

## Publikationen

1. D. Vollhardt, G. Brezesinski, R. Rudert, A. Gonzalez (**2017**). „Effect of the Alkanoyl Group Position at the Glycerol Backbone on the Monolayer Characteristics Demonstrated by 2-Monopalmitoyl-*rac*-glycerol”, *Langmuir* 33, 12559-12568. doi: 10.1021/acs.langmuir.7b02222
2. N. Vogt, R. Rudert, A. N. Rykov, N. M. Karasev, I. F. Shishkov, J. Vogt (**2011**). „Use of imaging plates (IPs) in the gas-phase electron diffraction (GED) experiments on the EG-100 M apparatus. The tetrachloromethane molecule as a test object”, *Struct. Chem.* 22, 287-291, doi: 10.1007/s11224-010-9707-6
3. N. Vogt, E. Popov, R. Rudert, R. Kramer, J. Vogt (**2010**). „3D visualization of molecular structures in the MOGADOC database”, *J. Mol. Struct.* 978, 201-204. doi: 10.1016/j.molstruc.2010.02.006
4. M. Birkholz, R. Rudert (**2008**). „Interatomic distances in pyrite-structure disulfides – a case for ellipsoidal modeling of sulfur ions”, *phys. stat. sol. (b)* 245, 1858-1864. doi: 10.1002/pssb.200879532
5. S. Steffens, U. Höweler, T. Jödicke, J. Oldendorf, R. Rudert, G. Haufe, H.-J. Galla (**2007**). „Temperature Dependent Phase Behavior and the Crystal-Forming Nucleation Process of Ethyl 4-Fluoro-2,3-dihydroxystearate Monolayers”, *Langmuir* 23, 1880-1887. doi: 10.1021/la062406g
6. D. Vollhardt, F. Liu, R. Rudert (**2005**). „Molecular Recognition of Dissolved Pyrimidine Derivatives by a Dialkyl Melamine-Type Monolayer”, *ChemPhysChem* 6, 1246-1250. doi: 10.1002/cphc.200500193
7. D. Vollhardt, F. Liu, R. Rudert (**2005**). „The Role of Nonsurface-Active Species at Interfacial Molecular Recognition by Melamine-Type Monolayers”, *J. Phys. Chem. B* 109, 17635-17643. doi: 10.1021/jp053041w
8. D. Vollhardt, F. Liu, R. Rudert, W. He (**2005**). „Interfacial Molecular Recognition of Dissolved Thymine by Medium Chain Dialkyl Melamine-Type Monolayers”, *J. Phys. Chem. B* 109, 10849-10857. doi: 10.1021/jp051036m
9. X. Chen, S. Wieghele, L. Chi, Ch. Mück-Lichtenfeld, R. Rudert, D. Vollhardt, H. Fuchs, G. Haufe (**2005**). „Phase Behavior of 2,3-Disubstituted Methyl Octadecanoate Monolayers at the Air-Water Interface”, *Langmuir* 21, 3376-3383. doi: 10.1021/la0470479
10. N. Nandi, D. Vollhardt, R. Rudert (**2004**). „Molecular pair potential of chiral amino acid amphiphile in Langmuir monolayers on the basis of an atomistic model”, *Colloids and Surfaces A* 250, 279-287. doi: 10.1016/j.colsurfa.2004.07.033
11. K. Lunkenheimer, W. Barzyk, R. Hirte, R. Rudert (**2003**). „Adsorption Properties of Soluble, Surface-Chemically Pure n-Alkanoic Acids at the Air/Water Interface and the Relationship to Insoluble Monolayer and Crystal Structure Properties”, *Langmuir* 19, 6140-6150. doi: 10.1021/la034379p
12. D. Vollhardt, J. Gloede, G. Weidemann, R. Rudert (**2003**). „Characteristic Features of Amphiphilic P-Functionalized Calixarene Monolayers at the Air/Water Interface”, *Langmuir* 19, 4228-4234. doi: 10.1021/la026856u
13. T. Rabe, R. Rudert, J. Goebels, K.-W. Harbich (**2003**). „Nondestructive Evaluation of Green Components”, *American Ceramic Society Bulletin* 82, 27-32.
