

# Forschungsbericht

Name: **Univ.-Prof. DI Dr. Werner Baumgartner**  
Forschungseinheit: **Institut für Medizin- und Biomechatronik**  
Zeitraum: 1990 bis 2021  
Forschungsleistungen: alle Publikationen

## Forschungsleistungen

### Publikationen

2021

#### Aufsatz / Paper in SCI-Expanded-Zeitschrift

Lifka S., Hischen F., Heitz J., Baumgartner W.:

**An Optimised Surface Structure for Passive, Unidirectional Fluid Transport Bioinspired by True Bugs**, in: Journal of Bionic Engineering, Volume 18, Page(s) 375 - 386, 2021.

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Muck M., Wolfsjäger B., Seibert K., Maier C., Lone S., Hassel A., Baumgartner W., Heitz J.:  
**Femtosecond Laser-Processing of Pre-Anodized Ti-Based Bone Implants for Cell-Repellent Functionalization**, in: Nanomaterials, Volume 11, Number 5, Page(s) 1342, 2021.

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Viskup R., Vereshchaga Y., Stadler A., Roland T., Wolf C., Weth A., Baumgartner W.:  
**Spectrochemical Analytical Characterisation of Particulate Matter Emissions Generated from In-Use Diesel Engine Vehicles**, in: Environmental Sciences Proceedings, Volume 4, Number 1, 2021.

#### Aufsatz / Paper in Tagungsband (referiert)

Viskup R., Alivuk E., De Mecquenem N., Vereshchaga Y., Stadler A., Roland T., Weth A., Wolf C., Baumgartner W.:

**Laser Induced Breakdown Spectroscopy technique for detection of trace elements in Particulate Matter emitted from in-use Diesel engine passenger vehicles**, in: Proceedings, International Scientific Journal Trans Motauto World, Series Transmot Auto '21, Volume 6, Number 3, Page(s) 104 - 109, 2021.

2020

#### Aufsatz / Paper in SCI-Expanded-Zeitschrift

Fosodeder P., Baumgartner W., Steinwender C., Hassel A., Florian C., Bonse J., Heitz J.:  
**Repellent rings at titanium cylinders against overgrowth by fibroblasts**, in: Advanced Optical Technologies, Volume 9, Number 3, Page(s) 113-120, 2020.

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Joel A., Meyer M., Heitz J., Heiss A., Park D., Adamova H., Baumgartner W.:

**Biomimetic Combs as Antiadhesive Tools to Manipulate Nanofibers**, in: ACS Applied Nano Materials, Page(s) 3395-3401, 2020.

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Plamadeala C., Gosain S., Hischen F., Buchroithner B., Puthukodan S., Jacak J., Bocchino A., Whelan D., O'Mahony C., Baumgartner W., Heitz J.:

**Bio-inspired microneedle design for efficient drug/vaccine coating**, in: Biomedical Microdevices, Volume 22, Number 8, 2020.

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Shaukat Lone A., Muck M., Fosodeder P., Mardare C., Florian C., Weth A., Krüger J., Steinwender C., Baumgartner W., Bonse J., Heitz J., Hassel A.:

**Impact of Femtosecond Laser Treatment Accompanied with Anodization of Titanium Alloy on Fibroblast Cell Growth**, in: Physics Status Solidi A, Number 217, 2020.

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Stadler A., Schönauer M., Aslani R., Baumgartner W., Philippi T.:

**The Impact of a Flexible Stern on Canoe Boat Maneuverability and Speed**, in: Biomimetics, Volume 5, Number 1, 2020.

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Stratakis E., Bonse J., Heitz J., Siegel J., Tsihidis G., Skoulas E., Papadopoulos G., Mimidis A., Joel A., Comanns P., Krüger J., Florian C., Fuentes-Edfuf Y., Solis J., Baumgartner W.:

**Laser engineering of biomimetic surfaces**, in: Materials Science & Engineering R, Volume 141, 2020.

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Viskup R., Wolf C., Baumgartner W.:

**Quantification of Minor Chemical Elements in Particulate Matter Collected from In-Use Diesel Engine Passenger Vehicles by Laser-Induced Breakdown Spectroscopy**, in: Energies, Volume 13, Number 22, 2020.

