

Veröffentlichungen

Anorganische Chemie 1

- A.L.C. Lagoa, H.P. Diogo, M. P. Dias, M.E.M. da Piedade, L.M.P.F. Amaral, M.A.V.R. da Silva, J.A.M. Simoes, R.C. Guedes, B.J.C. Cabral, K.Schwarz, M. Epple, *Chemistry — A European Journal* **7** (2001) 483-489. Energetics of C-Cl, C-Br, and C-I bonds in haloacetic acids. Enthalpies of formation of XCH₂COOH (X = Cl, Br, I) compounds and of the carboxymethyl radical.
- F. Peters, M. Epple, *Zeitschrift für Kardiologie* 90:Suppl. **3** (2001) III/81-III/85. Simulating arterial wall calcification in vitro: biomimetic crystallization of calcium phosphates under controlled conditions.
- M. Epple, P. Lanzer, *Zeitschrift für Kardiologie* 90:Suppl. **3** (2001) III/2-III/5. How much interdisciplinarity is required to understand vascular calcification? Formulation of four basic mechanisms of vascular calcification.
- M. Epple, *Zeitschrift für Kardiologie* 90: Suppl. **3** (2001) III/64-III/67. Solid-state chemical methods to investigate the nature of calcified deposits.
- O. Herzberg, H. Ehrenberg, S. J. Kitchin, K. D.M. Harris, M. Epple, *Journal of Solid State Chemistry* **156** (2001) 61-67. Structural aspects of the solid-state polycondensation reaction in alkali 4-halogenomethylbenzoates.
- W. Linhart, F. Peters, W. Lehmann, K. Schwarz, A. Schilling, M. Amling, J.M. Rueger, M. Epple, *Journal of Biomedical Materials Research* **54** (2001) 162-171. Biologically and chemically optimized composites of carbonated apatite and polyglycolide as bone substitution materials.
- C. Schiller, M. Siedler, F. Peters, M. Epple, *Ceramic Transactions* **114** (2001) 97-108. Functionally graded materials of biodegradable polyesters and bone-like calcium phosphates for bone replacement.
- O. Herzberg, M. Epple, *European Journal of Inorganic Chemistry* (2001) 1395-1406. Formation of polyesters by thermally induced polymerization reactions of molecular solids.
- S. Weihe, M. Wehmöller, A. Tschakaloff, R. von Oepen, C. Schiller, M. Epple, H. Eufinger, *Mund-Kiefer- und Gesichtschirurgie* **5** (2001) 299-304. Alternative Knochenersatzmaterialien zur präoperativen Fertigung individueller CAD/CAM-Schädelimplantate.
- S. Weihe, M. Wehmöller, C. Schiller, C. Rasche, H. Eufinger, M. Epple, *Biomedizinische Technik* **46 Suppl. 1** (2001) 214-215. Formgebung degradierbarer Werkstoffe mit Hilfe der Verfahrenskette zur Fertigung individueller CAD/CAM-Implantate.
- S. Weihe, M. Wehmöller, C. Schiller, C. Rasche, H. Eufinger, M. Epple, *Biomedizinische Technik* **46 Suppl. 1** (2001) 204-205. Ein optimierter biodegradierbarer Werkstoff für die Behandlung großflächiger Schädeldefekte.
- J. S. Choi, M. Köller, D. Müller, G. Muhr, M. Epple, *Biomedizinische Technik* **46 Suppl. 1** (2001) 226-227. Verbesserung der Biokompatibilität von Ni-Ti-Formgedächtnislegierungen ("Nitinol") durch Beschichtung mit Calciumphosphaten aus Lösung.
- D. Tadic, M. Epple, *Biomedizinische Technik* **46 Suppl. 1** (2001) 224-225. Kontinuierliche Herstellung von Knochenmineral-ähnlichen Calciumphosphat-Keramiken.
- M. Epple, *Biomedizinische Technik* **46 Suppl. 1** (2001) 36-38. Biomaterialien: Von Fremdkörpern im Gewebe hin zu funktionellen Implantaten.

- M. Siedler, S. J. Kitchin, K. D.M. Harris, A. L. C. Lagoa, H. P. Diogo, M. E. M. da Piedade, M. Epple, *Journal of the Chemical Society, Dalton Transactions* (2001) 3140-3148. Porous Poly(d,l-lactide) and poly(d,l-lactide-co-glycolide) by thermal salt elimination from halogenocarboxylates.
- F. Peters, M. Epple, *Journal of the Chemical Society, Dalton Transactions* (2001) 3585-3592. Crystallization of calcium phosphates under constant conditions with a double-diffusion setup.

Anorganische Chemie 2

- R. Schmechel, H. Winkler, X. Li, M. Kennedy, M. Kolbe, A. Benker, M. Winterer, R. A. Fischer, H. Hahn, H. von Seggern, *J. Appl. Phys.*, **89** (2001) 1679-1686. Optical properties of nanocrystalline $Y_2O_3:Eu^{3+}$ in different host materials.
- R. Schmechel, H. Winkler, X. M. Li, M. Kennedy, M. Kolbe, A. Benker, M. Winterer, R. A. Fischer, H. Hahn, H. von Seggern, *Scripta Materialia*, **44** (2001) 1213-1217. Photoluminescence properties of nanocrystalline $Y_2O_3 :Eu^{3+}$ in different environments.
- N. Oberbeckmann, K. Merz, R. A. Fischer, *Organometallics*, **20** (2001) 3265-3273. Coordination of Donor-Functionalized Cyclopentadienyl Ligands at Platinum(II) Centers: Syntheses and Molecular Structure of $\mu(1,2-\eta^2:5,6-cod)bis\{[\eta^5-C_5Me_4(CH_2CH_2NMe_2)]MePt\}$.
- H. Parala, A. Devi, A. Wohlfart, M. Winter, R. A. Fischer, *Adv. Functional Mater.*, **11** (2001) 224-228. An efficient chemical solution deposition method for epitaxial gallium nitride layers using single molecule precursor.
- H. Parala, A. Devi, W. Rogge, A. Birkner, R. A. Fischer, *J. Phys. IV France*, **11** (2001) 473-479. Synthesis of GaN particles in porous matrices by Chemical Vapour Infiltration of single molecule precursors.
- R. A. Fischer, U. Weckenmann, S. Mittler, *J. Phys. IV France*, **11** (2001) 1183-1190 (Selective CVD, VII). Area Selective OMCVD of Gold and Palladium on Self-Assembled Organic Monolayers: Control of Nucleation Sites.
- R. Becker, J. Weiß, A. Devi, R. A. Fischer, *J. Phys. IV France*, **11** (2001) 569-575. Chemical Vapour Deposition of Copper using intramolecularly adduct stabilised monomeric Copper(II) Alkoxides.
- Wohlfart, A. Devi, F. Hipler, H.W. Becker, R. A. Fischer, *J. Phys. IV France*, **11** (2001) 683-687. Growth of porous columnar α -GaN layers on c-plane Al_2O_3 by MOCVD using Bisazido dimethylaminopropyl gallium as single source precursor.
- Devi, H. Parala, W. Rogge, A. Wohlfart, A. Birkner, R. A. Fischer, *J. Phys. IV France*, **11** (2001) 577-584. Growth of InN whiskers from single source precursor.
- R. Becker, J. Weiß, M. Winter, R. A. Fischer, *J. Organomet. Chem.*, **630** (2001) 253-262. New Heterometallic Copper Zink Alkoxides: Synthesis, Structural Properties and Pyrolysis to Cu/ZnO Composite Materials.
- J. Hambrock, A. Birkner R. A. Fischer, *J. Mater. Chem.*, **11** (2001) 3197-3201. Synthesis of CdSe nanoparticles using various organometallic cadmium precursors.

