lehnert, A. Schubert: *Analysis of the Fundamental Removal Geometry in Electrochemical Profile Turning with Continuous Electrolytic Free Jet*, Procedia CIRP, accepted for publication

N. Lehnert, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Derivation of Guidelines for Reliable Finishing of Aluminium Matrix Composites by Jet Electrochemical Machining*, Procedia CIRP, accepted for publication

R. Schimmelpfennig, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Microstructuring of Joining Areas in Aluminum Alloy Sheets by Jet Electrochemical Machining*, Technologies for Lightweight Structures, Volume 1, 2017, S. 17-25, doi:10.21935/tls.v1i2.80

A. Martin, **M. Hackert-Oschätzchen**, N. Lehnert, A. Schubert: *Analysis of the Removal Geometry in Electrochemical Straight Turning with Continuous Electrolytic Free Jet*, Proceedings of the 13th International Symposium on Electrochemical Machining Technology, Publication Series Applied Electrochemistry in Material Science, Editors: A. Michaelis, M. Schneider, Vol. 6, 2017, ISBN 978-3-8396-1261-3

M. Yahyavi Zanjani, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Evaluation of On-Machine Gap Measurement Strategies in Jet-Electrochemical Machining*, Proceedings of the 13th International Symposium on Electrochemical Machining Technology, Publication Series Applied Electrochemistry in Material Science, Editors: A. Michaelis, M. Schneider, Vol. 6, 2017, ISBN 978-3-8396-1261-3

S. Loebel, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Development of Interfaces for Material Data Integration in Models of Electrochemical Machining Processes*, Proceedings of the 13th International Symposium on Electrochemical Machining Technology, Publication Series Applied Electrochemistry in Material Science, Editors: A. Michaelis, M. Schneider, Vol. 6, 2017, ISBN 978-3-8396-1261-3

G. Meichsner, T. Petzold, **M. Hackert-Oschätzchen**, J. Edelmann, A. Schubert, M. Putz, G. Hahn: *Reduplication of Precise Internal Geometries by Pulsed Electrochemical Machining*, Proceedings of the 13th International Symposium on Electrochemical Machining Technology, Publication Series Applied Electrochemistry in Material Science, Editors: A. Michaelis, M. Schneider, Vol. 6, 2017, ISBN 978-3-8396-1261-3

R. Paul, **M. Hackert-Oschätzchen**, M. Zinecker, A. Schubert: *Approximation of the Flow Field in Electrochemical Machining Incorporating Pressure Drop Calculation*, Proceedings of the European COMSOL Conference, 2017

I. Schaarschmidt, M. Zinecker, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Multiscale Model of the PECM with Oscillating Cathode for External Geometries using a Virtual Switch*, Proceedings of the European COMSOL Conference, 2017

P. Steinert, R. Paul, I. Schaarschmidt, M. Zinecker, **M. Hackert-Oschätzchen**, T. Muschalek, J. Esslinger, A. Schubert: *Analysis of Mixing Chambers for the Processing of Two-component Adhesives for Transport Applications*, Proceedings of the European COMSOL Conference, 2017

M. Penzel, M. Zinecker, A. Schubert, **M. Hackert-Oschätzchen**, A. Ludwig, A. Adamczewski, A. Schulz, M. Lausberg: *Investigation of Forced Convection in Pin Structured Cold Plates for Improved Heat Transfer and Heat Spreading*, In: Proceedings of the 9th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, 2017

M. Herzig, T. Berger, H.-P. Schulze, **M. Hackert-Oschätzchen**, O. Kröning, A. Schubert: *Modification of the process dynamics in micro-EDM by means of an additional piezo-control system*, AIP Conference Proceedings Volume 1896, 2017, doi:<http://dx.doi.org/10.1063/1.5008048>

A. Schubert, T. Berger, A. Martin, **M. Hackert-Oschätzchen**, N. Treffkorn, R. Kühn: *Surface Structuring of Boron Doped CVD Diamond by Micro Electrical Discharge Machining*, In: Proceedings of the 20th International ESAFORM Conference on Material Forming, 2017

R. Kühn, T. Berger, M. Prieske, R. Börner, **M. Hackert-Oschätzchen**, H. Zeidler, A. Schubert: *Deposition and Micro Electrical Discharge Machining of CVD-Diamond Layers Incorporated with Silicon*, AIP Conference Proceedings Volume 1896, 2017, doi:<http://dx.doi.org/10.1063/1.5008057>

**M. Hackert-Oschätzchen**, R. Paul, M. Kowalick, D. Kuhn, G. Meichsner, M. Zinecker, A. Schubert: *Characterization of an Electrochemical Machining Process for Precise Internal Geometries by Multiphysics Simulation*, Procedia CIRP, Volume 58, 2017, S. 175–180, doi:10.1016/j.procir.2017.04.021

I. Schaarschmidt, M. Zinecker, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Multiscale Multiphysics Simulation of a Pulsed Electrochemical Machining Process with Oscillating Cathode for Microstructuring of Impact Extrusion Punches*, Procedia CIRP, Volume 58, 2017, S. 257–262, doi:10.1016/j.procir.2017.04.005

M. Sieber, R. Morgenstern, D. Kuhn, **M. Hackert-Oschätzchen**, A. Schubert, T. Lampke: *Downscaled anodic oxidation process for aluminium in oxalic acid*, IOP Conference Series: Materials Science and Engineering, Volume 181, 2017, doi:10.1088/1757-899X/181/1/012044

D. Kuhn, A. Martin, C. Eckart, M. Sieber, R. Morgenstern, **M. Hackert-Oschätzchen**, T. Lampke, A. Schubert: *Localised anodic oxidation of aluminium material using a continuous electrolyte jet*, IOP Conference Series: Materials Science and Engineering, Volume 181, 2017, doi:10.1088/1757-899X/181/1/012042

A. Spille-Kohoff, G. Meichsner, **M. Hackert-Oschätzchen**, R. Schulze, S. Busan: *3D CFD Simulation of Electrochemical Machining Based on Dissolving Characteristics within the SIREKA Joint Research Project*, Proceedings of the 12th International Symposium on Electrochemical Machining Technology, 2016, ISBN 978-9-4619746-1-7

**M. Hackert-Oschätzchen**, N. Lehnert, G. Meichsner, C. Scherf, A. Martin, A. Schubert: *Experimental Derivation of Processing Strategies for Electrochemical Precision Machining of Aluminium Matrix Composites*, Proceedings of the 12th International Symposium on Electrochemical Machining Technology, 2016, ISBN 978-9-4619746-1-7

A. Martin, D. Kuhn, **M. Hackert-Oschätzchen**, A. Schubert: *Design and Realisation of a Specific Device for Jet Electrochemical Machining of Rotating Work Pieces*, Proceedings of the 12th International Symposium on Electrochemical Machining Technology, 2016, ISBN 978-9-4619746-1-7

G. Meichsner, **M. Hackert-Oschätzchen**, T. Petzold, M. Krönert, J. Edelmann, A. Schubert, M. Putz: *Removal Characteristic of Stainless Steel in Pulsed Electrochemical Machining*, Proceedings of the 12th International Symposium on Electrochemical Machining Technology, 2016, ISBN 978-9-4619746-1-7

**M. Hackert-Oschätzchen**, N. Lehnert, M. Kowalick, C. Scherf, A. Martin, A. Schubert: *Analysis of an Electrochemical Machining Process for Particle Reinforced Aluminium Matrix Composites*, Proceedings of the European COMSOL Conference, 2016

**M. Hackert-Oschätzchen**, M. Kowalick, R. Paul, M. Zinecker, D. Kuhn, G. Meichsner, A. Schubert: *2-D Axisymmetric Simulation of the Electrochemical Machining of Internal Precision Geometries*, Proceedings of the European COMSOL Conference, 2016

**M. Hackert-Oschätzchen**, M. Penzel, M. Kreißig, M. Kowalick, M. Zinecker, G. Meichsner, A. Schubert: *Transient Simulation of an Electrochemical Machining Process for Stamping and Extrusion Dies*, Proceedings of the European COMSOL Conference, 2016

**M. Hackert-Oschätzchen**, N. Lehnert, A. Martin, G. Meichsner, A. Schubert: *Surface Characterization of Particle Reinforced Aluminum-Matrix Composites Finished by Pulsed Electrochemical Machining*, Procedia CIRP, Volume 45, 2016, S. 351–354, doi:10.1016/j.procir.2016.02.078

A. Martin, C. Eckart, N. Lehnert, **M. Hackert-Oschätzchen**, A. Schubert: *Generation of Defined Surface Waviness on Tungsten Carbide by Jet Electrochemical Machining with Pulsed Current*, Procedia CIRP, Volume 45, 2016, S. 231–234, doi:10.1016/j.procir.2016.02.076

G. Meichsner, **M. Hackert-Oschätzchen**, M. Krönert, J. Edelmann, A. Schubert, M. Putz: *Fast Determination of the Material Removal Characteristics in Pulsed Electrochemical Machining*, Procedia CIRP, Volume 46, 2016, S. 123–126, doi:10.1016/j.procir.2016.03.175

**M. Hackert-Oschätzchen**, N. Lehnert, A. Martin, A. Schubert: *Jet Electrochemical Machining of Particle Reinforced Aluminum Matrix Composites with Different Neutral Electrolytes*, IOP Conference Series: Materials Science and Engineering, Volume 118, 2016, doi:10.1088/1757-899X/118/1/012036

A. Schubert, U. Götze, **M. Hackert-Oschätzchen**, N. Lehnert, F. Herold, G. Meichsner, A. Schmidt: *Evaluation of the Technical-Economic Potential of Particle-Reinforced Aluminum Matrix Composites and Electrochemical Machining*, IOP Conference Series: Materials Science and Engineering, Volume 118, 2016, doi:10.1088/1757-899X/118/1/012035

A. Schubert, **M. Hackert-Oschätzchen**, A. Martin, S. Winkler, D. Kuhn, G. Meichsner, H. Zeidler, J. Edelmann: *Generation of Complex Surfaces by Superimposed Multi-dimensional Motion in Electrochemical Machining*, Procedia CIRP, Volume 42, 2016, S. 384–389, doi:10.1016/j.procir.2016.02.216

A. Schubert, H. Zeidler, R. Kühn, **M. Hackert-Oschätzchen**, S. Flemmig, N. Treffkorn: *Investigation of Ablation Behaviour in Micro-EDM of Nonconductive Ceramic Composites ATZ and Si<sub>3</sub>N<sub>4</sub>-TiN*, Procedia CIRP, Volume 42, 2016, S. 727–732, doi:10.1016/j.procir.2016.02.309

**M. Hackert-Oschätzchen**: *Gestaltung von elektrochemischen Abtragprozessen durch Multiphysiksimulation gezeigt an der Endformgebung von Mikrobohrungen* (Habilitationsschrift). In: Schubert, A. (Hrsg.): *Scripts Precision and Microproduction Engineering*, Band 10. Verlag Wissenschaftliche Scripten, 2015, ISBN 978-3-95735-028-2.