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Viskup R., Wolf C., Baumgartner W.:

**Qualitative and Quantitative Characterization of Major Elements of Particulate Matter of In-use Diesel Engine Passenger Vehicles by LIBS**, in: Energies, Series 13, 2020.

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Weth A., Krol I., Priesner K., Donato C., Pirker S., Wolf C., Aceto N., Baumgartner W.:

**A novel device for elimination of cancer cells from blood specimens**, in: Scientific Reports, Volume 10, Number 10181, 2020.

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#### **Aufsatz / Paper in Tagungsband (referiert)**

Heitz J., Muck M., Vujovic J., Baumgartner W., Hassel A., Lone S., Steinhauser B., Hrelescu C., Klar T., Buchberger G., Weth A., Baiko D.:

**Laser-Induced Periodic Surface Structures (LIPSS) for Biomedical and Sensing Applications**, in: 22nd International Conference on Transparent Optical Networks (ICTON), Bari, Italy, 2020, Series 22nd International Conference on Transparent Optical Networks (ICTON), Bari, Italy, 2020, 2020.

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**Aufsatz / Paper in Sammelwerk (referiert)**

Viskup R., Wolf C., Baumgartner W.:

**Identification of the Minor Chemical Elements in the Particulate Matter Exhaust Emissions From In-Use Diesel Engine Passenger Vehicles**, in: Diesel and Gasoline Engines, IntechOpen, 2020.

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Viskup R., Wolf C., Baumgartner W.:

**Major Chemical Elements in Soot and Particulate Matter Exhaust Emissions Generated from In-Use Diesel Engine Passenger Vehicles**, in: Diesel and Gasoline Engines, InTechOpen, 2020.

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2019

**Aufsatz / Paper in SCI-Expanded-Zeitschrift**

Roland T., Amsüss S., Russold M., Baumgartner W.:

**Ultra-Low-Power Digital Filtering for Insulated EMG Sensing**, in: Sensors, Series 19, Volume 4, 2019.

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Roland T., Wimberger K., Amsüss S., Russold M., Baumgartner W.:

**An Insulated Flexible Sensor for Stable Electromyography Detection: Application to Prosthesis Control**, in: Sensors 2019, 2019.

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Stadler A., Krieger M., Baumgartner W.:

**The sandfish lizard's aerodynamic filtering system**, in: Bioinspiration and Biomimetics, 2019.

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Wiesmayr B., Höglinger M., Krieger M., Lindner P., Baumgartner W., Stadler A.:

**A Polydimethylsiloxane (PDMS) Waveguide Sensor that Mimics a Neuromast to Measure Fluid Flow Velocity**, in: Sensors, 2019.

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**Aufsatz / Paper in sonstiger referierter Fachzeitschrift**

Viskup R., Wolf C., Baumgartner W.:

**Identification of the minor chemical elements in the exhaust emissions from Diesel engine vehicles**, in: Trans Motauto World, Volume 4, Number 3, Page(s) 124-127, 2019.

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**Aufsatz / Paper in Tagungsband (referiert)**

Höglinger M., Wiesmayr B., Baumgartner W., Stadler A.:

**A Rapid and Low-Cost Lung Function Testing Method Based on an Optical Flow Sensor**, in: VIII Latin American Conference on Biomedical Engineering and XLII National Conference on Biomedical Engineering, Series IFMBE Proceedings, Volume 75, Page(s) 469-477, 2019.

Stadler A., Leopold M., Krieger M., Baumgartner W.:

**The aerodynamic filtering system of the sandfish lizard**, in: Antonia B. Kesel, Doris Zehren (Eds.): Bionik: Patente aus der Natur, Page(s) 43-52, 2019.

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Viskup R., Wolf C., Baumgartner W.:

**Laser Induced Breakdown Spectroscopy of Diesel Particulate Matter Exhaust Emissions Generated from on Road Diesel Engine: Light Duty Vehicles**, in: Proceedings of the 7th International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2019), Page(s) 308-314, SCITEPRESS, 2019.