- H. Parala, A. Devi, F. Hipler, E. Maile, A. Wohlfart, A. Birkner, H.-W. Becker, R. A. Fischer, *J. Cryst. Growth*, **231** (2001) 68-74. Investigations on InN whiskers grown by Chemical Vapour Deposition.
- H. Parala, A. Devi, F. Hipler, A. Birkner, R. A. Fischer, *Electrochemical Society Proceedings* **13** (2001) 356-364. InN Whisker Growth by Chemical Vapor Deposition.
- H. Parala, A. Devi, A. Birkner, R.A. Fischer, *Electrochemical Society Proceedings* **13** (2001), 429-436. Nano-sized GaN Particles by Chemical Vapour Infiltration.
- J. Müller, B. Wittig, S. Bendix, *J. Phys. Chem. A* **105** (2001) 2112–2116. Synthesis of Monomeric Me₂GaD via a **b**-Hydrogen Elimination at High Temperatures. A Matrix-Isolation Study.
- J. Müller, B. Wittig, H. Sternkicker, S. Bendix, *J. Phys. IV* **11 (Pr3)** (2001) 17–22. Insights into the MOCVD Process of GaN using Single-Source Precursors. Matrix Isolation: A Powerful Technique.
- J. Müller, B. Wittig, *Electrochemical Society Proceedings* **13** (2001) 124–128. Fragmentation of the Intramolecularly Coordinated Alane Me₂NCH₂CD₂CH₂AlBr₂. A Matrix-Isolation Study.
- J. Müller, S. Bendix, *Chem. Commun.* **2001**, 911–912. Insights into the Chemical Vapor Deposition of GaN using the Single-Source Precursor Me₂N(CH₂)₃Ga(N₃)₂. Matrix Isolation of Ga(N₃).

Organische Chemie 2

- G. Bucher, M. Halupka, C. Kolano, O. Schade, W. Sander, *Eur. J. Org. Chem.* (2001) 545 – 552. Characterization of Alkoxy carbonyl Radicals by Step-Scan Time-Resolved Infrared Spectroscopy
- C. Röser, R. Albers, W. Sander, *Eur. J. Org. Chem.* (2001) 269 – 273. Rearrangements of 2-Furfurylidenes – Synthesis of Acylsilanes and –stannanes.
- G. Bucher, H. Wandel, W. Sander, *J. Phys. Org. Chem.* **14** (2001) 197 – 200. 1,4-Naphthoquinonediazide-2-carboxylic acid: a Diazo Compound with a Long-Lived Triplet Excited State.
- W. Sander, K. Block, W. Kappert, A. Kirschfeld, S. Muthusamy, K. Schroeder, C. P. Sosa, E. Kraka, D. Cremer, *J. Am. Chem. Soc.* **121** (2001) 2618 – 2627. Dimesitylketone O-oxide: Spectroscopic Characterization, Conformation, and Reaction Modes – OH Formation and OH Capture.
- H. H. Wenk, W. Sander, *Chem. Eur. J.* **6** (2001) 1837 – 1844. Matrix Isolation and Spectroscopic Characterization of the Perfluorinated ortho- and meta-Benzyne.
- H. H. Wenk, A. Balster, W. Sander, D. A. Hrovat, and W. T. Borden, *Angew. Chem.* **113** (2001) 2356 – 2359. Matrix Isolation of the Perfluorinated p-Benzyne.
- H. H. Wenk, R. Hübert, W. Sander, *J. Org. Chem.* **66** (2001) 7994 – 7999. Reaction of 4-Oxo-2,3,5,6-tetrafluorocyclohexa-2,5-dienylidene with Acetylene – a Carbene to Carbene Reaction.
- W. Sander, A. Strehl, M. Winkler, *Eur. J. Org. Chem.* (2001) 3771 – 3778. Photochemistry of Bissulfonyldiazomethanes

- M. Winkler, W. Sander, *J. Phys. Chem.* **105** (2001) 10422 – 10432. The Structure of meta-Benzyne Revisited – A Close Look into σ -Bond Formation.
- G. Bucher, M. Halupka, C. Kolano, O. Schade, W. Sander, *Eur. J. Org. Chem.* (2001) 545 – 552. Characterization of Alkoxy carbonyl Radicals by Step-Scan Time-Resolved Infrared Spectroscopy
- C. Röser, R. Albers, W. Sander, *Eur. J. Org. Chem.* (2001) 269 – 273. Rearrangements of 2-Furfurylidene – Synthesis of Acylsilanes and –stannanes
- G. Bucher, H. Wandel, W. Sander, *J. Phys. Org. Chem.* **14** (2001) 197 – 200. 1,4-Naphthoquinonediazide-2-carboxylic acid: a Diazo Compound with a Long-Lived Triplet Excited State
- W. Sander, K. Block, W. Kappert, A. Kirschfeld, S. Muthusamy, K. Schroeder, C. P. Sosa, E. Kraka, D. Cremer, *J. Am. Chem. Soc.* **121** (2001) 2618 – 2627. Dimesitylketone O-oxide: Spectroscopic Characterization, Conformation, and Reaction Modes – OH Formation and OH Capture.
- H. H. Wenk, W. Sander, *Chem. Eur. J.* **6** (2001) 1837 – 1844. Matrix Isolation and Spectroscopic Characterization of the Perfluorinated ortho- and meta-Benzyne.
- H. H. Wenk, A. Balster, W. Sander, D. A. Hrovat, and W. T. Borden, *Angew. Chem.* **113** (2001) 2356 – 2359. Matrix Isolation of the Perfluorinated p-Benzyne.
- H. H. Wenk, R. Hübner, W. Sander, *J. Org. Chem.* **66** (2001) 7994 – 7999. Reaction of 4-Oxo-2,3,5,6-tetrafluorocyclohexa-2,5-dienylidene with Acetylene – a Carbene to Carbene Reaction.
- W. Sander, A. Strehl, M. Winkler, *Eur. J. Org. Chem.* (2001) 3771 – 3778. Photochemistry of Bissulfonyldiazomethanes.
- M. Winkler, W. Sander, *J. Phys. Chem.* **105** (2001) 10422 – 10432. The Structure of meta-Benzyne Revisited – A Close Look into σ -Bond Formation.
- G. Bucher, *Eur. J. Org. Chem.* (2001) 2447-2462. Photochemical Generation of Iminoquinone Methides by 1,4-Hydrogen Migration in Derivatives of *o*-Tolyl nitrene.
- G. Bucher, *Eur. J. Org. Chem.* (2001) 2463-2475. Laser Flash Photolysis Study on *N,N*-Diethyl-2-azidobenzylamine: The Reactivity of Iminoquinonemethides in Solution.
- Kudin, K. N.; Bettinger, H. F.; Scuseria, G. E.; Fluorinated (10,10) and (18,0) Single-Wall Carbon Nanotubes *Phys. Rev. B.* **2001**, *63*, 045413.
- Timoshkin, A. Y.; Bettinger, H. F.; Schaefer, H. F.; A Theoretical Approach to the Single Source Precursor Concept: Quantum Chemical Modeling of Gas Phase Reactions, *J. Cryst. Growth* **2001**, *222*, 170-182.
- Stahl, F.; Schleyer, P. v. R.; Bettinger, H. F.; Kaiser, R. I.; Lee, Y. T.; Schaefer, H. F.; The reaction of the Ethynyl Radical, C₂H, with Methylacetylene, CH₃CCH, under single collision conditions: Implications for Astrochemistry, *J. Chem. Phys.* **2001**, *114*, 3476.
- Timoshkin, A. Y.; Bettinger, H. F.; Schaefer, H. F.; DFT Modeling of Chemical Vapor Deposition of GaN from Organogallium Precursors. I. Thermodynamics of the Elimination Reactions, *J. Phys. Chem.*, **2001**, *105*, 3240-3248.
- Timoshkin, A. Y.; Bettinger, H. F.; Schaefer, H. F.; DFT Modeling of Chemical Vapor Deposition of GaN from Organogallium Precursors. II. Structures of the Oligomers and Thermodynamics of the Association Processes, *J. Phys. Chem.*, **2001**, *105*, 3249-3258.