A. Schubert, **M. Hackert-Oschätzchen**, N. Lehnert: *Endformgebung von hochfesten, partikelverstärkten Aluminiummatrix-Verbundwerkstoffen (AMCs) durch elektrochemisches Abtragen*, DGM-Magazin DIALOG, Ausgabe 4 2015, S. 104–107, ISSN 2193:3383

**M. Hackert-Oschätzchen**, R. Morgenstern, N. Lehnert, A. Martin, T. Lampke, A. Schubert: *Basic Research on Electrochemical Machining of Particle Reinforced Aluminium Matrix Composites*, Proceedings of the 11th International Symposium on Electrochemical Machining Technology, 2015

A. Spille-Kohoff, R. Schulze, G. Meichsner, **M. Hackert-Oschätzchen**, S. Busan: *Optimized design of electrochemical machining processes by a combination of 3D simulation and rapid prototyping of cathodes*, Proceedings of the 11th International Symposium on Electrochemical Machining Technology, 2015

**M. Hackert-Oschätzchen**, R. Paul, M. Kowalick, A. Martin, G. Meichsner, A. Schubert: *Multiphysics Simulation of the Material Removal in Jet Electrochemical Machining*, Procedia CIRP, Volume 31, 2015, S. 197–202, doi:10.1016/j.procir.2015.03.098

O. Kröning, M. Herzig, **M. Hackert-Oschätzchen**, R. Kühn, H. Zeidler, A. Schubert: *Micro Electrical Discharge Machining of Tungsten Carbide with Ultra-Short Pulse*, Key Engineering Materials, Volumes 651-653, 2015, S. 759-764, ISSN 1662-9795, doi:10.4028/www.scientific.net/KEM.651-653.759

**M. Hackert-Oschätzchen**, R. Paul, A. Martin, G. Meichsner, N. Lehnert, A. Schubert: *Study on the Dynamic Generation of the Jet Shape in Jet Electrochemical Machining*, Journal of Materials Processing Technology, 223:240–251, 2015, doi:10.1016/j.jmatprotec.2015.03.049

G. Meichsner, **M. Hackert-Oschätzchen**, M. Krönert, J. Edelmann, A. Schubert, G. Hahn, M. Putz: *Characterisation of the Influence of Material Hardness in Precise Electrochemical Machining of Steel*, Proceedings of the 17th International Conference on the Strength of Materials (ICSMA 17), 2015, ISBN 978-80-87434-07-9

H. Zeidler, A. Martin, M. Kowalick, **M. Hackert-Oschätzchen**, A. Schubert: *Analysis of a PECM Electrode Concept for Micro Injection Moulds by Multiphysics Simulation*, In: Proceedings of the 4M/ICOMM2015 Conference, 2015, 137, S. 550-553, doi:10.3850/978-981-09-4609-8\_137

G. Meichsner, L. Boenig, **M. Hackert-Oschätzchen**, M. Krönert, T. Petzold, J. Edelmann, A. Schubert: *Quantifizierung der Gasentwicklung beim elektrochemischen Präzisionsabtragen*, Galvanotechnik, 106:484-489, 2015, ISSN 0016-4232

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Evaluation of Gap Control Strategies in Jet Electrochemical Machining on Defined Shape Deviations*, Proceedings of the 10th International Symposium on Electrochemical Machining Technology, 2014, Editors: D. Bähre, A. Rebschläger, ISBN 978-3-95735-010-7

G. Meichsner, L. Boenig, **M. Hackert-Oschätzchen**, M. Krönert, T. Petzold, J. Edelmann, A. Schubert: *Determination of the gas generation during precise electrochemical machining*, Proceedings of the 10th International Symposium on Electrochemical Machining Technology, 2014, Editors: D. Bähre, A. Rebschläger, ISBN 978-3-95735-010-7

**M. Hackert-Oschätzchen**, N. Lehnert, M. Kowalick, G. Meichsner, A. Schubert: *Analysis of the Electrochemical Removal of Aluminium Matrix Composites Using Multiphysics Simulation*, Proceedings of the European COMSOL Conference, 2014

**M. Hackert-Oschätzchen**, M. Penzel, M. Kowalick, G. Meichsner, A. Schubert: *Transient Simulation of the Electrolyte Flow in a Closed Device for Precise Electrochemical Machining*, Proceedings of the European COMSOL Conference, 2014

S. Winkler, J. Edelmann, A. Schubert, **M. Hackert-Oschätzchen**: *Elektrochemisches Präzisionsabtragen - neue Möglichkeiten zur Formgebung schwer bearbeitbarer Werkstoffe*, Ingenieur-Spiegel, 2014, Nr. 3, S. 84-85, ISSN: 1868-5919

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Analysis of Strategies for Gap Control in Jet Electrochemical Machining*, Proceedings of the 14th euspen International Conference, 2014, ISBN 978-0-9566790-3-1

A. Schubert, H. Zeidler, A. Martin, **M. Hackert-Oschätzchen**, A. Martin, K. Kempen, J.-P. Kruth: *Jet-Electrochemical Machining of Selective Laser Melted Aluminum and Steel Alloys for Micro Injection Moulds*, Proceedings of the 14th euspen International Conference, 2014, ISBN 978-0-9566790-3-1

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *An investigation into the influence of micro structures on nucleate boiling processes*, In: Proceedings of 13th International Conference on Simulation and Experiments in Heat Transfer and its Applications, 2014, doi:10.2495/HT140061

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *Application of Nucleate Boiling with Micro Structured Surfaces for Electronic Cooling*, Proceedings of the PCIM EUROPE, 2014, S. 1141-1148, ISBN 978-3-8007-3603-4

O. Kröning, M. Herzig, H.-P. Schulze, **M. Hackert-Oschätzchen**, R. Kühn, H. Zeidler, A. Schubert: *Resource-efficient machining of hard metals*, Material Forming ESAFORM 2014, ISBN 978-3-03795-801-8, pp. 708-714, also published in: Key Engineering Materials, Volumes 611-612, 2014, S. 708-714, ISSN 1662-9795, doi:10.4028/www.scientific.net/KEM.611-612.708

A. Schubert, G. Meichsner, L. Boenig, **M. Hackert-Oschätzchen**, M. Krönert: *Ressourceneffiziente Gestaltung des elektrochemischen Präzisionsabtragens*, Galvanotechnik, 105:703-709, 2014, ISSN 0016-4232

**M. Hackert-Oschätzchen**, L. Boenig, G. Meichsner, M. Zinecker, M. Krönert, A. Martin, A. Schubert: *Elektrochemisches Präzisionsabtragen rotierender Werkstücke*, Galvanotechnik, 105:462-467, 2014, ISSN 0016-4232

M. M. Lohrengel, K.P. Rataj, N. Schubert, M. Schneider, S. Höhn, A. Michaelis, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Electrochemical Machining of Hard Metals – WC/Co as an example*, Powder Metallurgy, Volume 57 Issue 1, 2014, Pages 21-30

**M. Hackert-Oschätzchen**, L. Boenig, G. Meichsner, M. Zinecker, M. Krönert, A. Schubert: *Precise Electrochemical Machining of Rotating Workpieces*, Proceedings of the 9th International Symposium on Electrochemical Machining Technology, 2013, Editors: A. Schubert, **M. Hackert-Oschätzchen**, ISBN 978-3-942267-95-3

B. Hommel, F. Jähn, M. Scharnbeck, R. Garn, A. Lenk, **M. Hackert-Oschätzchen**, A. Schubert: *Edge Rounding of Micro Bores by Inverse Jet Electrochemical Machining*, Proceedings of the 9th International Symposium on Electrochemical Machining Technology, 2013, Editors: A. Schubert, **M. Hackert-Oschätzchen**, ISBN 978-3-942267-95-3

H. Zeidler, A. Martin, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Jet Electrochemical Machining of Selective Laser Sintered Metals for Micro Injection Moulds*, Proceedings of the 9th International Symposium on Electrochemical Machining Technology, 2013, Editors: A. Schubert, **M. Hackert-Oschätzchen**, ISBN 978-3-942267-95-3

A. Schubert, G. Meichsner, L. Boenig, **M. Hackert-Oschätzchen**, M. Krönert, J. Edelmann: *Resource-Efficient Design of Precise Electrochemical Machining*, Proceedings of the 9th International Symposium on Electrochemical Machining Technology, 2013, Editors: A. Schubert, **M. Hackert-Oschätzchen**, ISBN 978-3-942267-95-3

