



Publikationen 2010

**des
Instituts für Medizinische Physik und Biophysik
Universitätsklinikum Münster
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Abd-El-Karem, Y; Elbers, T; Reichelt, R; Steinbüchel, A. 2010. Heterologous expression of *Anabaena* sp. PCC7120 cyanophycin metabolism genes *cphA1* and *cphB1* in *Sinorhizobium* (*Ensifer*) *meliloti* 1021. *Appl. Microbiol. Biot.*, in press, doi: 10.1007/s00253-010-2891-x

Bartkowiak, K; Effenberger, KE; Harder, S; Andreas, A; Buck, F; Peter-Katalinić, J; Pantel, K; Brandt, BH. 2010. Discovery of a Novel Unfolded Protein Response Phenotype of Cancer Stem/Progenitor Cells from the Bone Marrow of Breast Cancer Patients. *J. Proteome Res.* 9: 3158-3168.

Boening, D; Groemer, TW; Klingauf, J. 2010. Applicability of an EM-CCD for spatially resolved TIR-ICS. *Opt. Express* 18: 13516-13528.

Cederkvist, FH; Mormann, M; Froesch, M; Eijnsink, VGH; Sørli, M; Peter-Katalinić J. 2010. Concurrent enzyme reactions and binding events for chitinases interacting with chitosan oligosaccharides monitored by high resolution mass spectrometry. *Int. J. Mass Spectrom.*, in press, doi:10.1016/j.ijms.2010.10.031.

Edlmayr, J; Niespodziana, K; Popow-Kraupp, T; Krzyzanek, V; Focke-Tejkl, M; Blaze, D; Grote, M; Valenta, R. 2010. Antibodies induced with recombinant VP1 from Human Rhinovirus exhibit cross-neutralization. *Eur. Respir. J.*, in press, doi: 10.1183/09031936.00149109

de la Paz Fernandez, M; Chan, YB; Yew, JY; Billeter, JC; Dreisewerd, K; Levine, JD; Kravitz, EA. Pheromonal and Behavioral Cues Trigger Male-to-Female Aggression in *Drosophila*. 2010 *PLOS Biol.* 8: Article Number: e1000541.

Glyvuk, N; Tsytsyura, Y; Geumann, C; Hooge, R; Hüve, J; Kratzke, M; Baltes, J; Böning, D; Klingauf, J; Schu, P. 2010. AP-1/sigma 1B-adaptin mediates endosomal synaptic vesicle recycling, learning and memory *EMBO J.* 29: 1318-1330.

Henning, S; Mormann, M; Peter-Katalinić, J; Pohlentz, G. 2010. Direct analysis of α - and β -chains of hemoglobins from mammalian blood samples by nanoESI mass spectrometry during in-capillary proteolytic digestion. *Amino Acids*, in press, doi:10.1007/s00726-010-0671-7

Hoffmann, P; Huelsewig, M; Duvar, S; Ziehr, H; Mormann, M; Peter-Katalinić, J; Friedrich, AW; Karch, H; Müthing, J. 2010. On the structural diversity of Shiga toxin glycosphingolipid receptors in lymphoid and myeloid cells determined by nanoelectrospray ionization tandem mass spectrometry. *Rapid Commun. Mass Spectrom.* 24: 2295-2304.

Hua, Y; Sinha, R; Martineau, M; Kahms, M; Klingauf, J. 2010. A common origin of synaptic vesicles undergoing evoked and spontaneous fusion. *Nat. Neurosci.* 13: 1451-1453.

Ibanez, AJ; Scharte, J; Bones, P; Pirkl, A; Meldau, S; Baldwin, IT; Hillenkamp, F; Weis, E; Dreisewerd, K. 2010. Rapid metabolic profiling of *Nicotiana tabacum* defence responses against *Phytophthora nicotianae* using direct infrared laser desorption ionization mass spectrometry and principal component analysis. *Plant Methods* 6: Article Number: 14.

Kirchhefer, U; Wehrmeister, D; Postma, AV; Pohlentz, G; Mormann, M; Kucerova, D; Müller, FU; Schmitz, W; Schulze-Bahr, E; Wilde, AA; Neumann, J. 2010. The human CASQ2 mutation K206N is associated with hyperglycosylation and altered cellular calcium handling. *J. Mol. Cell. Cardiol.* 49: 95-105.