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#### Aufsatz / Paper in Online-Archiv (nicht-referiert)

Stadler A., Schönauer M., Aslani R., Baumgartner W., Philippi T.:

**The impact of a flexible stern on boat speed**, 2019.

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2018

#### Aufsatz / Paper in SCI-Expanded-Zeitschrift

Buchberger G., Baumgartner R., Kogler A., Fritz T., Bauer S., Baumgartner W.:

**Bio-Inspired "Fluidic Diode" for Large-Area Unidirectional Passive Water Transport Even Against Gravity**, in: Sensors and Actuators A: Physical, Volume 283, Page(s) 375-385, 2018.

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Buchberger G., Kogler A., Weth A., Baumgartner R., Comanns P., Bauer S., Baumgartner W.:

**"Fluidic Diode" for Passive Unidirectional Liquid Transport Bioinspired by the Spermathecae of Fleas**, in: Journal of Bionic Engineering, Series 1, Volume 15, Page(s) 42 - 56, 2018.

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Doppelhammer N., Baumgartner W., Vereshchaga Y.:

**Interplay between Stride Velocity, Stride Frequency and Stride Length in Human Gait Transition**, in: Journal of Bioanalysis & Biomedicine, Volume 10, Number 209, Page(s) 74 - 79, 2018.

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Hischen F., Buchberger G., Plamadeala C., Armbruster O., Winands K., Jüttler B., Heitz J., Baumgartner W.:

**The external scent efferent system of selected European true bugs (Heteroptera): a biomimetic inspiration for passive, unidirectional fluid transport**, in: J. Roy. Soc. Interface, Volume 15, Number 140, Page(s) 20170975, 2018.

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Hischen F., Keser M., Baumgartner W.:

**AMROBS: All-Metal Replicas of Biological Surfaces—A Novel Approach Combining Established Techniques**, in: Biomimetics, Volume 3, Number 31, Page(s) 1-13, 2018.

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Vereshchaga Y., Arnold N., Baumgartner W.:

**Physiological relevance of epithelial geometry: New insights into the standing gradient model and the role of LI cadherin**, in: PLOS ONE, Volume 13, Number 12, Page(s) 1-22, 2018.

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Vereshchaga Y., Baumgartner W.:

**Knowledge Acquisition from a Biomedical System: Human Gait Transition as an Example**, in: British Biomedical Bulletin, Volume 6, Number 2:314, 2018.

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Wolf C., Weth A., Walcher S., Lax C., Baumgartner W.:

**Modeling of Zinc Dynamics in the Synaptic Cleft: Implications for Cadherin Mediated Adhesion and Synaptic Plasticity**, in: Frontiers, Volume 11, 2018.

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#### **Aufsatz / Paper in sonstiger referierter Fachzeitschrift**

Tradler S., Mayr S., Himmelsbach M., Priewasser R., Baumgartner W., Stadler A.:

**Hydrothermal Carbonization as an all-inclusive process for food-waste conversion**, in: Bioresource Technology Reports, Volume 2, Page(s) 77-83, 2018.

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#### **Aufsatz / Paper in Tagungsband (referiert)**

Roland T., Mairhofer S., Roland W., Diskus C., Amsüss S., Russold M., Wolf C., Baumgartner W.:

**Evaluation of Capacitive EMG Sensor Geometries by Simulation and Measurement**, in: Scientific Computing in Electrical Engineering, 2018.

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Stadler A., Krieger M., Baumgartner W.:

**How the Sandfish Lizard Filters Particles and What We May Learn from It**, in: Biomimetic and Biohybrid Systems, Page(s) 439-449, Springer, 2018.

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Stadler A., Wiesmayr B., Krieger M., Baumgartner W.:

**An optical sensory principle for spirometry**, in: VDE (Eds.): Sensoren und Messsysteme, Page(s) 442-445, VDE VERLAG GMBH, 2018.

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Viskup R., Baumgartner W.:

**Measurement of the main compounds present in the diesel particulate matter exhaust emissions generated from the real diesel combustion engine passenger vehicles**, in: PROCEEDINGS VOLUME 10680 SPIE PHOTONICS EUROPE | 22-26 APRIL 2018 Optical Sensing and Detection V, Series Proc. SPIE 10680, Optical Sensing and Detection V, 1068017, Volume 5, 2018.

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Wiesmayr B., Krieger M., Baumgartner W., Stadler A.:

**Polydimethylsiloxane (PDMS) Waveguide Sensor Detecting Fluid Flow Velocity by Mimicking the Fish Lateral Line Organ**, in: Proceedings, Volume 2, Eurosensors 2018, Volume 2, 2018.