- Sander, W.; Bettinger, H. F.; Reactions of 2,5-Cyclohexadienylienes Investigated by Direct Spectroscopic Methods. In: *Advances in Carbene Chemistry*, Vol. 3, Brinker, U. H. (Ed.), Elsevier, Amsterdam, **2001**, pp. 159-203.
- Nossal, J.; Saini, R. K.; Sadana, A. K.; Bettinger, H. F.; Alemany, L. B.; Scuseria, G. E.; Billups, W. E.; Saunders, M.; Kong, A.; Weisemann, R.; Formation, Isolation, Spectroscopic Properties, and Calculated Properties of Some Isomers of C₆₀H₃₆, *J. Am. Chem. Soc.* **2001**, *123*, 8482-8495.
- Bettinger, H. F.; Kudin, K. N.; Scuseria, G. E.; The Thermochemistry of Fluorinated Single Wall Carbon Nanotubes, *J. Am. Chem. Soc.* **2001**, *123*, 12849-12856.
- G. Dyker, H. Markwitz and G. Henkel, *Eur. J. Org. Chem.* **2001**, 2415-2423. A Putatively Unfeasible Heck Reaction
- G. Dyker, M. Hagel, G. Henkel, M. Köckerling, C. Näther, S. Petersen, G. P. Schiemenz, *Zeitschrift für Naturforsch. B* **2001**, *56b*, 1109-1116. On the Impact of peri-Stress and Trityl-Stress upon the Length of N⁺-C Bonds in 1-Azonia-acenaphthene Cations

Physikalische Chemie 1

- Th. Becker, St. Hövel, M. Kunat, Ch. Boas, U. Burghaus, Ch. Wöll, *Surf. Sci.* **486**, L502 (2001). Interaction of hydrogen with metal oxides: The case of the polar ZnO(0001)-surface
- Ch. Boas, Th. Becker, M. Kunat, U. Burghaus, Ch. Wöll, *Phys. Rev. B* **64** (3), 37401 (2001). Comment on „Effect of the structural anisotropy and lateral strain on the surface phonons of monolayer xenon on Cu(110)“
- Ch. Wöll, *J. Synchrotron Radiation* **8**, 129-135, (2001). Small hydrocarbons on metal surfaces : adsorption- induced changes in electronic and geometric structure as seen by X-ray absorption spectroscopy
- H.-T. Rong, St. Frey, Y.-J. Yang, M. Zharnikov, M. Buck, M. Wühn, Ch. Wöll, G. Helmchen *Langmuir* **17**, 1582-1593 (2001). On the Importance of the Head Group Substrate Bond in Thiol Monolayers: A Study of Biphenyl Based Thiols on Gold and Silver.
- M. Kunat, Ch. Boas, Th. Becker, U. Burghaus, Ch. Wöll, *Surf. Sci.* **474**, 114-128 (2001). Adsorption dynamics of CO on Cu(110): a molecular beam study.
- M. Wühn, J. Weckesser, Ch. Wöll, *Langmuir* **17**, 7605-7612 (2001). Bonding and orientational ordering of long-chain carboxylic acids on Cu(111): Investigations using x-ray absorption spectroscopy.
- G. Beernink, M. Gunia, Ch. Wöll, F. Dötz, K. Müllen, H. Öström, K. Weiss, *Chem. Phys. Chem.* **5**, 317-320 (2001). Synthesis of polycyclic aromatic hydrocarbons and graphite-islands via surface-induced reaction of small molecules
- S. Lukas, S. Vollmer, G. Witte, Ch. Wöll, *J. Chem. Phys.* **114** (22), 10123-10130 (2001). Adsorption of acenes on flat and vicinal Cu(111) surfaces: step induced formation of lateral order
- R. Arnold, A. Terfort, Ch. Wöll, *Langmuir* **17**, 4980-4989 (2001). The Determination of Molecular Orientation in Self-Assembled Monolayers Using IR Absorption Intensities – The Importance of Grinding Effects

- C. Fuxen, W. Azzam, R. Arnold, G. Witte, A. Terfort, Ch. Wöll, *Langmuir* **17**, 3689-3695 (2001). Structural Characterization of Organothiolate Adlayers on Gold: the Case of Rigid, Aromatic backbones
- S. Vollmer, G. Witte, Ch. Wöll, *Langmuir* **17**, 7560 (2001). Structural analysis of saturated alkanethiolate monolayers on Cu(100): coexistence of thiolate and sulfide species
- S. Vollmer, G. Witte, Ch. Wöll, *Catalysis Letters* **77**, 97-102 (2001). Determination of site specific adsorption energies of CO on copper
- V. Strehmel, A. Ziegler, M. Rutloh, C. Jung, J. Stumpe, R. Ruhmann, S. Kostromin, M. Wühh, A. Niklewski, S. Reiss, Ch. Wöll *Molecular Crystals and Liquid Crystals*, **368**, 4229-4236 (2001). Bulk and surface investigation of photooriented polymer films.
- U. Burghaus, *Surface Review and Letters* **8** (2001) 353. Monte Carlo Simulation of the adsorbate-assisted adsorption in the case of CO/ZnO.
- L. Vattuone, U. Burghaus, L. Savio, D. Zampa, M. Rocca, F. Buatier de Mongeot, G. Costantini, C. Boragno, and U. Valbusa, *J.Chem.Phys.* **115** (2001) 3346. Oxygen interaction with disordered and nanostructured Ag(001) surfaces.
- S. Bartholmei, P. Fouquet and G. Witte, *Surf. Sci.* **473**, 227 (2001). Growth and dynamics of ultrathin Barium films on Cu(100).
- S. Lukas, S. Vollmer, G. Witte and Ch. Wöll, *J. Chem. Phys.* **114**, 10123 (2001). Chemisorption of Acenes on flat and vicinal Cu(111) surfaces: step induced alignment.
- C. Fuxen, W. Azzam, R. Arnold, G. Witte, A. Terfort, Ch. Wöll, *Langmuir* **17**, 3689 (2001). Structural characterization of organothiolate adlayers on gold: the case of rigid, aromatic backbones.
- G. Witte, *J. Chem. Phys.* **115**, 2757 (2001). Low Energy Dynamics of NO and CO chemisorbed on Rh(111).
- P. Fouquet and G. Witte, *Appl. Surf. Sci.* **180**, 286 (2001). Metallization and demetallization of clean and oxygen covered ultrathin alkali metal films on GaAs(100).
- M. Kind, F. Stuhl, Y.-R. Tzeng, M. H. Alexander und P. J. Dagdigian, *J. Chem. Phys.* **114**, 4479 (2001). Fine-structure state resolved rotationally inelastic collisions of CH($A^2\Delta, v=0$) with Ar: A combined experimental and theoretical study,
- M. Kind und F. Stuhl, *J. Chem. Phys.* **114**, 6160 (2001). State-to-state rate constants for the rotational relaxation of CH($B^2\Sigma^-, v=0, J$) in inelastic collisions with Ar,