14. W. He, D. Vollhardt, R. Rudert, L. Zhu, J. Li (**2003**). „Phase Transition and Domain Morphology in Langmuir Monolayers of a Calix[4]arene Derivative Containing No Alkyl Chain”, *Langmuir* 19, 385-392. doi: 10.1021/la020714i
15. T. Rabe, R. Rudert, J. Goebels, K.-W. Harbich (**2002**). „Evaluation of green components by nondestructive methods”, in „Improved ceramics through new measurements, processing, and standards”, *Ceramic Transaction Series* 133, Westerville, Ohio: American Ceramic Society, 86-95

16. D. Vollhardt, G. Emrich, S. Siegel, R. Rudert (**2002**). "Phase Transition in Monolayers of Straight Chain and 2-Methyl Branched Alcohols at the Air-Water Interface", *Langmuir* 18, 6571-6577. doi: 10.1021/la0201671
17. T. Rabe, K. Uematsu , U. Mücke, R. Rudert, (**2002**). "Characterisation of defects in dry-pressed green bodies", *Key Eng. Mat.* 206, 649-652.
18. R. Rudert, G. Schmaucks (**2000**). "Crystal and molecular structure of N-methyl-N-3(sulfonato)propyl-3-[tris(trimethylsiloxanyl)3-silyl]pyrrolinium sulfobetaine hydrate at room temperature and 163 K", *Crystal Research and Technology* 35, 625-633. doi: 10.1002/1521-4079(200005)35:5<625::AID-CRAT625>3.0.CO;2-1
19. R. Rudert, B. Schulz, G. Reck, D. Vollhardt, J. Kriwanek (**2000**). "*N*-n-Alkyl N,N-Dimethyl Ammonio Acetic Acid Bromides: The First Complete Series of Crystal and Molecular Structure Determinations of an Amphiphilic Compound with Alkyl Chain Lengths n=1,..., 16", *Acta Cryst. B* 56, 124-131. doi:10.1107/S0108768199007740
20. D. Vollhardt, G. Czichocki, R. Rudert (**1998**). "Effect of the Molecular Structure on the Adsorption of Alkylethersulfates and Alkylethersulfonates at the Air-Water Interface", *Colloids Surf. A* 142, 315-322. doi: 10.1016/S0927-7757(98)00356-2
21. R. Rudert (**1998**). "Program HARDPACK: Crystal Structure Determination from Cell Constants and Molecular Structure Only", *Bulletin of the Czech and Slovak Crystallographic Association* 5, special issue A, 78-79.
22. R. Rudert, D. Vollhardt (**1998**). "Crystal Structure of Sodium 2-(N'-n-dodecylureido) ethanesulfonate", *Z. Kristallogr.-NCS* 213, 651-652.
23. R. Rudert, D. Vollhardt (**1998**). "Crystal Structure of Sodium 2-(N'-n-decylureido) ethanesulfonate", *Z. Kristallogr.-NCS* 213, 649-650.
24. R. Rudert, Chr. André, R. Wagner, D. Vollhardt (**1997**). "A consideration of the hydrogen bonding schemes of the surfactant *N*-tetradecyl-(2,4-dihydroxy)-butanoic acid amide and some related amphiphilic compounds", *Z. Kristallogr.-NCS* 212, 752-755. doi: 10.1524/zkri.1997.212.10.752
25. R. Rudert, G. Czichocki (**1997**). "Crystal structure of sodium adamantyl(oxyethylene)sulfate dihydrate, NaC<sub>10</sub>H<sub>15</sub>OC<sub>2</sub>H<sub>4</sub>SO<sub>4</sub> · 2H<sub>2</sub>O", *Z. Kristallogr.-New Crystal Structures* 212, 329-331. doi: 10.1524/ncls.1997.212.1.329 doi: 10.1524/ncls.1997.212.1.329
26. R. Rudert, G. Schmaucks (**1997**). "Crystal and Molecular Structure of 1-Ethyl-3-[tris(trimethylsiloxanyl)silyl]pyrrolinium Hydrochloride", *Cryst. Res. Technol.* 32, 347-352.
27. R. Rudert (**1996**). "[Program HARDPACK: 'Prediction' and Optimization of Organic Crystal Structures Using Atom-Atom Potentials](#)", *Acta Cryst. A* 52 (Supplement), C-94.
28. R. Rudert, G. Czichocki (**1996**). "Sodium 1,12-Dodecylene Disulfate Hydrate", *Acta Cryst. C*52, 1670-1673. doi: 10.1107/S0108270196003071
29. R. Rudert, G. Schmaucks, G. Reck, G. Knochenhauer (**1996**). "Phase transformation of propyl-[3-(pentamethyldisiloxanyl)propyl]dimethylammonium bromide", *Z. Kristallogr.* 211, 612-615. doi: 10.1524/zkri.1996.211.9.612
30. M. Birkholz, R. Rudert (**1996**). "Variations of ionic binding energies and the distribution of charge carriers in orthorhombic La<sub>2-x</sub>S<sub>x</sub>CuO<sub>4</sub>", *Z. Phys. B* 99, 311-319. doi: 10.1007/BF02769947
31. R. Rudert, B. Schulz, G. Reck, D. Vollhardt, J. Kriwanek (**1996**). "n-Butyl(carboxymethyl)dimethylammonium Bromide and (Carboxymethyl)ethyl(dimethylammonium Bromide", *Acta Cryst. C*52, 648-652.