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2017

**Aufsatz / Paper in SCI-Expanded-Zeitschrift**

Bott R., Baumgartner W., Bräunig P., Menzel F., Joel A.:

**Adhesion enhancement of cribellate capture threads by epicuticular waxes of the insect prey sheds new light on spider web evolution**, in: Proceedings of the Royal Society B, Number 284, 2017.

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Comanns P., Esser F., Kappel P., Baumgartner W., Shaw J., Withers P.:

**Adsorption and movement of water by skin of the Australian thorny devil (Agamidae: Moloch horridus)**, in: Royal Society Open Science, Volume 4, Number 9, 2017.

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Drenckhahn D., Baumgartner W., Zonneveld B.:

**Different genome sizes of Western and Eastern Ficaria verna lineages shed light on steps of Ficaria evolution**, in: Forum geobotanicum, Number 7, Page(s) 27-33, 2017.

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Heitz J., Plamadeala C., Muck M., Armbruster O., Baumgartner W., Weth A., Steinwender C., Blessberger H., Kellermair J., Kirner S., Krüger J., Bonse J., Guntner A., Hassel A.:

**Femtosecond laser-induced microstructures on Ti substrates for reduced cell adhesion**, in: Applied Physics A, Volume 123, Page(s) 734, 2017.

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Hischen F., Reisch V., Kupsch D., De Mecquenem N., Riedel M., Himmelsbach M., Weth A., Heiss E., Armbruster O., Heitz J., Baumgartner W.:

**Adaptive camouflage: What can be learned from the wetting behaviour of the tropical flatbugs Dysodius lunatus and D. magnus.**, in: Biology Open, Number 6, 2017.

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Joel A., Baumgartner W.:

**Nanofibre production in spiders without electric charge**, in: Journal of Experimental Biology, Volume 220, Page(s) 2243-2249, 2017.

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Kirner S., Hermens U., Mimidis A., Skoulas E., Florian C., Hischen F., Plamadeala C., Baumgartner W., Winands K., Mescheder H., Krüger J., Solis J., Siegel J., Stratakis E., Bonse J.:

**Mimicking bug-like surface structures and their fluid transport produced by ultrashort laser pulse irradiation of steel**, in: Applied Physics A, Volume 123, Page(s) 754, 2017.

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Plamadeala C., Hischen F., Friesenecker R., Wollhofen R., Jacak J., Buchberger G., Heiss E., Klar T., Baumgartner W., Heitz J.:

**Bioinspired polymer microstructures for directional transport of oily liquids**, in: Royal Society Open Science, Volume Vol. 4, 2017.

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Weth A., Dippl C., Striedner Y., Tiemann-Boege I., Vereshchaga Y., Golenhofen N., Bartelt-Kirbach B., Baumgartner W.:

**Water transport through the intestinal epithelial barrier under different osmotic**

conditions is dependent on LI-cadherin trans-interaction., in: Tissue Barriers, Volume 5, Number 2, 2017.

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**Aufsatz / Paper in Tagungsband (referiert)**

Roland T., Baumgartner W., Amsüss S., Russold M.:

**Capacitively coupled EMG detection via ultra-low-power microcontroller STFT.**, in: Conference proceeding: IEEE Engineering in Medicine and Biology Society 2017, Page(s) 410-4013, PubMed, 2017.

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**Aufsatz / Paper in Sammelwerk (nicht-referiert)**

Heitz J., Steinwender C., Baumgartner W.:

**Microstructures Control Cell Attachment**, in: Hagelauer R., Pomberger G. (Eds.): Whitebook Medical Technology, Page(s) 40-41, 2017.

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Kellermair J., Baumgartner W., Steinwender C.:

**Impact of Different Flow Conditions on Endothelial Cell Activation and the von Willebrand Generation**, in: Hagelauer R., Pomberger G. (Eds.): Whitebook Medical Technology, Page(s) 118-119, 2017.

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2016

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Comanns P., Withers P., Esser F., Baumgartner W.:

**Cutaneous water collection by a moisture-harvesting lizard, the thorny devil /Moloch horridus)**, in: Journal of Experimental Biology, Volume 219, Number 21, Page(s) 3473-3479, 2016.