**M. Hackert-Oschätzchen**, M. Kowalick, G. Meichsner, A. Schubert, B. Hommel, F. Jähn, M. Scharnbeck, R. Garn, A. Lenk: *2D Axisymmetric Simulation of the Electrochemical Finishing of Micro Bores by Inverse Jet Electrochemical Machining*, Proceedings of the European COMSOL Conference, 2013

**M. Hackert-Oschätzchen**, R. Paul, M. Penzel, M. Zinecker, A. Schubert: *Simulation of Heat Transfer on Periodic Microstructured Surfaces for Evaporation Cooling*, Proceedings of the European COMSOL Conference, 2013

**M. Hackert-Oschätzchen**, M. Kreißig, M. Kowalick, H. Zeidler, A. Schubert, O. Kröning, M. Herzig, H.-P. Schulze: *Single Discharge Simulations of Needle Pulses for Electrothermal Ablation*, Proceedings of the European COMSOL Conference, 2013

**M. Hackert-Oschätzchen**, A. Martin, R. Kühn, G. Meichsner, M. Zinecker, A. Schubert: *Mikrostrukturierung von Hartmetall durch elektrochemisches Abtragen mit geschlossenem Freistrahler - Teil 2*, Galvanotechnik, 104:1308-1321, 2013, ISSN 0016-4232

**M. Hackert-Oschätzchen**, A. Martin, R. Kühn, G. Meichsner, M. Zinecker, A. Schubert: *Mikrostrukturierung von Hartmetall durch elektrochemisches Abtragen mit geschlossenem Freistrahler - Teil 1*, Galvanotechnik, 104:1133-1139, 2013, ISSN 0016-4232

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *Determining of micro structuring technologies for nucleate boiling surfaces*, Proceedings of the 8th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, 2013

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *Energy-efficient cooling using microstructures for nucleate boiling process*, Proceedings of the PCIM EUROPE, 2013, S. 1036-1041, ISBN 978-3-8007-3505-1

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, M. Zinecker, A. Schubert: *Micro Structuring of Carbide Metals Applying Jet Electrochemical Machining*, Precision Engineering, 37:621–634, 2013, doi: 10.1016/j.precisioneng.2013.01.007

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, M. Kowalick, H. Zeidler, A. Schubert: *Inverse Jet Electrochemical Machining for Functional Edge Shaping of Micro Bores*, Procedia CIRP, 6:379-384, 2013, doi:10.1016/j.procir.2013.03.060

A. Schubert, H. Zeidler, M. Hahn, **M. Hackert-Oschätzchen**, J. Schneider: *Micro-EDM Milling of Electrically Nonconducting Zirconia Ceramics*, Procedia CIRP, 6:298–303, 2013, doi: 10.1016/j.procir.2013.03.026

A. Schubert, H. Zeidler, **M. Hackert-Oschätzchen**, J. Schneider, M. Hahn: *Enhancing Micro-EDM using Ultrasonic Vibration and Strategies for Machining of Nonconducting Ceramics*, Journal of Mechanical Engineering, 59:156-164, 2013, doi:10.5545/sv-jme.2012.442

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, A. Martin, J. Edelmann: *Präzises, elektrochemisches Mikro-Drahtschneiden*, Galvanotechnik, 104:484-490, 2013, ISSN 0016-4232

**M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, A. Martin, A. Schubert: *Micro Machining with Continuous Electrolytic Free Jet*, Precision Engineering, Volume 36, Issue 4, 2012, Pages 612-619, doi: 10.1016/j.precisioneng.2012.05.003

A. Schubert, P. Steinert, T. Schmidt, **M. Hackert-Oschätzchen**: *Manufacturing of Tribologically Optimized Surfaces for Powertrain Applications*, Key Engineering Materials, Volumes 523-524, 2012, S. 799-804, ISBN: 978-3-03785-509-6, doi: 10.4028/www.scientific.net/KEM.523-524.799

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Effect of Tungsten Carbide Grain Size in Jet Electrochemical Machining*, Proceedings of the 8th International Symposium on Electrochemical Machining Technology, 2012, Editor: M. Zybura-Skrabalak, ISBN 978-83-931339-5-6

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, A. Martin, J. Edelmann: *Micro Wire Cutting by Pulsed Electrochemical Machining*, Proceedings of the 8th International Symposium on Electrochemical Machining Technology, 2012, Editor: M. Zybura-Skrabalak, ISBN 978-83-931339-5-6

A. Schubert, H. Zeidler, W. Meyer, M. Unger, **M. Hackert-Oschätzchen**: *Edge rounding of EDM micro bores using a plasma electrolytic polishing process*, Proceedings of the 8th International Symposium on Electrochemical Machining Technology, 2012, Editor: M. Zybura-Skrabalak, ISBN 978-83-931339-5-6

**M. Hackert-Oschätzchen**, M. Kowalick, G. Meichsner, A. Schubert: *Multiphysics Simulation of the Electrochemical Finishing of Micro Bores*, Proceedings of the European COMSOL Conference, 2012, ISBN 978-0-9839688-7-0

**M. Hackert-Oschätzchen**, M. Penzel, P. Plänitz, A. Schubert: *Pseudo-3D Multiphysics Simulation of a Hydride Vapor Phase Epitaxy Reactor*, Proceedings of the European COMSOL Conference, 2012, ISBN 978-0-9839688-7-0

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, H. Zeidler, J. Edelmann: *Micro Structured Surfaces for Thermodynamic Applications*, Proceedings of the euspen 3rd Topical Meeting - Structured and Freeform Surfaces, 2012

**M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, A. Martin, A. Schubert: *Evaluierung des Einflusses des elektrischen Potentials beim Jet-ECM*, Galvanotechnik, 103:1196-1200, 2012, ISSN 0016-4232

**M. Hackert-Oschätzchen**, G. Meichsner, A. Martin, H. Zeidler, A. Schubert: *Fast Micromilling with Jet Electrochemical Machining*, Proceedings of the 29th Danubia-Adria Symposium, 2012, ISBN 978-86-7083-762-1

H. Zeidler, M. Hahn, J. Schneider, **M. Hackert-Oschätzchen**, A. Schubert: *Accelerated Precision Manufacturing through Electro Discharge Machining with Ultrasonic Vibration Assistance*, Proceedings of the 29th Danubia-Adria Symposium, 2012, ISBN 978-86-7083-762-1

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Micro Structuring of Carbide Metals with Jet Electrochemical Machining*, Proceedings of the 12th euspen International Conference, 2012, ISBN 978-0-9566790-0-0

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, H. Zeidler: *Functional Edge Shaping of Micro Bores by Applying Electrochemical Machining*, Proceedings of the 12th euspen International Conference, 2012, ISBN 978-0-9566790-0-0

A. Schubert, H. Zeidler, N. Wolf, **M. Hackert-Oschätzchen**, J. Schneider: *Ultrasonic-Assisted Micro-EDM of Deep Bores: Process and Discharge Analysis*, Proceedings of the 12th euspen International Conference, 2012, ISBN 978-0-9566790-0-0

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, M. Zinecker, J. Edelmann: *Präzise elektrochemische Bearbeitung von pulvermetallurgischen Stählen*, Galvanotechnik, 103:710-715, 2012

A. Schubert, **M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, A. Martin: *Evaluation of the Influence of the Electric Potential in Jet Electrochemical Machining*, Proceedings of the 7th International Symposium on Electrochemical Machining Technology, CEST Centre of Electrochemical Surface Technology, 2011, Editors: B. Mollay, M.M. Lohrengel, ISBN 978-3-00-036247-7

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, M. Zinecker, J. Edelmann: *Pulsed Electrochemical Machining of Powder Metallurgy Steels*, Proceedings of the 7th International Symposium on Electrochemical Machining Technology, CEST Centre of Electrochemical Surface Technology, 2011, Editors: B. Mollay, M.M. Lohrengel, ISBN 978-3-00-036247-7

**M. Hackert-Oschätzchen**, S. F. Jahn, A. Schubert: *Design of Electrochemical Machining Processes by Multiphysics Simulation*, Proceedings of the European COMSOL Conference, 2011, ISBN 978-0-9839688-0-1

A. Schubert, **M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, J. Edelmann: *Precision and Micro ECM with Localized Anodic Dissolution*, Proceedings of the 8th International Conference on Industrial Tools and Material Processing Technologies, 2011, Editor: J.M. Slabe, ISBN 978-961-6692-02-1

A. Schubert, H. Zeidler, N. Wolf, **M. Hackert-Oschätzchen**, J. Schneider: *Ultrasonic Assistance and Nonconductive Materials: Shifting the Boundaries of Micro-EDM*, Proceedings of the 8th International Conference on Industrial Tools and Material Processing Technologies, 2011, Editor: J.M. Slabe, ISBN 978-961-6692-02-1

A. Schubert, **M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker: *Design and realization of micro structured surfaces for thermodynamic applications*, Microsystem Technologies, Volume 17, Issue 9, Pages 1471-1479, 2011, doi:10.1007/s00542-011-1331-x

A. Schubert, R. Neugebauer, D. Sylla, M. Avila, **M. Hackert-Oschätzchen**: *Manufacturing of surface microstructures for improved tribological efficiency of powertrain components and forming tools*, CIRP Journal of Manufacturing Science and Technology, Volume 4, Issue 2, 2011, Pages 200-207, doi: 10.1016/j.cirpj.2011.01.010

**M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, A. Schubert: *Precision Turning with localized anodic dissolution*, Proceedings of the 11th euspen International Conference, 2011, ISBN 978-0-9553082-9-1

A. Schubert, J. Edelmann, D. Sylla, **M. Hackert-Oschätzchen**: *Structuring of tribological active surfaces for reduction of frictional losses*, Proceedings of the 11th euspen International Conference, 2011, ISBN 978-0-9553082-9-1