32. R. Rudert, Y. Wu, D. Vollhardt (**1996**). "The Crystal Structure of *N*-(3-hydroxylpropyl)-hexadecanoic acid amide", *Z. Kristallogr.* 211, 114-116. doi: 10.1524/zkri.1996.211.2.114
33. R. Rudert, B. Schulz, G. Czichocki, D. Vollhardt (**1995**). "Crystal and Molecular Structure of Sodium dodecyl(oxyethylene)sulfate Hydrate", *Z. Kristallogr.* 211, 43-45.
34. M. Birkholz, R. Rudert (**1995**). "Substitutional disorder, random dipoles and the binding energy of orthorhombic La<sub>2-x</sub>S<sub>x</sub>CuO<sub>4</sub>", *Z. Phys.* B98, 49-54.

35. R. Rudert, G. Czichocki, B. Weiland, D. Vollhardt (**1995**). "Sodium [Cyclododecylphosphonic Acid Monoethyl Ester Trihydrate](#)", Acta Cryst. C51, 1252-1254.
36. M. Birkholz, R. Rudert (**1995**). "Electrostatic lattice coefficients and binding energy of orthorhombic  $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ ", Z. Phys. B97, 7-16.
37. R. Rudert, B. Schulz, G. Reck, D. Vollhardt, J. Kriwanek (**1995**). "(Carboxymethyl)dimethylundecylammonium Bromide", Acta Cryst. C51, 768-770.
38. R. Rudert, B. Schulz, G. Reck, D. Vollhardt, J. Kriwanek (**1995**). "(Carboxymethyl)dimethyloctylammonium Bromide", Acta Cryst. C51, 766-768. doi: 10.1107/S0108270194006554
39. R. Rudert, G. Schmaucks, D. Zobel, M. Strumpel (**1995**). "[3,3'-\(1,1,3,3-Tetramethyldisiloxane-1,3-diyl\)bis\(N-ethyl-N,N-dimethyl-1-propanaminium\) Diperchlorate at 163 K and Room Temperature](#)", Acta Cryst. C51, 763-766. doi: 10.1107/S0108270194008073
40. R. Rudert, B. Schulz (**1995**). "Kristall- und Molekülstrukturen von Alkylbetain-Tensiden,  $\text{CH}_3(\text{CH}_2)_n\text{N}^+\text{Me}_2\text{CH}_2\text{COOH Br}^-$ ,  $n=1, \dots, 14$ ", Z. Kristallogr. (Suppl.).
41. R. Rudert, G. Schmaucks (**1994**). "Structure and Packing of Siloxane Surfactants", Z. Kristallogr. (Suppl.).
42. R. Rudert, D. Vollhardt, G. Czichocki (**1994**). "Sodium Cyclododecyl Sulfate Trihydrate,  $\text{Na}^+\text{C}_{12}\text{H}_{23}\text{O}_4\text{S}^-\text{3H}_2\text{O}$ ", Acta Cryst. C50, 1054-1057.
43. R. Rudert, G. Schmaucks (**1994**). "Synthesis, crystal and molecular structure of  $N,N$ -dimethyl-3-[tris(trimethylsiloxanyl)silyl]pyrrolinium chloride", J. Organomet. Chem. 474, 59-62.
44. R. Rudert, G. Schmaucks (**1994**). "Butyl[3-(1,1,3,3,5,5-heptamethyltrisiloxan-1-yl)propyl]dimethylammonium Bromide,  $\text{C}_{16}\text{H}_{42}\text{NO}_2\text{Si}_3^+\text{Br}^-$ , at 173 and 301 K", Acta Cryst. C50, 631-635. doi: 10.1107/S010827019300784X
45. D. Vollhardt, G. Czichocki, R. Rudert (**1993**). "Structural effect on the adsorption properties of aqueous solutions of straight-chain and cyclic dodecyl sulfates", Colloids and Surfaces A76, 217-225. doi: 10.1016/0927-7757(93)80081-O
46. M. Ramm, G. Schmaucks, R. Rudert, B. Schulz (**1993**). "Structure of 1-Ethyl-3-(heptamethyltrisiloxan-3-yl)pyrrolidine Hydrochloride,  $\text{C}_{13}\text{H}_{32}\text{NO}_2\text{Si}_3^+\text{Cl}^-$ ", Acta Cryst. C49, 2145-2147.