Physikalische Chemie 2

- I. Scheele, R. Lehnig, M. Havenith, Observation of a high lying van der Waals mode in the intermolecular potential of Ar-CO. *Mol. Phys.* **99**, 205 (2001)
- I. Scheele, R. Lehnig, M. Havenith, IR spectroscopy of van der Waals modes in the intermolecular potential of Ar-CO: The $K_a = 0$ combination of stretch and bending. *Mol. Phys.* **99**, 197 (2001)
- G. Gimmler, M. Havenith, Free-jet infrared diode laser spectroscopy of the v_2 -band of the Ar-N₂O van der Waals complex. *J. Mol. Struct.* **599**, 117 (2001)

- N. Pörtner, A. Vilesov, M. Havenith, The formation of heterogeneous van der Waals complexes in helium droplets. *Chem. Phys. Lett.* **343**, 281 (2001)
- M. Havenith, Infrared Spectroscopy of molecular clusters, Springer Tracts of Modern Physics, 176, Springer-Verlag Berlin Heidelberg, 2001
- H. Weingärtner, W. Schröer, *Adv. Chem. Phys.*, 2001, **116**, 1 - 66. Criticality of Ionic Fluids.
- H. Nadolny, H. Weingärtner, *J. Chem. Phys.*, 2001, **114**, 5273 - 5276. Ion Pair Correlations Near Critical Points of Ionic Fluids. - An Experimental Investigation of the Static Dielectric Constant.
- D. Jacob, M.A. Anisimov, J.V. Sengers, A. Oleinikova, H. Weingärtner, A. Kumar, *Phys.Chem.-Chem.Phys.*, 2001, **3**, 829-831. Novel Phase Transition Behavior near Liquid-Liquid Critical Points of Aqueous Solutions: Formation of a Third Phase at the Interface.
- Knocks, H. Weingärtner, *J. Phys. Chem. B*, 2001, **105**, 3635-3638. The Dielectric Spectrum of Ubiquitin in Aqueous Solution.
- H. Weingärtner, A. Knocks, S. Boresch, P. Höchtel, O. Steinhauser, *J. Chem. Phys.*, 2001, **115**, 1463 - 1472. Complex Dielectric Spectra of Aqueous Solutions of Saccharides. - Experiment Meets Simulation.
- H. Weingärtner, A. Knocks, W. Schrader, U. Kaatze, *J. Phys. Chem. A*, 2001, **105**, 8646. Dielectric Spectroscopy of the Room Temperature Molten Salt Ethylammonium Nitrate.
- H. Weingärtner, *Pure Appl. Chem.*, 2001, **11**, 1733-1748. Corresponding States for Electrolyte Solutions.
- H. Weingärtner, ”, in: *McGraw-Hill Encyclopedia of Science and Technology* 2002, 359-360, (publ. 2001) Supercritical Fluid Technology.
- H. Schmalfluss, W. Weissflog, A. Würflinger, S. Masberg, and G.M. Schneider: Thermodynamic measurements on selected liquid crystals at normal and elevated pressures; *Z. Naturforsch.* 56a (2001) 262-266.
- S. Urban and A. Würflinger: DTA and Dielectric Studies under Pressure of a Smectogen Substance with a Strong Perpendicular Dipole Moment; *Z. Naturforsch.* 56a (2001) 489-492.
- Würflinger and S. Urban: Thermodynamic measurements on three 5-n-alkyl-2-(4'-isothiocyanatophenyl)-1,3-dioxanes (6DBT, 8DBT, 10DBT) at elevated pressures, *Phys. Chem. Chem. Phys.*, (PCCP), 3, (2001), 3727-3731.
- S. Urban, A. Würflinger, and A. Kocot: Phase diagram and dielectric relaxation studies of n-octyl-isothiocyanato-biphenyl (8BT) in the smectic E phase under high pressure; *Liq. Cryst.* 28, (2001) 1331-1336.
- W. Weissflog, I. Wirth, S. Diele, G. Pelzl, H. Schmalfluss, T. Schoss, and A. Würflinger: The Homologous Series of N,N'-Bis[4-(4-n-alkyloxybenzoyloxy)benzylidene]phenylene-1,3-diamines: Mesophase Behaviour and Physical Properties; *Liq. Cryst.*, 28, (2001) 1603-1609.
- Würflinger, D. Mondieig, F. Rajabalee, and M. A. Cuevas-Diarte: PVT measurements and related studies on the binary system nC₁₆H₃₄ - nC₁₇H₃₆ and on nC₁₈H₃₈ at high pressures. *Z. Naturforsch.* 56a, (2001) 626-634.

- Würflinger, M. Massalska-Arodź, S. Urban, W. Weissflog, and S. Ernst: Thermodynamic Measurements on the Binary System bis {[2,2-di(n-hexyloxy-carbonyl)ethenyl] phenyl} biphenyl-4,4'-dicarboxylate and 4-n-octyloxyphenyl 4-n-pentyloxy-benzoate at Elevated Pressures; *Z. Naturforsch.* 56a, (2001) 658-662.
- M. Massalska-Arodź, H. Schmalfluss, W. Witko, H. Kresse, and A. Würflinger: Dielectric relaxation studies of 4-n-butyl-4'-thioxyanobiphenyl (4TCB); *Mol. Cryst. Liq. Cryst.* 366, (2001) 221-227.
- G. M. Schneider, in: K. Yanagisawa, Q. Feng (Eds.), Proceedings of the Joint 6th International Symposium on Hydrothermal Reactions and 4th International Conference on Solvo-Thermal Reactions, Kochi, Japan, 25–28 July 2000, Nishimura Tosha-Do Ltd, Kochi, Japan, 2001, p. 18–23. Aqueous solutions at pressures up to 2 GPa: Gas-gas equilibria, closed loops, high-pressure immiscibility, salt effects, and related phenomena.
- G. M. Schneider, D. Tuma, M. Winter, B. Wagner, *Z. Kristallogr. NCS* **216** (2001) 299–300. Crystal structure of 1,4-bis(ethylamino)anthracene-9,10-dione, C₁₈H₁₈N₂O₂
- D. Tuma, B. Wagner, G. M. Schneider, *Fluid Phase Equilibria* **182** (2001) 133–143. Comparative solubility investigations of anthraquinone disperse dyes in near- and supercritical fluids
- M. Roth, K. Maag, G. M. Schneider, D. Tuma, *J. Phys. Chem. B* **105** (2001) 10373–10378. Solution properties of C₆₀ and C₇₀ fullerenes and C₂₁ to C₄₀ n-alkanes at infinite dilution in carbon dioxide from supercritical fluid chromatography.