A. Schubert, S. F. Jahn, B. Müller, **M. Hackert-Oschätzchen**: *Study on the Influence of the Forming Velocity in Micro Impact Extrusion with Modular Dies*, Proceedings of the 11th euspen International Conference, 2011, ISBN 978-0-9553082-9-1

**M. Hackert-Oschätzchen**, G. Meichsner, H. Zeidler, M. Zinecker, A. Schubert: *Micro Machining of Different Steels with Closed Electrolytic Free Jet*, AIP Conference Proceedings Volume 1353:1337-1343, ISBN: 978-0-7354-0911-8, 2011

A. Schubert, H. Zeidler, N. Wolf, **M. Hackert-Oschätzchen**: *Micro Electro Discharge Machining of Electrically Nonconductive Ceramics*, AIP Conference Proceedings Volume 1353:1303-1308, ISBN: 978-0-7354-0911-8, 2011

A. Schubert, J. Edelmann, S. Gross, H. Zeidler, G. Meichsner, **M. Hackert** N. Wolf, J. Schneider: *Micromanufacturing Of Hard To Machine Materials By Physical And Chemical Ablation Processes*, AIP Conference Proceedings Volume 1315:1279-1284, ISBN: 978-0-7354-0871-5, 2011

**M. Hackert**, G. Meichsner, A. Schubert: *Micro Turning with Closed Electrolytic Free Jet*, Proceedings of 6th International Symposium on Electrochemical Machining Technology, Vrije Universiteit Brussel, 2010, Editors: J. Deconinck, D. De Wilde, ISBN 978-90-5487-818-6

**M. Hackert**, G. Meichsner, S. F. Jahn, A. Schubert: *Investigating the Influence of Dynamic Jet Shapes on the Jet Electrochemical Machining Process*, Proceedings of the European COMSOL Conference, 2010, ISBN 978-0-9825697-6-4

A. Schubert, S. F. Jahn, **M. Hackert**: *Simulation of a Forming Process for Joining a Piezo Aluminium Module*, Proceedings of the European COMSOL Conference, 2010, ISBN 978-0-9825697-6-4



S. F. Jahn, S. Ebert, **M. Hackert**, W. A. Goedel, A. Schubert, R. R. Baumann: *Simulation of the Mechanical Stability of Inkjet-Printed Hierarchical Microsieves*, Proceedings of the European COMSOL Conference, 2010, ISBN 978-0-9825697-6-4

**M. Hackert**, A. Schubert, G. Meichsner: *Abtragende Fertigung mikrostrukturierter Oberflächen mit geschlossenem elektrolytischem Freistrah*, Galvanotechnik, 101:2232-2236, 2010

A. Schubert, R. Neugebauer, D. Sylla, M. Avila, **M. Hackert**: *Fertigungs- und Oberflächentechnologien für anforderungsgerechte, tribologisch effiziente Oberflächen von Umformwerkzeugen und Powertrain-Bauteilen*, Tagungsband zum 1. Internationalen Kolloquium des Spitzentechnologieclusters eniPROD, 2010, Herausgeber: R. Neugebauer, ISBN 978-3-942267-00-7

A. Schubert, R. Pohl, **M. Hackert**: *Micro Impact Extrusion of Precision Cavities with Modular Dies*, Proceedings of the 10th euspen International Conference, 2010, ISBN 978-0-9553082-8-4

**M. Hackert**: *Entwicklung und Simulation eines Verfahrens zum elektrochemischen Abtragen von Mikrogeometrien mit geschlossenem elektrolytischem Freistrah*, Dissertation, In A. Schubert (Hrsg.): *Scripts Precision and Microproduction Engineering*, Band 2, 2010, ISBN 978-3-937524-95-5

**M. Hackert**, G. Meichsner, A. Schubert: *Generating plane and microstructured surfaces applying Jet Electrochemical Machining*, Proceedings of Fifth International Symposium on Electrochemical Machining Technology, Fraunhofer IKTS Dresden, 2009, Editors: A. Michaelis, M. Schneider, ISBN 978-3-8396-0076-4

**M. Hackert**, A. Schubert, G. Meichsner: *Simulation of a Heated Tool System for Jet Electrochemical Machining*, Proceedings of the European COMSOL Conference, 2009, ISBN 978-0-9825697-2-6

A. Schubert, **M. Hackert**, G. Meichsner: *Simulating the Influence of the Nozzle Diameter on the Shape of Micro Geometries Generated with Jet Electrochemical Machining*, Proceedings of the European COMSOL Conference, 2009, ISBN 978-0-9825697-2-6

A. Schubert, R. Pohl, **M. Hackert**: *Simulation of a Modular Die Stamp for Micro Impact Extrusion*, Proceedings of the European COMSOL Conference, 2009, ISBN 978-0-9825697-2-6

A. Schubert, **M. Hackert**, G. Meichsner: *Elektrochemisches Strukturieren von Oberflächen mit geschlossenem elektrolytischem Freistrah*, Tagungsband zum 12. Werkstofftechnischen Kolloquium, 2009, ISBN 978-3-00-029007-7

**M. Hackert**, G. Meichsner, A. Schubert: *Simulation of the Shape of Micro Geometries generated with Jet Electrochemical Machining*, Proceedings of the European COMSOL Conference, 2008, ISBN 978-0-9766792-3-3

A. Schubert, **M. Hackert**: *Blick in den Elektrolytstrahl*, Mikroproduktion, 4:44-47, 2008

**M. Hackert**, G. Meichsner, A. Schubert: *Generating Micro Geometries with Air assisted Jet Electrochemical Machining*, Proceedings of the euspen 10th Anniversary International Conference, 2008, Editors: H. van Brussel, E. Brinksmeier, H. Spaan, T. Burke, ISBN 978-0-9553082-5-3

**M. Hackert**, G. Meichsner, A. Schubert: *Fast Micro Structuring with Electrolyte Jet Machining*, Proceedings of Fourth International Symposium on Electrochemical Machining Technology, Fraunhofer IWU Chemnitz, 2007, Editor: A. Schubert, ISBN 978-3-00-022770-7

**M. Hackert**, G. Meichsner, A. Schubert: *Electrochemical Machining of Carbide Metal Micro Tools*, Proceedings of the 7th euspen International Conference, 2007, Editor: E. Thornett, ISBN 978-0-9553082-2-2

P. Häussler, J. Barzola-Quiquia, D. Hauschild, J. Rauchhaupt, M. Stiehler, **M. Hackert**: *Spherical periodicity, a general feature of matter at its early stages of formation*, Science of Complex Alloy Phases, 43-86, TMS The Minerals, Metals & Materials Society 2005, ISBN 0-87339-593-X

T.G. Gopakumar, M. Lackinger, **M. Hackert**, F. Müller, M. Hietschold: *Adsorption of Palladium Phtalocyanine on Graphite (0001): an STM and LEED study*, J. Phys. Chem. B 108, 7839-7843 (2004)

## Geladene Vorträge

**M. Hackert-Oschätzchen**: *Neue elektrothermische und elektrochemische Technologien der Mikrofertigung*, Schlossgespräche, Schloss Forstglauchau, Glauchau, Germany, 21.03.2012

**M. Hackert-Oschätzchen**: *Verfahrensvarianten und Anwendungen des elektrochemischen Abtragens in der Präzisions- und Mikrofertigung*, Institutsseminar des Fraunhofer-Instituts für Silicatforschung, Würzburg, Germany, 02.02.2012

**M. Hackert-Oschätzchen**: *Strom als Werkzeug – Anwendungen des elektrochemischen Abtragens in der Präzisions- und Mikrofertigung*, Drittes Industriegespräch Chemnitz/Jena des Arbeitskreises für Industrie und Wirtschaft der Deutschen Physikalischen Gesellschaft, Technologie Centrum Chemnitz, Germany, 23.11.2011

**M. Hackert-Oschätzchen**: *Effiziente und präzise Metallbearbeitung durch elektrochemisches Abtragen*, Wissenschaftliches Kolloquium zum 20. Gründungsjubiläum der SITEC Industrietechnologie GmbH, SITEC Industrietechnologie GmbH Chemnitz, Germany, 19.08.2011

**M. Hackert-Oschätzchen**: *Auslegung von elektrochemischen Bearbeitungsprozessen mittels Multiphysiksimulation*, ECM Technologie Forum, SITEC Industrietechnologie GmbH Chemnitz, Germany, 10.05.2011

**M. Hackert**: *Elektrochemisches Abtragen - Ein Verfahren der Präzisions- und Mikrofertigung*, PAC-Meeting, PEMTec SNC Forbach, France, 28.09.2009

## Vorträge

N. Lehnert, G. Meichsner, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Study on the Influence of the Processing Speed in the Generation of Complex Geometries in Aluminium Matrix Composites by Electrochemical Precision Machining*, 19th CIRP Conference on Electro Physical and Chemical Machining (ISEM XIX), Bilbao, Spain, 26.04.2018

T. Berger, H.-P. Schulze, **M. Hackert-Oschätzchen**, M. Herzig, O. Kröning, A. Schubert: *Design of a High Dynamic Piezo Module for Resource-efficient Electrothermal Precision Ablation*, 19th CIRP Conference on Electro Physical and Chemical Machining (ISEM XIX), Bilbao, Spain, 26.04.2018

A. Martin, **M. Hackert-Oschätzchen**, N. Lehnert, A. Schubert: *Analysis of the Fundamental Removal Geometry in Electrochemical Profile Turning with Continuous Electrolytic Free Jet*, 19th CIRP Conference on Electro Physical and Chemical Machining (ISEM XIX), Bilbao, Spain, 25.04.2018

N. Lehnert, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Derivation of Guidelines for Reliable Finishing of Aluminium Matrix Composites by Jet Electrochemical Machining*, 19th CIRP Conference on Electro Physical and Chemical Machining (ISEM XIX), Bilbao, Spain, 25.04.2018