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Esterhammer F., Wolf C., Stadler A., Baumgartner W.:

**Optimizing the Cross Section of Cold-Rolled Steel Beams Using a Genetic Algorithm: Avoiding Local Optima Using Adaptive Mutation Control, Flexible Restriction Handling and Inbreed Avoiding Mating Strategies**, in: Peertechz Journal of Computer Science and Engineering, Volume 1, Number 1, Page(s) 001--011, 2016.

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Heitz J., Plamadeala C., Wiesbauer M., Freudenthaler P., Wollhofen R., Jacak J., Klar T., Magnus B., Köstner D., Weth A., Baumgartner W.:

**Boneforming Cells with Pronounced Spread into the Third Dimension in Polymer Scaffolds Fabricated by Twophoton Polymerization**, in: Journal of Biomedical Materials Research Part A, Volume 105, Number 3, Page(s) 891 - 899, 2016.

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Heitz J., Plamadeala C., Wiesbauer M., Wollhofen R., Jacak J., Puthukodan S., Klar T., Weth A., Baumgartner W., Magnus B., Marksteiner R., Freudenthaler P.:

**Three-dimensional photonic structures on transparent substrates fabricated by two-photon polymerization for use as cell substrates and for wetting experiments**, in:

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Himmelsbach M., Weth A., Bräunig P., Böhme C., Schwarz M., Baumgartner W.:  
**The plant hopper *Issus coleoptratus* can detoxify phloem sap saponins including the degradation of the terpene core**, in: *Biology Open*, Volume 5, Number 3, Page(s) 252--255, 2016.

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Joel A., Scholz I., Orth L., Kappel P., Baumgartner W.:  
**Morphological adaptation of the calamistrum to the cribellate spinning process in *Deinopoidae* (*Uloboridae*, *Deinopidae*)**, in: *Royal Society Open Science*, Volume 3, Number 2, 2016.

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Stadler A., Vihar B., Günther M., Huemer M., Riedl M., Shamiyeh S., Mayrhofer B., Böhme W., Baumgartner W.:  
**Adaptation to life in aeolian sand: how the sandfish lizard, *Scincus Scincus*, prevents sand particles from entering its lungs**, in: *Journal of Experimental Biology*, Volume 219, Number 22, Page(s) 3597-3604, 2016.

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Vihar B., Hanisch F., Baumgartner W.:  
**Neutral glycans from sandfish skin can reduce friction of polymers**, in: *Journal of The Royal Society Interface*, Volume 13, Number 116, 2016.

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#### **Aufsatz / Paper in sonstiger referierter Fachzeitschrift**

Comanns P., Winands K., Arntz K., Klocke F., Baumgartner W.:  
**Laser-Based biomimetic functionalization of surfaces: From moisture harvesting lizards to specific fluid transport systems**, in: *Int. J. of Design & Nature and Ecodynamics*, Volume 9, Number 3, Page(s) 206-15, 2016.

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#### **Aufsatz / Paper in Tagungsband (referiert)**

Buchberger G., Jakoby B., Schöftner J., Schützenberger A., Wiesmayr B., Baumgartner W., Puttinger S., Brandl A., Hilber W.:  
**Simple synthetic jet actuators for cooling applications using soft or rigid magnets**, in: *Procedia Engineering*, Series *Procedia Engineering*, Number 168, Page(s) 1541 - 1546, 2016.

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Comanns P., Winands K., Pothen M., Bott R., Wagner H., Baumgartner W.:  
**The Texas Horned Lizard as Model for Robust Capillary Structures for Passive Directional Transport of Cooling Lubricants**, in: *SPIE Smart Structures and Materials+ Nondestructive Evaluation and Health Monitoring*, 979711-979711-11, Series *SPIE: Bioinspiration, Biomimetics, and Bioreplication 2016*, Volume 9797, 2016.

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Roland T., Amsüss S., Russold M., Wolf C., Baumgartner W.:  
**Capacitive Sensing of Surface EMG for Upper Limb Prostheses Control**, in: *Procedia*



Engineering 00 (2016) 000-000, Series Procedia Engineering, 2016.