- Kosicek, M; Kirsch, S; Bene, R; Trkanjec, Z; Titlic, M; Bindila, L; Peter-Katalinić, J; Hecimovic, S. 2010. Nano-HPLC-MS analysis of phospholipids in cerebrospinal fluid of Alzheimer's disease patients-a pilot study. *Anal. Bioanal. Chem.* 398: 2929-2937.
- Manilla-Perez, E; Reers, C; Baumgart, M; Hetzler, S; Reichelt, R; Malkus, U; Kalscheuer, R; Waeltermann, M; Steinbüchel, A. 2010. Analysis of Lipid Export in Hydrocarbonoclastic Bacteria of the Genus *Alcanivorax*: Identification of Lipid Export-Negative Mutants of *Alcanivorax borkumensis* SK2 and *Alcanivorax jadensis* T9. *J. Bacteriol.* 192: 643-656.
- Meisen, I; Wisholzer, S; Soltwisch, J; Dreisewerd, K; Mormann, M; Müthing, J; Karch, H; Friedrich, AW. 2010. Normal silica gel and reversed phase thin-layer chromatography coupled with UV spectroscopy and IR-MALDI-o-TOF-MS for the detection of tetracycline antibiotics. *Anal. Bioanal. Chem.* 398: 2821-2831.
- Müsken, A; Souady, J; Dreisewerd, K; Zhang, W; Distler, U; Peter-Katalinić, J; Miller-Podraza, H; Karch, H; Müthing, J. 2010. Application of thin-layer chromatography/infrared matrix-assisted laser desorption/ionization orthogonal time-of-flight mass spectrometry to structural analysis of bacteria-binding glycosphingolipids selected by affinity detection. *Rapid Commun. Mass Spectrom.* 24: 1032-1038.
- Pfaff, M; Müller, E; Klein, MFG; Colsmann, A; Lemmer, U; Krzyzanek, V; Reichelt, R; Gerthsen, D. 2010. Low-energy electron scattering in carbon-based materials analyzed by scanning transmission electron microscopy and its application to sample thickness determination. *J. Microscop.*, in press, doi: 10.1111/j.1365-2818.2010.03475.x
- Pirkl, A; Dreisewerd, K; Yew, JY; König, S. 2010. Field-based ion generation from microscale emitters on natural and artificial objects for atmospheric pressure mass spectrometry. *Anal. Bioanal. Chem.* 397: 3311-3316.
- Reuter, S; Reiermann, S; Woerner, R; Schröter, R; Edemir, B; Buck, F; Henning, S; Peter-Katalinić, J; Vollenbröcker, B; Amann, K; Pavenstädt, H; Schlatter, E; Gabriels, G. 2010. IF/TA-related metabolic changes-proteome analysis of rat renal allografts. *Nephrol. Dial. Transpl.* 25: 2492-2501.
- Rohlfing, A; Leisner, A; Hillenkamp, F; Dreisewerd, K. 2010. Investigation of the Desorption Process in UV Matrix-Assisted Laser Desorption/Ionization with a Liquid 3-Nitrobenzyl Alcohol Matrix by Photoacoustic Analysis, Fast-Flash Imaging, and UV-Laser Postionization. *J. Phys. Chem. C* 114: 5367-5381.
- Rojo, A; Solis, J; Oseguera, J; Salas, O; Reichelt, R. 2010. Tribological Properties of CrN/AlN Films Produced by Reactive Magnetron Sputtering. *J. Mater. Eng. Perform.* 19: 421-427.
- Schmidt, T; Lenders, M; Hillebrand, A; van Deenen, N; Munt, O; Reichelt, R; Eisenreich, W; Fischer, R; Prüfer, D; Gronover, CS. Characterization of rubber particles and rubber chain elongation in *Taraxacum koksaghyz*. *BMC Biochem.* 11: Article Number: 11.
- Schweppe, CH; Hoffmann, P; Nofer, JR; Pohlentz, G; Mormann, M; Karch, H; Friedrich, AW; Müthing, J. 2010. Neutral glycosphingolipids in human blood: a precise mass spectrometry analysis with special reference to lipoprotein-associated Shiga toxin receptors. *J. Lipid Res.* 51:2282-2294.
- Sobchenko, I; Baither, D; Reichelt, R; Nembach, E. 2010. Modeling and kinetic Monte Carlo simulations of the metallographic etching process of second-phase particles. *Philos. Mag.* 90: 527-551.

Soltwisch, J; Dreisewerd, K. 2010. Discrimination of Isobaric Leucine and Isoleucine Residues and Analysis of Post-Translational Modifications in Peptides by MALDI In-Source Decay Mass Spectrometry Combined with Collisional Cooling. *Anal. Chem.* 82: 5628-5635.

Souady, J; Dadimov, D; Kirsch, S; Bindila, L; Peter-Katalinić, J; Vakhrushev, SY. 2010. Software utilities for the interpretation of mass spectrometric data of glycoconjugates: application to glycosphingolipids of human serum. *Rapid Commun. Mass Spectrom.* 24: 1039-1048.

Zarei, M; Müthing, J; Peter-Katalinić, J; Bindila, L. 2010. Separation and identification of GM1b pathway Neu5Ac-and Neu5Gc gangliosides by on-line nanoHPLC-QToF MS and tandem MS: toward glycolipidomics screening of animal cell lines. *Glycobiology* 20: 118-126.