**M. Hackert-Oschätzchen**, A. Nestler, N. Lehnert, G. Meichsner, A. Schubert: *Erzeugung definierter Oberflächen bei der Endformgebung von partikelverstärkten Aluminiummatrix-Verbundwerkstoffen*, 20. Werkstofftechnisches Kolloquium, Chemnitz, Germany, 14.03.2018

**M. Hackert-Oschätzchen**: *Zusammenarbeit bei Projektakquise und Projektdurchführung*, Vollversammlung des Kompetenzzentrums Mikrofertigungs- und Oberflächentechnologien KoMOT, Chemnitz, Germany, 24.01.2018

A. Martin, **M. Hackert-Oschätzchen**, N. Lehnert, A. Schubert: *Analysis of the Removal Geometry in Electrochemical Straight Turning with Continuous Electrolytic Free Jet*, 13th International Symposium on Electrochemical Machining Technology, Dresden, Germany, 01.12.2017

M. Yahyavi Zanjani, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Evaluation of On-Machine Gap Measurement Strategies in Jet-Electrochemical Machining*, 13th International Symposium on Electrochemical Machining Technology, Dresden, Germany, 01.12.2017

S. Loebel, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Development of Interfaces for Material Data Integration in Models of Electrochemical Machining Processes*, 13th International Symposium on Electrochemical Machining Technology, Dresden, Germany, 30.11.2017

G. Meichsner, T. Petzold, **M. Hackert-Oschätzchen**, J. Edelmann, A. Schubert, M. Putz, G. Hahn: *Reduplication of Precise Internal Geometries by Pulsed Electrochemical Machining*, 13th International Symposium on Electrochemical Machining Technology, Dresden, Germany, 30.11.2017

R. Paul, **M. Hackert-Oschätzchen**, M. Zinecker, A. Schubert: *Approximation of the Flow Field in Electrochemical Machining Incorporating Pressure Drop Calculation*, European COMSOL Conference, Rotterdam, The Netherlands, 19.10.2017

I. Schaarschmidt, M. Zinecker, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Multiscale Model of the PECM with Oscillating Cathode for External Geometries using a Virtual Switch*, European COMSOL Conference, Rotterdam, The Netherlands, 19.10.2017

R. Schimmelpfennig, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Microstructuring of Joining Areas in Aluminum Alloy Sheets by Jet Electrochemical Machining*, International Merge Technologies Conference, Chemnitz, Germany, 22.09.2017

**M. Hackert-Oschätzchen**, R. Paul, M. Kowalick, D. Kuhn, G. Meichsner, M. Zinecker, A. Schubert: *Characterization of an Electrochemical Machining Process for Precise Internal Geometries by Multiphysics Simulation*, 16th CIRP Conference on Modelling of Machining Operations (CIRP CMMO), Cluny, France, 15.06.2017

I. Schaarschmidt, M. Zinecker, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Multiscale Multiphysics Simulation of a Pulsed Electrochemical Machining Process with Oscillating Cathode for Microstructuring of Impact Extrusion Punches*, 16th CIRP Conference on Modelling of Machining Operations (CIRP CMMO), Cluny, France, 16.06.2017

M. Herzig, T. Berger, H.-P. Schulze, **M. Hackert-Oschätzchen**, O. Kröning, A. Schubert: *Modification of the process dynamics in micro-EDM by means of an additional piezo-control system*, 20th International ESAFORM Conference on Material Forming, Dublin, Ireland, 26.04.2017

A. Schubert, T. Berger, A. Martin, **M. Hackert-Oschätzchen**, N. Treffkorn, R. Kühn: *Surface Structuring of Boron Doped CVD Diamond by Micro Electrical Discharge Machining*, 20th International ESAFORM Conference on Material Forming, Dublin, Ireland, 26.04.2017

R. Kühn, T. Berger, M. Prieske, R. Börner, **M. Hackert-Oschätzchen**, H. Zeidler, A. Schubert: *Deposition and Micro Electrical Discharge Machining of CVD-Diamond Layers Incorporated with Silicon*, 20th International ESAFORM Conference on Material Forming, Dublin, Ireland, 26.04.2017

D. Kuhn, A. Martin, C. Eckart, M. Sieber, R. Morgenstern, **M. Hackert-Oschätzchen**, T. Lampke, A. Schubert: *Localised anodic oxidation of aluminium material using a continuous electrolyte jet*, 19. Werkstofftechnisches Kolloquium, Chemnitz, Germany, 17.03.2017

**M. Hackert-Oschätzchen**: *Einbindung studentischer Arbeiten in Promotionsvorhaben*, Doktoranden-Werkstatt des Kompetenzzentrums Mikrofertigungs- und Oberflächentechnologien KoMOT, Breitenbrunn, Germany, 18.03.2017

G. Meichsner, **M. Hackert-Oschätzchen**, R. Wertheim, J. Edelmann, A. Schubert, M. Putz: *New Method to define Material Removal Characteristics in PECM - Pulsed Electro Chemical Machining*, 34th Israeli Conference on Mechanical Engineering, Haifa, Israel, 23.11.2016

A. Spille-Kohoff, G. Meichsner, **M. Hackert-Oschätzchen**, R. Schulze, S. Busan: *3D CFD Simulation of Electrochemical Machining Based on Dissolving Characteristics within the SIREKA Joint Research Project*, 12th International Symposium on Electrochemical Machining Technology, Mechelen, Belgium, 18.11.2016

**M. Hackert-Oschätzchen**, N. Lehnert, G. Meichsner, C. Scherf, A. Martin, A. Schubert: *Experimental Derivation of Processing Strategies for Electrochemical Precision Machining of Aluminium Matrix Composites*, 12th International Symposium on Electrochemical Machining Technology, Mechelen, Belgium, 17.11.2016

A. Martin, D. Kuhn, **M. Hackert-Oschätzchen**, A. Schubert: *Design and Realisation of a Specific Device for Jet Electrochemical Machining of Rotating Work Pieces*, 12th International Symposium on Electrochemical Machining Technology, Mechelen, Belgium, 17.11.2016

G. Meichsner, **M. Hackert-Oschätzchen**, T. Petzold, M. Krönert, J. Edelmann, A. Schubert, M. Putz: *Removal Characteristic of Stainless Steel in Pulsed Electrochemical Machining*, 12th International Symposium on Electrochemical Machining Technology, Mechelen, Belgium, 17.11.2016

**M. Hackert-Oschätzchen**, M. Kowalick, R. Funke, A. Schubert: *Unterstützung des selbstorganisierten Lernens im Rahmen der Betreuung studentischer Arbeiten*, HDS.Forum, Dresden, Germany, 11.11.2016

**M. Hackert-Oschätzchen**, M. Penzel, M. Kreißig, M. Kowalick, M. Zinecker, G. Meichsner, A. Schubert: *Transient Simulation of an Electrochemical Machining Process for Stamping and Extrusion Dies*, European COMSOL Conference, Munich, Germany, 14.10.2016

**M. Hackert-Oschätzchen**, N. Lehnert, M. Kowalick, C. Scherf, A. Martin, A. Schubert: *Analysis of an Electrochemical Machining Process for Particle Reinforced Aluminium Matrix Composites*, European COMSOL Conference, Munich, Germany, 13.10.2016

**M. Hackert-Oschätzchen**, M. Kowalick, R. Paul, M. Zinecker, D. Kuhn, G. Meichsner, A. Schubert: *2-D Axisymmetric Simulation of the Electrochemical Machining of Internal Precision Geometries*, European COMSOL Conference, Munich, Germany, 13.10.2016

**M. Hackert-Oschätzchen**, N. Lehnert, A. Martin, G. Meichsner, A. Schubert: *Surface Characterization of Particle Reinforced Aluminum-Matrix Composites Finished by Pulsed Electrochemical Machining*, 3rd CIRP Conference on Surface Integrity, Charlotte, USA, 10.06.2016

G. Meichsner, **M. Hackert-Oschätzchen**, M. Krönert, J. Edelmann, A. Schubert, M. Putz: *Fast Determination of the Material Removal Characteristics in Pulsed Electrochemical Machining*, 7th CIRP Conference on High Performance Cutting HPC, Chemnitz, Germany

A. Schubert, **M. Hackert-Oschätzchen**, A. Martin, S. Winkler, D. Kuhn, G. Meichsner, H. Zeidler, J. Edelmann: *Generation of Complex Surfaces by Superimposed Multi-dimensional Motion in Electrochemical Machining*, 18th CIRP Conference on Electro Physical and Chemical Machining (ISEM XVIII), Tokyo, Japan, 20.04.2016

A. Schubert, H. Zeidler, R. Kühn, **M. Hackert-Oschätzchen**, S. Flemmig, N. Treffkorn: *Investigation of Ablation Behaviour in Micro-EDM of Nonconductive Ceramic Composites ATZ and Si<sub>3</sub>N<sub>4</sub>-TiN*, 18th CIRP Conference on Electro Physical and Chemical Machining (ISEM XVIII), Tokyo, Japan, 21.04.2016

**M. Hackert-Oschätzchen**: *Antworten auf die hochschuldidaktischen Herausforderungen in der Betreuung studentischer Arbeiten*, Doktoranden-Werkstatt des Kompetenzzentrums Mikrofertigungs- und Oberflächentechnologien KoMOT, Breitenbrunn, Germany, 19.03.2016

**M. Hackert-Oschätzchen**, R. Morgenstern, N. Lehnert, A. Martin, T. Lampke, A. Schubert: *Basic Research on Electrochemical Machining of Particle Reinforced Aluminium Matrix Composites*, Proceedings of the 11th International Symposium on Electrochemical Machining Technology, Linz, Austria, 12.11.2015