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Roland T., Baumgartner W., Amsüss S., Russold M.:

**Signal Evaluation Of Capacitive EMG For Upper Limb Prostheses Control Using An Ultra-Low-Power Microcontroller**, in: IEEE (Eds.): Biomedical Engineering and Sciences (IECBES), 2016 IEEE EMBS Conference on, 2016.

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Wolf C., Stadler A., Baumgartner W.:

**Cross-Section Optimisation for Cold-Rolled Steel Beams Using a Genetic Algorithm**, in: TANGER Ltd (Eds.): METAL 2016: 25th Anniversary International Conference on Metallurgy and Materials, Page(s) 507-512, 2016.

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2015

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Comanns P., Buchberger G., Buchsbaum A., Baumgartner R., Kogler A., Bauer S., Baumgartner W.:

**Directional, passive liquid transport: The Texas horned lizard as a model for a biomimetic 'liquid diode'**, in: Royal Society, Series Interface, Volume 12, Number 109, 2015.

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Heiliger E., Osmanagic A., Haase H., Golenhofen N., Grabrucker A., Weth A., Baumgartner W.:

**N-cadherin-mediated cell adhesion is regulated by extracellular Zn(2+)**, in: Metallomics: Integrated Biometal Science, 2015.

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Joel A., Baumgartner W., Scholz I.:

**Cribellate thread production in spiders: Complex processing of nano-fibres into a functional capture thread**, in: Arthropod Structure & Development, Volume 44, Number 6, Page(s) 568-573, 2015.

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Vihar B., Wolf C., Böhme W., Fiedler F., Baumgartner W.:

**Respiratory physiology of the sandfish (Squamata: Scincidae: Scincus scincus) with special reference to subharenal breathing**, in: Salamandra, Volume 51, Number 4, Page(s) 326-334, 2015.

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**Aufsatz / Paper in Tagungsband (referiert)**

Buchberger G., Hischen F., Comanns P., Baumgartner R., Kogler A., Buchsbaum A., Bauer S., Baumgartner W.:

**Bio-inspired Microfluidic Devices for Passive, Directional Liquid Transport: Model-based Adaption for Different Materials**, in: Procedia Engineering, Series Procedia Engineering, Volume 120, Page(s) 106 - 111, 2015.

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Baumgartner W.:

**Friction-Reducing Sandfish Skin**, in: Bhushan, Bharat (Eds.): Encyclopedia of Nanotechnology, Page(s) 1--7, Springer Netherlands, 2015.

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**Aufsatz / Paper in Online-Archiv (nicht-referiert)**

Stadler A., Pavlicek P., Baumgartner W.:

**Bio-inspired flow sensor: mimicking the lateral line organ with an optical sensory system**, 2015.

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Tradler S., Stadler A., Baumgartner W.:

**Hydrothermal Carbonization: a Decentralized and Discontinuous Technology to Convert Organic Food Waste into High Quality Hydrochar**, 2015.

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Vereshchaga Y., Yang Y., Kaiser B., Baumgartner W.:

**Human Gait Transition speeds predicted by fuzzy logic**, 2015.

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2014

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Baumgartner W., Weth A., Gutberlet J., Harms G., Groschner K.:

**Localization of VE-cadherin in plasmalemmal cholesterol rich microdomains and the effects of cholesterol depletion on VE-cadherin mediated cell-cell adhesion**, in: Biochimica Et Biophysica Acta, 2014.

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Bennemann M., Backhaus S., Scholz I., Park D., Mayer J., Baumgartner W.:

**Determination of the Young's modulus of the epicuticle of the smooth adhesive organs of Carausius morosus using tensile testing**, in: The Journal of Experimental Biology, Volume 217, Number Pt 20, Page(s) 3677--3687, 2014.

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Krauspe B., Dreher W., Beyer C., Baumgartner W., Denecke B., Janssen K., Langhans C., Clarner T., Kipp M.:

**Short-Term Cuprizone Feeding Verifies N-Acetylaspartate Quantification as a Marker of Neurodegeneration**, in: Journal of molecular neuroscience: MN, Page(s) 1559-1166, 2014.

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Maes H., Stibany F., Giefers S., Daniels B., Deutschmann B., Baumgartner W., Schäffer A.:  
**Accumulation and Distribution of Multiwalled Carbon Nanotubes in Zebrafish (Danio rerio)**, in: Environmental Science & Technology, Volume 48, Number 20, Page(s) 12256--12264, 2014.