Analytische Chemie

- M. Heller, W. S. Sheldrick, *Z. Anorg. Allg. Chem.* **627** (2001) 569 - 571. Polymeric Linear CuCN Chains in a 2,3-Dihydroxyquinoxaline Host Lattice.
- J. Zahra, L. Henning, M. Findeisen, P. Welzel, D. Müller, W. S. Sheldrick, *Tetrahedron Lett.* **42** (2001) 2969 - 2972. Building Blocks for Phosphonate Analogues of Moenomycin A.
- D. J. Brauer, K. W. Kottsieper, T. Nickel, O. Stelzer, W. S. Sheldrick, *Eur. J. Inorg. Chem.* (2001) 1251-1259. Novel Electron Rich Hydrophilic Phosphanes with Carboxylated Cyclohexyl Substituents.
- Y. V. Mironov, A.V. Virovets, W. S. Sheldrick, V. E. Federov, *Polyhedron* **20** (2001) 969 - 974. Novel inorganic polymeric compounds based on the Re₄ chalcocyanide cluster complexes: synthesis and crystal structures of Mn₂[Re₄Se₄(CN)₁₂].6H₂O, Cd₂[Re₄Te₄(CN)₁₂].6H₂O, Cu₂[Re₄Te₄(CN)₁₂].4H₂O and K₄Re₄Se₄(CN)₁₂.5H₂O.
- M. Hahn, M. Kleine, W. S. Sheldrick, *J. Biol. Inorg. Chem.* **6** (2001) 556 - 566. Interaction of cisplatin with methionine- and histidine-containing peptides - competition between backbone binding, macrochelation and peptide cleavage.
- J. Frelek, J. Jagodzinski, H. Mayer-Figge, W. S. Sheldrick, E. Wieteska, W. J. Szczepek, *Chirality* **13** (2001) 313 - 321. Chiroptical properties of binuclear rhodium complexes of lanostane alcohols.

- T. Röttgers, W. S. Sheldrick, *Z. Anorg. Allg. Chem.* **627** (2001) 1976 - 1982. Lamellar Copper(I) Thiocyanate-Based Coordination Polymers containing the Alkali Cation ligating Thiocrown Ether 1,10-Dithia-18-crown-6.
- A. Loose, W. S. Sheldrick, *Z. Anorg. Allg. Chem.* **627** (2001) 2051 - 2052. Synthesis and Structure of the Bicyclic $\text{Sn}_4\text{Se}_{11}^{6-}$ Anion in $\text{Na}_6\text{Sn}_4\text{Se}_{11}\cdot 22\text{H}_2\text{O}$.
- W. S. Sheldrick, *J. Inorg. Biochem.* **86** (2001) 97. Interaction of Pt-antitumor drugs with methionine- and histidine-containing peptides: migration, macrochelation or backbone cleavage.
- F. Becker, W. Wirth, W. S. Sheldrick, *J. Inorg. Biochem.* **86** (2001) 141. Specific enhancement of guanosine 2'-monophosphate N3-coordination for (amine)Pt(II) complexes by $\kappa^2\text{N}_3\text{O}$ (phosphate) macrochelation.
- M. Kleine, W. S. Sheldrick, *J. Inorg. Biochem.* **86** (2001) 296. Reaction of carboplatin with methionine- and histidine-containing peptides.
- J. Zahra, L. Henning, M. Findeisen, S. Giesa, P. Welzel, D. Müller, W. S. Sheldrick, *Tetrahedron* **57** (2001) 9437-9452. Synthesis of a Building Block for Phosphonate Analogues of Moenomycin A_{12} from D-Tartaric Acid.
- I. M. Müller, R. Robson, F. Separovic *Angew. Chem.* **113** (2001) 4519 Eine metallhaltige, supramolekulare Kapsel mit der Topologie eines Tetraeders, 3^3 , aufgebaut aus vier Guanidinliganden und zwölf Cadmiumzentren *Angew. Chem. Int. Ed. Engl.*, **40** (2001) 4385 A Metallosupramolecular Capsule with the Topology of the Tetrahedron, 3^3 , Assembled from Four Guanidine-based Ligands and Twelve Cadmium Centres
- Zimmer, D. Kuppert, T. Weyermüller, I. Müller, K. Hegetschweiler *Chemistry, A European Journal* **7** (2001) 917 Part 3 : Linear Primary Polyamines as Building Blocks for Coordination Polymers. Complex Formation of Ni^{II} , Cu^{II} , Pd^{II} and Co^{II} with 1,2,3,4-Butanetetramine
- D. Kuppert, J. Sander, C. Roth, M. Wörle, T. Weyhermüller, G. Reiss, U. Schilde, I. Müller, K. Hegetschweiler *Eur. J. Inorg. Chem.* **2001**, 2525 The Coordination Chemistry of *cis*-3,4-Diaminopyrrolidine and Related Polyamines
- J. Sander, K. Hegetschweiler, B. Morgenstern, A. Keller, W. Amrein, T. Weyhermüller, I. Müller *Angew. Chem.* **113** (2001) 4307 *T*-Symmetrische Ikosaeder: eine neue Form von Chiralität bei Metallkomplexen *Angew. Chem. Int. Ed. Engl.* **40** (2001) 4179 *T*-symmetrical Icosahedra: A new Type of Chirality in Metal Complexes
- C. A. Briehn, M.-S. Schiedel, E. M. Bosen, W. Schuhmann, P. Bäuerle, *Angew. Chem.* **113** (2001) 4817-4820. Einzelsubstanz-Bibliotheken Organischer Materialien: Von der kombinatorischen Synthese konjugierter Oligomere zu Struktur-Eigenschaftsbeziehungen. *Angew. Chem. Int. Ed. Engl.* **40** (2001) 4680-4683. Single-Compound Libraries of Organic Materials: From the Combinatorial Synthesis of Conjugated Oligomers to Structure-Property Relationships.
- S. Reiter, K. Eckhard, A. Blöchl, W. Schuhmann, *The Analyst* **126** (2001) 1912-1918. Redox modification of proteins using sequential-parallel electrochemistry in microtiter plates
- M. Mosbach, T. Laurell, J. Nilsson, E. Csöregi, W. Schuhmann, *Biosensors & Bioelectronics* **16** (2001) 611-620. A Miniaturised Direct Electrochemical Affinity Assay Based on a Wall-Free Sample Droplet and Nano-Dispensing of the Redox-Labelled Binding Partner