A. Spille-Kohoff, R. Schulze, G. Meichsner, **M. Hackert-Oschätzchen**, S. Busan: *Optimized design of electrochemical machining processes by a combination of 3D simulation and rapid prototyping of cathodes*, Proceedings of the 11th International Symposium on Electrochemical Machining Technology, Linz, Austria, 12.11.2015

G. Meichsner, **M. Hackert-Oschätzchen**, M. Krönert, J. Edelmann, A. Schubert, G. Hahn, M. Putz: *Characterisation of the Influence of Material Hardness in Precise Electrochemical Machining of Steel*, 17th International Conference on the Strength of Materials (ICSMA-17), Brno, Czech Republic, 11.08.2015

**M. Hackert-Oschätzchen**, R. Paul, M. Kowalick, A. Martin, G. Meichsner, A. Schubert: *Multiphysics Simulation of the Material Removal in Jet Electrochemical Machining*, 15th CIRP Conference on Modelling of Machining Operations (CMMO), Karlsruhe, Germany, 11.06.2015

O. Kröning, M. Herzig, **M. Hackert-Oschätzchen**, R. Kühn, H. Zeidler, A. Schubert: *Micro Electrical Discharge Machining of Tungsten Carbide with Ultra-Short Pulse*, 18th International ESAFORM Conference, Graz, Austria, 15.04.2015

H. Zeidler, A. Martin, M. Kowalick, **M. Hackert-Oschätzchen**, A. Schubert: *Analysis of a PECM Electrode Concept for Micro Injection Moulds by Multiphysics Simulation*, 4M/ICOMM2015 Conference, Milan, Italy, 31.03.2015

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Evaluation of Gap Control Strategies in Jet Electrochemical Machining on Defined Shape Deviations*, 10th International Symposium on Electrochemical Machining Technology, Saarbrücken, Germany, 13.11.2014

G. Meichsner, L. Boenig, **M. Hackert-Oschätzchen**, M. Krönert, T. Petzold, J. Edelmann, A. Schubert: *Determination of the gas generation during precise electrochemical machining*, 10th International Symposium on Electrochemical Machining Technology, Saarbrücken, Germany, 13.11.2014

**M. Hackert-Oschätzchen**, N. Lehnert, M. Kowalick, G. Meichsner, A. Schubert: *Analysis of the Electrochemical Removal of Aluminium Matrix Composites Using Multiphysics Simulation*, European COMSOL Conference, Cambridge, United Kingdom, 18.09.2014

**M. Hackert-Oschätzchen**, M. Penzel, M. Kowalick, G. Meichsner, A. Schubert: *Transient Simulation of the Electrolyte Flow in a Closed Device for Precise Electrochemical Machining*, European COMSOL Conference, Cambridge, United Kingdom, 17.09.2014

A. Schubert, **M. Hackert-Oschätzchen**, N. Lehnert, A. Martin, G. Meichsner: *Charakterisierung des elektrochemischen Abtragverhaltens von Aluminiummatrix-Verbundwerkstoffen*, 17. Werkstofftechnisches Kolloquium, Chemnitz, Germany, 11.09.2014

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *An investigation into the influence of micro structures on nucleate boiling processes*, 13th International Conference on Simulation and Experiments in Heat Transfer and its Applications, A Coruña, Spain, 03.07.2014

O. Kröning, M. Herzig, H.-P. Schulze, **M. Hackert-Oschätzchen**, R. Kühn, H. Zeidler, A. Schubert: *Resource-efficient machining of hard metals*, 17th ESAFORM Conference

**M. Hackert-Oschätzchen**: *Jet-ECM und Multiphysiksimulation*, Praxis-Workshop Elektrochemisches Abtragen, Fraunhofer IWU Chemnitz, Germany 13.02.2014

**M. Hackert-Oschätzchen**, L. Boenig, G. Meichsner, M. Zinecker, M. Krönert, A. Schubert: *Precise Electrochemical Machining of Rotating Workpieces*, 9th International Symposium on Electrochemical Machining Technology, Chemnitz, Germany, 12.11.2013

B. Hommel, F. Jähn, M. Scharnbeck, R. Garn, A. Lenk, **M. Hackert-Oschätzchen**, A. Schubert: *Edge Rounding of Micro Bores by Inverse Jet Electrochemical Machining*, 9th International Symposium on Electrochemical Machining Technology, Chemnitz, Germany, 12.11.2013

H. Zeidler, A. Martin, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Jet Electrochemical Machining of Selective Laser Sintered Metals for Micro Injection Moulds*, 9th International Symposium on Electrochemical Machining Technology, Chemnitz, Germany, 12.11.2013

A. Schubert, G. Meichsner, L. Boenig, **M. Hackert-Oschätzchen**, M. Krönert, J. Edelmann: *Resource-efficient Design of Precise Electrochemical Machining*, 9th International Symposium on Electrochemical Machining Technology, Chemnitz, Germany, 12.11.2013

**M. Hackert-Oschätzchen**, M. Kowalick, G. Meichsner, A. Schubert, B. Hommel, F. Jähn, M. Scharnbeck, R. Garn, A. Lenk: *2D Axisymmetric Simulation of the Electrochemical Finishing of Micro Bores by Inverse Jet Electrochemical Machining*, European COMSOL Conference, 2013, Rotterdam, The Netherlands, 24.10.2013

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *Determining of micro structuring technologies for nucleate boiling surfaces*, 8th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Lisbon, Portugal, 20.06.2013

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, M. Kowalick, H. Zeidler, A. Schubert: *Inverse Jet Electrochemical Machining for Functional Edge Shaping of Micro Bores*, 17th CIRP Conference on Electro Physical and Chemical Machining (ISEM), Leuven, Belgium, 10.04.2013

A. Schubert, H. Zeidler, M. Hahn, **M. Hackert-Oschätzchen**, J. Schneider: *Micro-EDM Milling of Electrically Nonconducting Zirconia Ceramics*, 17th CIRP Conference on Electro Physical and Chemical Machining (ISEM), Leuven, Belgium, 11.04.2013

**M. Hackert-Oschätzchen**: *Simulation und Anwendung des elektrochemischen Abtragens in der Präzisions- und Mikrofertigungstechnik*, Doktoranden-Werkstatt der Professur Mikrofertigungstechnik der Technischen Universität Chemnitz und der Abteilung Präzisions- und Mikrofertigung des Fraunhofer-Instituts für Werkzeugmaschinen und Umformtechnik, Berghotel Drei Brüder Höhe, Marienberg, Germany, 02.03.2013

A. Schubert, P. Steinert, T. Schmidt, **M. Hackert-Oschätzchen**: *Manufacturing of tribologically optimized surfaces for powertrain applications*, 14th International Conference on Precision Engineering, 09.11.2012

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Effect of Tungsten Carbide Grain Size in Jet Electrochemical Machining*, 8th International Symposium on Electrochemical Machining Technology, Krakow, Poland, 18.10.2012

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, A. Martin, J. Edelmann: *Micro Wire Cutting by Pulsed Electrochemical Machining*, 8th International Symposium on Electrochemical Machining Technology, Krakow, Poland, 18.10.2012

A. Schubert, H. Zeidler, W. Meyer, M. Unger, **M. Hackert-Oschätzchen**: *Edge rounding of EDM micro bores using a plasma electrolytic polishing process*, 8th International Symposium on Electrochemical Machining Technology, Krakow, Poland, 18.10.2012

**M. Hackert-Oschätzchen**, M. Kowalick, G. Meichsner, A. Schubert: *Multiphysics Simulation of the Electrochemical Finishing of Micro Bores*, European COMSOL Conference, Milan, Italy, 11.10.2012

**M. Hackert-Oschätzchen**, M. Penzel, P. Plänitz, A. Schubert: *Pseudo-3D Multiphysics Simulation of a Hydride Vapor Phase Epitaxy Reactor*, European COMSOL Conference, Milan, Italy, 11.10.2012

**M. Hackert-Oschätzchen**, G. Meichsner, A. Martin, H. Zeidler, A. Schubert: *Fast Micromilling with Jet Electrochemical Machining*, 29th Danubia-Adria Symposium, Belgrade, Serbia, 27.09.2012

H. Zeidler, M. Hahn, J. Schneider, **M. Hackert-Oschätzchen**, A. Schubert: *Accelerated Precision Manufacturing through Electro Discharge Machining with Ultrasonic Vibration Assistance*, 29th Danubia-Adria Symposium, Belgrade, Serbia, 27.09.2012

**M. Hackert-Oschätzchen**: *Habilitationsvorhaben im Forschungsgebiet elektrochemisches Abtragen*, Doktoranden-Werkstatt der Professur Mikrofertigungstechnik der Technischen Universität Chemnitz und der Abteilung Präzisions- und Mikrofertigung des Fraunhofer-Instituts für Werkzeugmaschinen und Umformtechnik, Berghotel Drei Brüder Höhe, Marienberg, Germany, 23.03.2012

H.-H. Wolters, **M. Hackert-Oschätzchen**, G. Meichsner: *The undeveloped opportunities of Electrochemical Jet machining*, Seminar Micro and Precision Manufacturing, Fraunhofer Institut für Produktionstechnologie IPT, Aachen, Germany, 22.11.2011

A. Schubert, **M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, A. Martin: *Evaluation of the Influence of the Electric Potential in Jet Electrochemical Machining*, INSECT 2011 - 7th International Symposium on Electrochemical Machining Technology, Museum of Natural History Vienna, Austria, 03.11.2011

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, M. Zinecker, J. Edelmann: *Pulsed Electrochemical Machining of Powder Metallurgy Steels*, INSECT 2011 - 7th International Symposium on Electrochemical Machining Technology, Museum of Natural History Vienna, Austria, 03.11.2011

**M. Hackert-Oschätzchen**, S. F. Jahn, A. Schubert: *Design of Electrochemical Machining Processes by Multiphysics Simulation*, European COMSOL Conference, Forum am Schlosspark, Ludwigsburg, Stuttgart, Germany, 27.10.2011