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Rhiem S., Riding M., Baumgartner W., Martin F., Semple K., Jones K., Schäffer A., Maes H.:  
**Interactions of multiwalled carbon nanotubes with algal cells: Quantification of**

**association, visualization of uptake, and measurement of alterations in the composition of cells**, in: Environmental Pollution (Barking, Essex: 1987), Volume 196C, Page(s) 431--439, 2014.

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2013

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Baumgartner W.:

**Possible roles of LI-Cadherin in the formation and maintenance of the intestinal epithelial barrier**, in: Tissue Barriers, Volume 1, Number 1, Page(s) 1--0, 2013.

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Baumgartner W., Osmanagic A., Gebhart M., Krämer S., Golenhofen N.:

**Different pH-dependencies of the two synaptic adhesion molecules N-cadherin and cadherin-11 and the possible functional implication for long-term potentiation**, in: Synapse (New York, N.Y.), Volume 67, Number 10, Page(s) 705--715, 2013.

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Muth-Köhne E., Sonnack L., Schlich K., Hischen F., Baumgartner W., Hund-Rinke K., Schäfers C., Fenske M.:

**The toxicity of silver nanoparticles to zebrafish embryos increases through sewage treatment processes**, in: Ecotoxicology (London, England), 2013.

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Zhou Y., Peisker H., Weth A., Baumgartner W., Dörmann P., Frentzen M.:

**Extrplastidial cytidinediphosphate diacylglycerol synthase activity is required for vegetative development in Arabidopsis thaliana**, in: The Plant journal: for cell and molecular biology, 2013.

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2012

**Aufsatz / Paper in SCI-Expanded-Zeitschrift**

Bachmann T., Emmerlich J., Baumgartner W., Schneider J., Wagner H.:

**Flexural stiffness of feather shafts: geometry rules over material properties**, in: The Journal of experimental biology, Volume 215, Number Pt 3, Page(s) 405--415, 2012.

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Bräunig P., Krumpholz K., Baumgartner W.:

**Sensory pits - Enigmatic sense organs of the nymphs of the planthopper Issus coleoptratus (Auchenorrhyncha, Fulgoromorpha)**, in: Arthropod Structure & Development, Volume 41, Number 5, Page(s) 443-458, 2012.

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Dolge L., Aufenvenne K., Traupe H., Baumgartner W.:

**Beta-actin is a target for transglutaminase activity at synaptic endings in chicken telencephalic cell cultures**, in: Journal of Molecular Neuroscience: MN, Volume 46, Number 2, Page(s) 410--419, 2012.

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Staudt K., Böhme W., Baumgartner W.:

**Comparative Investigations of the Sandfishes -Keratin (Reptilia: Scincidae:**

**Scincus scincus). Part 2: Glycan-Based Friction Reduction**, in: Journal of Biomimetics, Biomaterials, and Tissue Engineering, Volume 16, Page(s) 1--9, 2012.

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Staudt K., Saxe F., Schmied H., Soeur R., Böhme W., Baumgartner W.:  
**Comparative Investigations of the Sandfish's -Keratin (Reptilia: Scincidae: Scincus scincus). Part 1: Surface and Molecular Examinations**, in: Journal of Biomimetics, Biomaterials, and Tissue Engineering, Volume 15, Page(s) 1--16, 2012.

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Weth A., Baumgartner W., Fluegge D., Moeller L., Cichy A., Gorin M., Veitinger S., Cainarca S., Lohmer S., Corazza S., Neuhaus E., Spehr J., Spehr M.:  
**Mitochondrial Ca(2+) mobilization is a key element in olfactory signaling**, in: Nature neuroscience, Volume 15, Number 5, Page(s) 754--762, 2012.

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Bachmann T., Blazek S., Erlinghagen T., Baumgartner W., Wagner H.:  
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#### **Wissenschaftliches Sammelwerk Herausgeberschaft (Erstauflage)**

Bachmann T., Blazek S., Erlinghagen T., Baumgartner W., Wagner H.:  
**Barn Owl Flight**, Springer Berlin Heidelberg, 2012.

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2011

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