- M. Mosbach, H. Zimmermann, T. Laurell, J. Nilsson, E. Csöregi, W. Schuhmann, *Biosensors & Bioelectronics* **16** (2001) 827-837. Picodroplet-Deposition of Enzymes on Functionalized Self-Assembled Monolayers as a Basis for Miniaturized Multi-Sensor Structures.
- E. Csöregi, S. Gaspar, M. Niculescu, B. Mattiasson, W. Schuhmann, "Amperometric biosensors for application in food and beverage industry" in (M. de Cuyper, J. Bulte, eds.) *Physics and Chemistry for Biotechnology, Vol VII of Focus on Biotechnology*, (M. Hofman, J. Ann, eds.), Kluwer, BV Academic Publishers, Dordrecht, The Netherlands (2001) pp. 105-129.
- P. Heiduschka, I. Romann, H. Ecken, M.J. Schöning, S. Thanos, W. Schuhmann *Electrochim. Acta.* **47** (2001) 299-307. Defined adhesion and growth of neurons on artificially structured substrates
- N. Diab, W. Schuhmann, *Electrochim. Acta* **47** (2001) 265-273. Electropolymerized Manganese Porphyrin/Polypyrrole Films as Catalytic Surfaces for the Oxidation of Nitric Oxide"
- Turyan, C. Zeltser, I. Lewinstein, W. Schuhmann, D. Mandler, in "Chemical and biological sensors and analytical methods II" (M. Butler, P. Vanysek, N. Yamazoe, eds.), *Proc. Vol. 2001-18*, The Electrochemical Society, Pennington, N.Y., 2001, pp. 284-292. Comparing different approaches for assembling selective electrodes for mercury ions.
- C. Kurzawa, M. Mosbach, E. Bensen, W. Schuhmann, in "Chemical and biological sensors and analytical methods II" (M. Butler, P. Vanysek, N. Yamazoe, eds.), *Proc. Vol. 2001-18*, The Electrochemical Society, Pennington, N.Y., 2001, pp.304-314. Visualization of micro-structured enzyme patterns using scanning electrochemical microscopy (SECM)
- S. Reiter, K. Habermüller, W. Schuhmann *Sensors & Actuators B*, **79** (2001) 150-156. A reagentless glucose biosensor based on glucose oxidase entrapped into Osmium-complex modified polypyrrole films.
- S. Gaspar, M. Mosbach, L. Wallman, T. Laurell, E. Csöregi, W. Schuhmann, *Anal. Chem.* **73** (2001) 4254-4261. A method for the design and study of enzyme micro-structures formed by means of a flow-through micro-dispenser
- M. Mosbach, T. Laurell, J. Nilsson, E. Csöregi, W. Schuhmann, *Anal. Chem.* **73** (2001) 2468-2475. Determination of Diffusion Coefficients of Electroactive Species in "Time-of-Flight-Experiments" Using a Micro-Dispenser and Micro-Electrodes
- O. Köster, W. Schuhmann, H. Vogt, W. Mokwa, *Sensors & Actuators B*, **76** (2001) 573-581. Quality Control of Ultra-Microelectrode Arrays Using Cyclic Voltammetry, Electrochemical Impedance Spectroscopy and Scanning Electrochemical Microscopy
- S. Gaspar, H. Zimmermann, I. Gazaryan, E. Csöregi, W. Schuhmann, *Electroanalysis* **13** (2001) 284-288. Hydrogen peroxide biosensors based on direct electron transfer from plant peroxidases immobilized on self-assembled thiol-monolayer modified gold electrodes
- Hengstenberg, A. Blöchl, I. D. Dietzel, W. Schuhmann, *Angew. Chem.* **113** (2001) 942-946. Ortsaufgelöste Detektion der Sekretion von Neurotransmittern aus einzelnen Zellen mittels elektrochemischer Rastermikroskopie; *Angew. Chem. Int. Ed. Engl.*, **40** (2001) 905-908. Spatially Resolved Detection of Neurotransmitter Secretion from Individual Cells by Means of Scanning Electrochemical Microscopy.

- S. Gaspar, K. Habermüller, E. Csöregi, W. Schuhmann, *Sensors & Actuators B*, **72** (2001) 63-68. Hydrogen peroxide sensitive biosensor based on plant peroxidases entrapped in Os-modified polypyrrole films
- Kurzawa, W. Schuhmann, L. Wang, H. Orth, I. Schwendtke, H. Gerberding, H. Stadler, B. Gründig, *GIT Labor-Fachzeitschrift* **45** (2001) 156-160. Kontinuierliche Bestimmung von Ammoniumionen in Klärwerksprozessen mittels sequentieller Injektionsanalyse.
- Turyan, T. Erichsen, W. Schuhmann, D. Mandler, *Electroanalysis* **13** (2001) 79-82. On-Line Analysis of Mercury by Sequential Injection Stripping Analysis (SISA) Using a Chemically Modified Electrode

Theoretische Chemie

- G.M. Koretsky, M.B. Knickelbein, R. Rousseau, and D. Marx, *J. Phys. Chem. A* **105** (2001) 11197-11203. A Combined Infrared Photodissociation and Theoretical Study of the Interaction of Ethanol with Small Gold Clusters.
- D. Krüger, H. Fuchs, R. Rousseau, D. Marx, and M. Parrinello, *J. Chem. Phys.* **115** (2001) 4776-4786. Interaction of short-chain alkane thiols and thiolates with small gold clusters: Adsorption structures and energetics.
- M.E. Tuckerman and D. Marx, *Phys. Rev. Lett.* **86** (2001) 4946-4949. Heavy-Atom Skeleton Quantization and Proton Tunneling in "Intermediate-Barrier" Hydrogen Bonds.

Presseecho dieser Arbeit:

- Ruhr-Nachrichten Bochum (14./15.06.2001): *Computer lässt Protonen tanzen.*
- Verein Deutscher Ingenieure: Ingenieur Forum Westfalen-Ruhr, **2** (2001) 29. *Protonen beim Tanzen zugeschaut.*
- dpa-Wissenschaftsdienst, **25** (18.06.2001) 14-15. *Protonentransfer im Molekül erstmals vollständig simuliert.*
- T. Grycuk, W. Behmenburg, V. Staemmler, *J. Phys. B: At. Mol. Opt. Phys.* **34** (2001) 245. Quantum Calculation of the Excitation Spectra of Li*He Probing Interaction Potentials and Dipole Moments.
- M. Pykavy, V. Staemmler, O. Seiferth, H.-J. Freund, *Surf. Sci.* **479** (2001) 11. Adsorption of CO on Cr₂O₃(0001).
- S. Thiel, M. Pykavy, T. Klüner, H.-J. Freund, R. Kosloff, V. Staemmler, *Phys. Rev. Lett.* **87** (2001) 077601. Three-Dimensional *Ab Initio* Quantum Dynamics of the Photodesorption of CO from Cr₂O₃(0001): Stereodynamic Effects.
- C. Kolczewski, R. Püttner, O. Plashkevych, H. Agren, V. Staemmler, M. Martins, G. Snell, A. S. Schlachter, M. Sant'Anna, G. Kaindl, L. G. M. Pettersson, *J. Chem. Phys.* **115** (2001) 6426. Detailed Study of Pyridine at the C 1s and N 1s Ionization Thresholds: The Influence of the Vibrational Fine Structure.
- D. Mukherjee, W. Kutzelnigg, *J. Chem. Phys.* **114** (2001) 2047-2061. Irreducible Brillouin conditions and contracted Schrödinger equations for *n*-electron systems. I. The equations satisfied by the density cumulants.
- D. Mukherjee, W. Kutzelnigg, *J. Chem. Phys.* **114** (2001) 8226-8227. Erratum.
- W. Kutzelnigg, *Forschung & Lehre* **6** (2001) 302-305. Kann man wissenschaftliche Leistung messen? Über die Aussagekraft von Publikationslisten und Zitierhäufigkeiten.