A. Schubert, **M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, J. Edelmann: *Precision and Micro ECM with Localized Anodic Dissolution*, ICIT&MPT 2011 - 8th International Conference on Industrial Tools and Material Processing Technologies, City Hotel Ljubljana, Slovenia, 03.10.2011

A. Schubert, H. Zeidler, N. Wolf, **M. Hackert-Oschätzchen**, J. Schneider: *Ultrasonic Assistance and Nonconductive Materials: Shifting the Boundaries of Micro-EDM*, ICIT&MPT 2011 - 8th International Conference on Industrial Tools and Material Processing Technologies, City Hotel Ljubljana, Slovenia, 03.10.2011

A. Schubert, J. Edelmann, D. Sylla, **M. Hackert-Oschätzchen**: *Structuring of tribological active surfaces for reduction of frictional losses*, euspen 2011 - 11th euspen International Conference, Spazio Villa Erba Congress Centre, Largo Luchino Visconti, Cernobbio, Italy, 26.05.2011

A. Schubert, S. F. Jahn, B. Müller, **M. Hackert-Oschätzchen**: *Study on the Influence of the Forming Velocity in Micro Impact Extrusion with Modular Dies*, euspen 2011 - 11th euspen International Conference, Spazio Villa Erba Congress Centre, Largo Luchino Visconti, Cernobbio, Italy, 25.05.2011

**M. Hackert-Oschätzchen**, G. Meichsner, H. Zeidler, M. Zinecker, A. Schubert: *Micro Machining of Different Steels with Closed Electrolytic Free Jet*, ESAFORM 2011 - 14th International ESAFORM Conference on Material Forming, Queen's University Belfast, Great Britain, 28.04.2011

A. Schubert, H. Zeidler, N. Wolf, **M. Hackert-Oschätzchen**: *Micro Electro Discharge Machining of Electrically Nonconductive Ceramics*, ESAFORM 2011 - 14th International ESAFORM Conference on Material Forming, Queen's University Belfast, Great Britain, 27.04.2011

**M. Hackert**, G. Meichsner, A. Schubert: *Micro Turning with Closed Electrolytic Free Jet*, INSECT 2010 - 6th International Symposium on Electrochemical Machining Technology, Vrije Universiteit Brussel, Belgium, 05.11.2010

A. Schubert, J. Edelmann, S. Gross, H. Zeidler, G. Meichsner, **M. Hackert** N. Wolf, J. Schneider: *Micromanufacturing Of Hard To Machine Materials By Physical And Chemical Ablation Processes*, AMPT 2010 - Advances in Materials and Processing Technologies Conference, Arts et Métiers ParisTech, Paris, France, 24.10.2010

**M. Hackert**, G. Meichsner, A. Schubert: *Oberflächenstrukturierung mit geschlossenem elektrolytischen Freistrah*, Workshop Oberflächenstrukturierung von rotationssymmetrischen und prismatischen Werkstücken, SITEC Industrietechnologie GmbH, Chemnitz, Germany, 20.10.2010

A. Schubert, R. Neugebauer, D. Sylla, M. Avila, **M. Hackert**: *Fertigungs- und Oberflächentechnologien für anforderungsgerechte, tribologisch effiziente Oberflächen von Umformwerkzeugen und Powertrain-Bauteilen*, 1. Internationales Kolloquium des Spitzentechnologieclusters eniPROD, Fraunhofer-IWU Chemnitz, Germany, 25.06.2010

**M. Hackert**: *Erfolgsfaktoren für eine Promotion*, Doktoranden-Werkstatt der Professur Mikrofertigungstechnik der Technischen Universität Chemnitz und der Abteilung Präzisions- und Mikrofertigung des Fraunhofer-Instituts für Werkzeugmaschinen und Umformtechnik, Berghotel Drei Brüder Höhe, Marienberg, Germany, 26.03.2010

**M. Hackert**: *EC-Technologien und Applikationen an Fraunhofer IWU und TU Chemnitz*, Eröffnung des PEM-Application-Centers am Fraunhofer IWU Chemnitz, 28.01.2010

**M. Hackert**, G. Meichsner, A. Schubert: *Generating plane and microstructured surfaces applying Jet Electrochemical Machining*, INSECT 2009 - Fifth International Symposium on Electrochemical Machining Technology, Fraunhofer IKTS Dresden, 26.11.2009

G. Meichsner, **M. Hackert**, A. Schubert: *Abtragende und abformende Fertigungsverfahren für die Medizintechnik*, RAPROMED® 2009 - Brücke zwischen Medizin und Technik, BECKMANN-INSTITUT für Technologieentwicklung e. V., Oelsnitz/Erzgebirge, 29.10.2009

A. Schubert, R. Pohl, **M. Hackert**: *Simulation of a Modular Die Stamp for Micro Impact Extrusion*, European COMSOL Conference, LEONARDO DA VINCI Convention Center Mailand, 16.10.2009

A. Schubert, **M. Hackert**, G. Meichsner: *Simulating the Influence of the Nozzle Diameter on the Shape of Micro Geometries Generated with Jet Electrochemical Machining*, European COMSOL Conference, LEONARDO DA VINCI Convention Center Mailand, 15.10.2009

A. Schubert, **M. Hackert**, G. Meichsner: *Elektrochemisches Strukturieren von Oberflächen mit geschlossenem elektrolytischen Freistrah*, 12. Werkstofftechnisches Kolloquium, Technische Universität Chemnitz, 01.10.2009

M. Schneider, S. Schroth, A. Michaelis, **M. Hackert**, A. Schubert: *Electrochemical machining – an unconventional manufacturing process*,ACHEMA 2009 - 29. Internationaler Ausstellungskongress für Chemische Technik, Umweltschutz und Biotechnologie, Messegelände Frankfurt am Main, 14.05.2009



**M. Hackert:** *Entwicklung und Simulation eines Verfahrens zum elektrochemischen Abtragen von Mikrogeometrien mit geschlossenem elektrolytischen Freistrahle*, Doktoranden-Werkstatt der Professur Mikrofertigungstechnik der Technischen Universität Chemnitz und der Abteilung Präzisions- und Mikrofertigung des Fraunhofer-Instituts für Werkzeugmaschinen und Umformtechnik, Berghotel Drei Brüder Höhe, Marienberg, 21.03.2009

**M. Hackert:** *Mein Weg zur Promotion*, Doktoranden-Werkstatt der Professur Mikrofertigungstechnik der Technischen Universität Chemnitz und der Abteilung Präzisions- und Mikrofertigung des Fraunhofer-Instituts für Werkzeugmaschinen und Umformtechnik, Berghotel Drei Brüder Höhe, Marienberg, 20.03.2009

**M. Schneider**, S. Schroth, A. Michaelis, **M. Hackert**, G. Meichsner, A. Schubert: *Electrochemical Machining (ECM) – ein unkonventionelles Fertigungsverfahren*, AGEF Symposium, Stahlinstitut VDEh Düsseldorf, 18.11.2008

**M. Hackert**, G. Meichsner, A. Schubert: *Simulation of the Shape of Micro Geometries generated with Jet Electrochemical Machining*, COMSOL European Conference 2008, Hannover Congress Centrum, 06.11.2008

**M. Hackert**, G. Meichsner, A. Schubert: *Fast Micro Structuring with Electrolyte Jet Machining*, INSECT 2007 - Fourth International Symposium on Electrochemical Machining Technology, Fraunhofer IWU Chemnitz, 25.10.2007

A. Schubert, **M. Hackert**, G. Meichsner: *Electrochemical drilling of deep micro holes with bulk electrodes*, INSECT 2006 - Third International Symposium on Electrochemical Machining Technology, Fraunhofer IKTS Dresden, 26.10.2006

## Posterbeiträge

**M. Yahyavi Zanjani**, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Experimental Study on Jet Electrochemical Machining of Intersecting Single Grooves*, euspen Special Interest Group Meeting: Micro/Nano Manufacturing, Glasgow, United Kingdom, 08.-09.11.2017

**R. Paul**, **M. Hackert-Oschätzchen**, M. Zinecker, A. Schubert: *Approximation of the Flow Field in Electrochemical Machining Incorporating Pressure Drop Calculation*, European COMSOL Conference, Rotterdam, The Netherlands, 18.-20.10.2017

**I. Schaarschmidt**, M. Zinecker, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Multiscale Model of the PECM with Oscillating Cathode for External Geometries using a Virtual Switch*, European COMSOL Conference, Rotterdam, The Netherlands, 18.-20.10.2017

P. Steinert, **R. Paul**, I. Schaarschmidt, M. Zinecker, **M. Hackert-Oschätzchen**, T. Muschalek, J. Esslinger, A. Schubert: *Analysis of Mixing Chambers for the Processing of Two-component Adhesives for Transport Applications*, European COMSOL Conference, Rotterdam, The Netherlands, 18.-20.10.2017

**M. Penzel**, M. Zinecker, A. Schubert, **M. Hackert-Oschätzchen**, A. Ludwig, A. Adamczewski, A. Schulz, M. Lausberg: *Investigation of Forced Convection in Pin Structured Cold Plates for Improved Heat Transfer and Heat Spreading*, 9th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Iguazu Falls, Brazil, 12.-15.06.2017

M. Sieber, **R. Morgenstern**, D. Kuhn, **M. Hackert-Oschätzchen**, A. Schubert, T. Lampke: *Downscaled anodic oxidation process for aluminium in oxalic acid*, 19. Werkstofftechnisches Kolloquium, Chemnitz, Germany, 16.-17.03.2017

**M. Hackert-Oschätzchen**, R. Funke, A. C. Bullinger-Hoffmann, A. Schubert: *Interaktive Aktivierung von Studierenden der Fakultät für Maschinenbau in der Grundlagenausbildung zur Fertigungslehre*, HDS.Forum, Dresden, Germany, 11.11.2016