Technische Chemie

- M.M. Schubert, S. Hackenberg, A. van Veen, M. Muhler, V. Plzak, R.J. Behm, *J. Catal.* **197** (2001) 113-122. CO Oxidation over supported Gold Catalysts – “Inert” and “Active” support Materials and their role for the Oxygen supply during reaction
- A.C. van Veen, H.W. Zanthoff, O. Hinrichsen, M. Muhler, *J. Vac. Sci. Technol. A* **19** (2001) 651-655. Fixed-bed microreactor for transient kinetic experiments with strongly adsorbing gases under high vacuum conditions
- H. Bielawa, O. Hinrichsen, A. Birkner, M. Muhler, *Angew. Chem. Int. Ed.* **40** (2001) 1061-1063. The Ammonia –Synthesis Catalyst of the Next Generation: Barium-Promoted Oxide-Supported Ruthenium
- H. Bielawa, O. Hinrichsen, A. Birkner, M. Muhler, *Angew. Chem.* **113** (2001) 1093-1096. Der Ammoniakkatalysator der nächsten Generation: Barium-promotiertes Ruthenium auf oxidischen Trägern
- M.M. Günter, T. Ressler, B. Bems, C. Büscher, T. Genger, O. Hinrichsen, M. Muhler, R. Schlögl, *Catal. Lett.* **71** (2001) 37-44. Implication of the microstructure of binary Cu/ZnO catalysts for their catalytic activity in methanol synthesis
- D. Wolf, M. Heber, W. Grünert, M. Muhler, *J. Catal.* **199** (2001) 92-106. Predictions of Relationships between Catalytic and Solid Phase Properties by Kinetic Models and Their Validation
- Z. Paal, T. Koltai, K. Matusek, J.-M. Manoli, C. Potvin, M. Muhler, U. Wild, P. Tetenyi, *Phys. Chem. Chem. Phys.* **3** (2001) 1535-1543. Sulfur uptake and exchange, HDS activity and structure of sulfided, Al₂O₃ supported MoO_x, PdMoO_x and PtMoO_x catalysts
- S. Besselmann, C. Freitag, O. Hinrichsen, M. Muhler, *Phys. Chem. Chem. Phys.* **3** (2001) 4633-4638. Temperature-programmed reduction and oxidation experiments with V₂O₅/TiO₂ catalysts
- Madhavaram, H. Idriss, S. Wendt, Y.D. Kim, M. Knapp, H. Over, J. Aßmann, E. Löffler, M. Muhler, *J. Catal.* **202** (2001) 296-307. Oxidation Reactions over RuO₂: A Comparative Study of the Reactivity of the (110) Single Crystal and Polycrystalline Surfaces
- H. Bielawa, M. Kurtz, T. Genger, O. Hinrichsen, *Ind. Eng. Chem. Res.* **40** (2001) 2793-2800. Rapid kinetic measurements in methanol and ammonia syntheses
- H. Bielawa, M. Kurtz, O. Hinrichsen, *Chem.-Ing.-Tech.* **73** (2001) 685. The quasi-isothermal temperature-programmed method for rapid kinetic measurements
- A.C. van Veen, O. Hinrichsen, M. Muhler, *in: 4th World Congress on Oxidation Catalysis* (Hrsg. H. Geiling), 2001, 113-117. TAP reactor experiments over an unsupported polycrystalline silver catalyst: the influence of different oxygen states on the reactivity in selective oxidation reactions
- S. Besselmann, C. Freitag, O. Hinrichsen, Elke Löffler, M. Muhler, *in: 4th World Congress on Oxidation Catalysis* (Hrsg. H. Geiling), 2001, 305-308. On the role of different vanadia species in the adsorption and oxidation of toluene over V₂O₅/TiO₂ catalysts (Eurocat)
- S. Besselmann, C. Freitag, O. Hinrichsen, M. Muhler, *Phys. Chem. Chem. Phys.* **3** (2001) 4633-4638. Temperature-programmed reduction and oxidation experiments with

V₂O₅/TiO₂ catalysts

- T. Liese, E. Löffler, W. Grünert, *J. Catal.* **197** (2001) 123-30. Selective Catalytic Reduction of NO by Methane over CeO₂-Zeolite Composites – Active Sites and Reaction Steps
- M. Heber, W. Grünert, *Top. Catal.* **15** (2001) 3-11. Application of Ultraviolet Photoelectron Spectroscopy (UPS) in the Surface Characterisation of Polycrystalline Oxide Catalysts I. Methodics and Analytical Potential
- F. Heinrich, C. Schmidt, E. Löffler, W. Grünert, *Catal. Comm.* **2** (2001) 317-21. A highly active intra-zeolite iron site for the selective catalytic reduction of NO by isobutane
- F. Heinrich, E. Löffler, W. Grünert, *Stud. Surf. Sci. Catal.* **135** (2001) 30-P-27. Selective catalytic reduction of NO over Fe zeolites – catalytic and *in-situ* DRIFTS studies
- C. Schmidt, T. Sowade, F.-W. Schütze, M. Richter, H. Berndt, W. Grünert, *Stud. Surf. Sci. Catal.* **135** (2001) 30-P-15. A comparison of different preparation methods of indium-modified zeolites as catalysts for the selective reduction of NO_x
- F.-W. Schütze, H. Berndt, M. Richter, B. Lücke, C. Schmidt, T. Sowade, W. Grünert, *Stud. Surf. Sci. Catal.* **135** (2001) 10-O-01. Investigation of indium-loaded zeolites and additionally promoted catalysts for the selective catalytic reduction of NO_x by methane

Biochemie 1

- B. Lacombe, D. Becker, R. Hedrich, R. DeSalle, M. Hollmann, J.M. Kwak, J.I. Schroeder, N. Le Novere, H.G. Nam, E.P. Spalding, M. Tester, F.J. Turano, J. Chiu, and G. Coruzzi, *Science* **292** (2001) 1486-1487. The identity of plant glutamate receptors.
- N. Strutz, C. Villmann, A. Thalhammer, P. Kizelsztejn, M. Eisenstein, V.I. Teichberg, and M. Hollmann, *Journal of Neuroscience* **21** (2001) 401-411. Identification of domains and amino acids involved in GluR7 ion channel function.

Biochemie 2

- R.Heumann: Krebsgen gegen Nervenleiden: Rubin 1, 12-16 (2001)
- Siren AL, Fratelli M, Brines M, Goemans C, Casagrande S, Lewczuk P, Keenan S, Gleiter C, Pasquali C, Capobianco A, Mennini T, Heumann R, Cerami A, Ehrenreich H, Ghezzi P. Erythropoietin prevents neuronal apoptosis after cerebral ischemia and metabolic stress. *Proc. Natl. Acad. Sci. USA* 98(7), 4044-9 (2001).
- Gross C, Heumann R, Erdmann KS. The protein kinase C-related kinase PRK2 interacts with the protein tyrosine phosphatase PTP-BL via a novel PDZ domain binding motif. *FEBS Lett.* 496(2-3), 101-4 (2001).
- W. Schultze, V. Eulenburg, V. Lessmann, L. Herrmann, T. Dittmar, E.D. Gundelfinger, R. Heumann and K.S. Erdmann: Semaphorin4F interacts with the postsynaptic density protein SAP90/PSD-95. *J. Neurochem.* 78(3), 482-9 (2001).
- Anneser JM, Gmerek A, Gerkrath J, Borasio GD, Heumann R. Immunosuppressant FK506 does not exert beneficial effects in symptomatic G93A superoxide dismutase-1 transgenic mice. *Neuroreport.* 12(12), 2663-5 (2001).