**M. Hackert-Oschätzchen**, N. Lehnert, M. Kowalick, C. Scherf, A. Martin, A. Schubert: *Analysis of an Electrochemical Machining Process for Particle Reinforced Aluminium Matrix Composites*, European COMSOL Conference, Munich, Germany, 12.-14.10.2016

**M. Hackert-Oschätzchen**, M. Kowalick, R. Paul, M. Zinecker, D. Kuhn, G. Meichsner, A. Schubert: *2-D Axisymmetric Simulation of the Electrochemical Machining of Internal Precision Geometries*, European COMSOL Conference, Munich, Germany, 12.-14.10.2016

**M. Hackert-Oschätzchen**, M. Penzel, M. Kreißig, M. Kowalick, M. Zinecker, G. Meichsner, A. Schubert: *Transient Simulation of an Electrochemical Machining Process for Stamping and Extrusion Dies*, European COMSOL Conference, Munich, Germany, 12.-14.10.2016

A. Martin, C. Eckart, N. Lehnert, **M. Hackert-Oschätzchen**, A. Schubert: *Generation of Defined Surface Waviness on Tungsten Carbide by Jet Electrochemical Machining with Pulsed Current*, 3rd CIRP Conference on Surface Integrity, Charlotte, USA, 08.-10.06.2016

Andreas Schubert, Mike Zinecker, **Matthias Hackert-Oschätzchen**, Michael Penzel, Patrick Neumann, Henning Zeidler: *Thermal measurement technology for forced convection on microstructured heat exchangers*, euspen Special Interest Group Meeting: Thermal Issues, Prague, Czech Republic, 17.-18.03.2016

**M. Hackert-Oschätzchen**, N. Lehnert, A. Martin, A. Schubert: *Jet Electrochemical Machining of Particle Reinforced Aluminum Matrix Composites with Different Neutral Electrolytes*, 18. Werkstofftechnisches Kolloquium, Technische Universität Chemnitz, 10.03.2016

A. Schubert, U. Götz, **M. Hackert-Oschätzchen**, N. Lehnert, F. Herold, G. Meichsner, A. Schmidt: *Evaluation of the Technical-Economic Potential of Particle-Reinforced Aluminum Matrix Composites and Electrochemical Machining*, 18. Werkstofftechnisches Kolloquium, Technische Universität Chemnitz, 10.03.2016

A. Schubert, **M. Hackert-Oschätzchen**, N. Lehnert, A. Martin, G. Meichsner: *Analysis of the Electrochemical Dissolution Characteristics of High-Strength Particle Reinforced Aluminium Matrix Composites*, 17th International Conference on the Strength of Materials (ICSMA-17), Brno, Czech Republic, 09.-14.08.2015

**M. Hackert-Oschätzchen**, N. Lehnert, M. Kowalick, G. Meichsner, A. Schubert: *Analysis of the Electrochemical Removal of Aluminium Matrix Composites Using Multiphysics Simulation*, European COMSOL Conference, Cambridge, United Kingdom, 17.-19.09.2014

**M. Hackert-Oschätzchen**, M. Penzel, M. Kowalick, G. Meichsner, A. Schubert: *Transient Simulation of the Electrolyte Flow in a Closed Device for Precise Electrochemical Machining*, European COMSOL Conference, Cambridge, United Kingdom, 17.-19.09.2014

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Analysis of Strategies for Gap Control in Jet Electrochemical Machining*, 14th euspen International Conference, Dubrovnik, Croatia, 02.-06.06.2014

A. Schubert, H. Zeidler, A. Martin, **M. Hackert-Oschätzchen**, A. Martin, K. Kempen, J.-P. Kruth: *Jet-Electrochemical Machining of Selective Laser Melted Aluminum and Steel Alloys for Micro Injection Moulds*, 14th euspen International Conference, Dubrovnik, Croatia, 02.-06.06.2014

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *Application of Nucleate Boiling with Micro Structured Surfaces for Electronic Cooling*, PCIM EUROPE - International Conference and Exhibition for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management, Nuremberg, Germany, 19.-21.05.2014

**M. Hackert-Oschätzchen**, M. Kowalick, G. Meichsner, A. Schubert, B. Hommel, F. Jähn, M. Scharrnbeck, R. Garn, A. Lenk: *2D Axisymmetric Simulation of the Electrochemical Finishing of Micro Bores by Inverse Jet Electrochemical Machining*, European COMSOL Conference, 2013, Rotterdam, The Netherlands, 23.-25.10.2013

**M. Hackert-Oschätzchen**, R. Paul, M. Penzel, M. Zinecker, A. Schubert: *Simulation of Heat Transfer on Periodic Microstructured Surfaces for Evaporation Cooling*, European COMSOL Conference, Rotterdam, The Netherlands, 23.-25.10.2013

**M. Hackert-Oschätzchen**, M. Kreißig, M. Kowalick, H. Zeidler, A. Schubert, O. Kröning, M. Herzig, H.-P. Schulze: *Single Discharge Simulations of Needle Pulses for Electrothermal Ablation*, European COMSOL Conference, Rotterdam, The Netherlands, 23.-25.10.2013

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, M. Lausberg, A. Schulz: *Energy-efficient cooling using microstructures for nucleate boiling process*, PCIM EUROPE - International Conference and Exhibition for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management, Nuremberg, Germany, 14.-16.05.2013

A. Schubert, M. Zinecker, **M. Hackert-Oschätzchen**, H. Zeidler, J. Edelmann: *Micro Structured Surfaces for Thermodynamic Applications*, euspen 3rd Topical Meeting - Structured and Freeform Surfaces, 05.-06.12.2012

**M. Hackert-Oschätzchen**, M. Kowalick, G. Meichsner, A. Schubert: *Multiphysics Simulation of the Electrochemical Finishing of Micro Bores*, European COMSOL Conference, Milan, Italy, 10.-12.10.2012

**M. Hackert-Oschätzchen**, M. Penzel, P. Plänitz, A. Schubert: *Pseudo-3D Multiphysics Simulation of a Hydride Vapor Phase Epitaxy Reactor* European COMSOL Conference, Milan, Italy, 10.-12.10.2012

**M. Hackert-Oschätzchen**, G. Meichsner, A. Martin, H. Zeidler, A. Schubert: *Fast Micromilling with Jet Electrochemical Machining*, 29th Danubia-Adria Symposium, Belgrade, Serbia, 27.-29.09.2012

H. Zeidler, M. Hahn, J. Schneider, **M. Hackert-Oschätzchen**, A. Schubert: *Accelerated Precision Manufacturing through Electro Discharge Machining with Ultrasonic Vibration Assistance*, 29th Danubia-Adria Symposium, Belgrade, Serbia, 27.-29.09.2012

**M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, A. Schubert: *Micro Structuring of Carbide Metals with Jet Electrochemical Machining*, 12th euspen International Conference, Stockholm, Sweden, 05.-08.06.2012

A. Schubert, G. Meichsner, **M. Hackert-Oschätzchen**, H. Zeidler: *Functional Edge Shaping of Micro Bores by Applying Electrochemical Machining*, 12th euspen International Conference, Stockholm, Sweden, 05.-08.06.2012

A. Schubert, H. Zeidler, N. Wolf, **M. Hackert-Oschätzchen**, J. Schneider: *Ultrasonic-Assisted Micro-EDM of Deep Bores: Process and Discharge Analysis*, 12th euspen International Conference, Stockholm, Sweden, 05.-08.06.2012

A. Schubert, **M. Hackert-Oschätzchen**, M. Zinecker, M. Lausberg, A. Schulz: *Energy-Efficient Evaporation Cooling of High-Power Electronics Using Innovative Micro Structured Surfaces*, PCIM EUROPE - International Conference and Exhibition for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management, Nuremberg, Germany, 08.-10.05.2012

**M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, A. Schubert: *Precision Turning with localized anodic dissolution*, euspen 2011 - 11th euspen International Conference, Spazio Villa Erba Congress Centre, Largo Luchino Visconti, Cernobbio, Italy, 23.-27.05.2011

**M. Hackert**, G. Meichsner, S. F. Jahn, A. Schubert: *Investigating the Influence of Dynamic Jet Shapes on the Jet Electrochemical Machining Process*, European COMSOL Conference, Palais des Congrès de Versailles Paris, France, 17.-19.11.2010

A. Schubert, S. F. Jahn, **M. Hackert**: *Simulation of a Forming Process for Joining a Piezo Aluminium Module*, European COMSOL Conference, Palais des Congrès de Versailles Paris, France, 17.-19.11.2010

S. F. Jahn, S. Ebert, **M. Hackert**, W. A. Goedel, A. Schubert, R. R. Baumann: *Simulation of the Mechanical Stability of Inkjet-Printed Hierarchical Microsieves*, European COMSOL Conference, Palais des Congrès de Versailles Paris, France, 17.-19.11.2010

A. Schubert, R. Pohl, **M. Hackert**: *Micro Impact Extrusion of Precision Cavities with Modular Dies*, 10th euspen International Conference, Technical University of Delft, 31.05.-04.06.2010

**M. Hackert**, A. Schubert, G. Meichsner: *Simulation of a Heated Tool System for Jet Electrochemical Machining*, European COMSOL Conference, LEONARDO DA VINCI Convention Center Mailand, 14.-16.10.2009

**M. Hackert**, G. Meichsner, A. Schubert: *Generating Micro Geometries with Air assisted Jet Electrochemical Machining*, euspen 10th Anniversary International Conference, Zürich, 18.-22.05.2008

**M. Hackert**, G. Meichsner, A. Schubert: *Electrochemical Machining of Carbide Metal Micro Tools*, 7th euspen International Conference, Bremen, 20.-24.05.2007