- Holzer M, Gartner U, Klinz F, Narz F, Heumann R, Arendt T. Activation of mitogen-activated protein kinase cascade and phosphorylation of cytoskeletal proteins after neurone-specific activation of p21ras. I. Mitogen-activated protein kinase cascade. *Neuroscience*. 105(4), 1031-40 (2001).
- Holzer M, Rodel L, Seeger G, Gartner U, Narz F, Janke C, Heumann R, Arendt T. Activation of mitogen- activated protein kinase cascade and phosphorylation of cytoskeletal proteins after neurone-specific activation of p21ras. II. Cytoskeletal proteins and dendritic morphology. *Neuroscience*. 105(4), 1041-54 (2001).
- M. Klau, M. Hartmann, K. Erdmann, R. Heumann & V. Lessmann. Reduced number of functional glutamatergic synapses in hippocampal neurons overexpressing full-length TrkB receptors. *J. Neurosci. Res.* 66(3), 327-336 (2001).
- M. Hartmann, R. Heumann & V. Lessmann. Synaptic secretion of Brain-Derived Neurotrophic Factor after high frequency postsynaptic stimulation of glutamatergic synapses. *EMBO J.* 20(21), 5887-97 (2001).
- J. Paul, K. Gottmann, V. Lessmann. NT-3 regulates BDNF-induced modulation of synaptic transmission in cultured hippocampal neurons. *NeuroReport* **12** (12): 2635-2639 (2001).
- Hengstenberg, A. Blöchl, I. D. Dietzel, W. Schuhmann, *Angew. Chem.* **113** (2001) 942-946. Ortsaufgelöste Detektion der Sekretion von Neurotransmittern aus einzelnen Zellen mittels elektrochemischer Rastermikroskopie; *Angew. Chem. Int. Ed. Engl.*, **40** (2001) 905-908. Spatially resolved detection of neurotransmitter secretion from individual cells by means of scanning electrochemical microscopy.
- G. Hoffmann, D. Bartsch, H.H. Althaus, R. Heumann, I.D. Dietzel, *Pflügers Arch. Suppl.* **441** (2001) R147. Induction of action potentials in cultured oligodendrocytes from adult pigs.
- S. Mann, G. Hoffmann, A. Hengstenberg, W. Schuhmann, I.D. Dietzel, *Biological Chemistry Suppl.* **382** (2001) S132. Scanning ion conductance microscopy – a new technique to investigate properties of living cells.
- K.F. Störtkuhl and R. Kettler, Functional analysis of an olfactory receptor in *Drosophila melanogaster*. *PNAS* **98** (2001) 9381-9385
- C.H. Wetzel, H.-J. Behrendt, G. Gisselmann, K.F. Störtkuhl, B. Hovemann, and H. Hatt, Functional expression and characterization of a *Drosophila* odorant receptor in a heterologous cell system. *PNAS* **98** (2001) 9377-9380.

Dissertationen 2001

- **Besselmann, Sonja:** Temperaturprogrammierte und schwingungsspektroskopische Untersuchungen von V₂O₅/TiO₂-Katalysatoren zur selektiven Oxidation von Alkylaromaten. Disputation: 29.01.2001 (Prof. Dr. M. Muhler)
- **Kruse, Tobias:** Übergangsmetallkomplexe neuer Thioether-Phenolatliganden - Synthese, Strukturen und Eigenschaften -. Disputation: 30.01.2001 (Prof. Dr. K. Wieghardt)
- **Schnepf, Robert:** *DeNovo*-Synthese und Charakterisierung von Vier-Helix-Bündel-Kupferproteinen. Disputation: 30.01.2001 (Prof. Dr. K. Wieghardt)
- **Türkel, Özlem:** Untersuchungen der Mechanismen der RSV-induzierten Th2-Zelldifferenzierung in kokultivierten dendritischen Zellen und allogenen naiven T-Zellen. Disputation: 02.02.2001 (Prof. Dr. H. Werchau)
- **Bräutigam, Andreas:** Einflüsse der Brandgutzusammensetzung und der Verbrennungsbedingungen auf die Entstehung mittel- und schwerflüchtiger organischer Braundrauchinhaltsstoffe. Disputation: 05.02.2001 (Prof. Dr. W. S. Sheldrick)
- **Winkler, Holger:** Mesoskopische Galliumnitrid-Kompositmaterialien. Disputation: 05.02.2001 (Prof. Dr. R. A. Fischer)
- **Baumann, Dirk:** Reorganisationen isomerer Methylenbicycloheptene und von Tricyclohexanen: Beiträge zur Stereochemie, Enantio- und Strukturisomerisierung. Disputation: 06.02.2001 (Prof. Dr. D. Hasselmann)
- **Leitheußer, Andreas:** Periodische Hartree-Fock-Rechnungen an Oxidoberflächen. Disputation: 07.02.2001 (Prof. Dr. V. Staemmler)
- **Stange, Bernd:** Beiträge zur Chemie der Bor-Stickstoff-Verbindungen - Synthesen und Reaktionen von N-Sulfinylaminen des Bors. Wege zu geeigneten Vorstufen -. Disputation: 07.02.2001 (Prof. Dr. mult. Dr.h.c. A. Haas)
- **Kolb, Peter:** Synthesen, Strukturen und Reaktionen von Zirconiumkomplexen mit Pentalenliganden. Disputation: 08.02.2001 (Prof. Dr. K. Jonas)
- **Olteanu, Alexandra Gabriela:** Beiträge zur Chemie tellursubstituierter Chalkogen-Stickstoff-Heterocyclen. Disputation: 09.03.2001 (Prof. Dr. mult. Dr.h.c. A. Haas)
- **Röttgers, Thomas:** Design und Struktur ionophorer Kupfer(I)-iodid- und -pseudohalogenidhaltiger Koordinationspolymere mit 1,10-Dithio-18-Krone-6 als verbrückendem Liganden. Disputation: 23.03.2001 (Prof. Dr. W. S. Sheldrick)
- **Wirth, Wolf:** NMR-spektroskopische, potentiometrische und chromatographische Untersuchungen zur spezifischen Erkennung von Übergangsmetallkomplexen durch 2'- und 3'-Purinnukleotide. Disputation: 03.04.2001 (Prof. Dr. W. S. Sheldrick)
- **Mosbach, Marcus:** Mikroelektrochemische Methoden in der Biosensorik und Elektroanalytik. Disputation: 04.04.2001 (Prof. Dr. W. Schuhmann)
- **Sprenger, Susanne:** Oberflächenanalytische Untersuchungen zu Metall-Träger-Wechselwirkungen mittels Photoelektronen-, Ionenstreu- und Infrarotspektroskopie. Disputation: 18.04.2001 (Prof. Dr. M. Muhler)
- **Sickmann, Albert:** Proteomanalyse des humanen Liquor cerebrosppinalis. Disputation: 24.04.2001 (Prof. Dr. H. E. Meyer)
- **Ossenbühl, Friedrich:** Zur post-transkriptionellen Regulation der plastidären Genexpression in *Chlamydomonas reinhardtii*: Analyse von RNA-Protein Interaktionen mit der 5'nicht-translatierten Region der *psbD* mRNA. Disputation: 24.04.2001 (PD Dr. J. Nickelsen)

- **Weiß, Dana:** Koordinationschemie von Organylmetallspezies an Platinkomplexfragmenten. Disputation: 04.05.2001 (Prof. Dr. R. A. Fischer)
- **Segnitz, Oliver:** Neutrale und kationische Komplexe donorfunktionalisierter Cyclopentadienyl-Liganden an Nickelzentren - Synthese, Struktur, Reaktivität, Theorie -. Disputation: 04.05.2001 (Prof. Dr. R. A. Fischer)
- **Praefcke, Gerrit:** Das humane Guanylat-bindende Protein 1: Modell oder Sonderfall der Dynamamin-verwandten GTP-bindenden Proteine. Disputation: 18.05.2001 (Prof. Dr. A. Wittinghofer)
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