47. R. Rudert, J. Buschmann, P. Luger, G. Trummlitz (**1992**). "Structures of 4-Methoxy-, 5-Chloro-, 5-Nitro- and 6-Nitro-1,2-benzisothiazol-3(2H)-one 1,1-Dioxide Sodium Salt (4-Methoxy-, 5-Chloro-, 5-Nitro- and 6-Nitrosaccharin)", Acta Cryst. B48, 269-275.
48. C.N. Dao, R. Rudert, P. Luger, J. Legendziewicz, G. Oczko (**1992**). "Structure of Triaqua( $N,N$ -dimethylformamide)trinitratoneodymium(III) Monohydrate", Acta Cryst. C48, 449-452. doi: 10.1107/S0108270191009939
49. P. Luger, Ch. André, R. Rudert, D. Zobel (**1992**). "X-Ray Structure of 18-Crown-6-Potassium Perchlorate at Room Temperature and 20 K". Acta Cryst. B48, 33-37. doi: 10.1107/S0108768191011631
50. R. Rudert, J. Buschmann, T. Richter, P. Luger, G. Trummlitz (**1991**). "Electron Density Distribution of 4-Hydroxy-1,2-benzisothiazol-2(2H)-one 1,1-Dioxide Sodium Salt (UH-AF 50 NA)", Acta Cryst. B47, 905-910.
51. M. Qian, R. Rudert, P. Luger, C. Ge, X. Wang (**1991**). "Structure of the 1:4 Complex of Bis[1,2-oxalato(2-)]copper(II) and Bis(ethylenedithio)tetrathiafulvalene (BEDT-TTF)", Acta Cryst. C47, 2358-2362. doi: 10.1107/S0108270191006716
52. M. Ramm, B. Schulz, R. Rudert, B. Göhrmann, H.-J. Niclas (**1991**). "The Structure of 7-( $N$ -Formyl- $N$ -phenyl)amino-4,6-dinitrobenzofurazan 1-Oxide", Acta Cryst. C47, 1700-1702. doi: 10.1107/S0108270191000069

53. M. Qian, P. Luger, R. Rudert, Y. Gau, C. Ge, X. Wang (**1990**). "Crystal Structures of Organic and Organometallic Charge Transfer Complexes Based on Multi-Sulfur  $\pi$ -Molecules", *Acta Cryst.* A46 (Suppl.), C-210.
54. R. Rudert, J. Buschmann, P. Luger, D. Gregson, G. Trummlitz (**1989**). "Structure of 6-Nitro-1,2-benzisothiazol-3(2H)-one 1,1-Dioxide Sodium Salt (6-Nitrosaccharin) at 123 K based on Neutron Diffraction Data", *Acta Cryst.* C45, 1013-1015. doi: 10.1107/S0108270189000089
55. J. Mulzer, U. Steffen, L. Zorn, Ch. Schneider, E. Weinhold, W. Münch, R. Rudert, P. Luger, H. Hartl (**1988**). "Electrophilic Additions to 3-C-(Methoxycarbonyl) methyl-3-deoxy-D-ribofuranose Enolates: A Case of Unusually Efficient Non-Chelate-Enforced Chirality Transfer", *J. Am. Chem. Soc.* 110, 4640-4646.
56. R. Rudert, J. Buschmann, P. Luger, D. Gregson, G. Trummlitz (**1988**). "Structure of 4-Hydroxy-1,2-benzisothiazol-3(2H)-one 1,1-Dioxide Sodium Salt (UH-AF 50 NA) at 123 K based on Neutron Diffraction Data", *Acta Cryst.* C44, 1083-1086. doi: 10.1107/S0108270187012721
57. R. Rudert, J. Buschmann, P. Luger (**1987**). "Structure/Taste Relationships of Artificial Sweeteners", *Acta Cryst.* A43 (Suppl.), C-106.
58. R. Rudert, J. Buschmann, P. Luger, D. Gregson, G. Trummlitz (**1987**). "Strukturelle Aspekte von Süß- und Bitterstoffen". *Z. Kristallogr.* 178, 193-194.
59. P. Luger, Ch. Zaki, J. Buschmann, R. Rudert (**1986**). "Röntgenstrukturanalyse am Ethylenoxid bei 150 K und begleitende ab-initio-Rechnungen", *Angewandte Chemie* 98, 254-255. doi: 10.1002/ange.19860980307
60. P. Luger, Ch. Zaki, J. Buschmann, R. Rudert (**1986**). "Ethylene Oxide - X-Ray Structure Analysis (at 150 K) and ab initio Calculations", *Angewandte Chemie International Edition* 25, 276-277. doi: 10.1002/anie.198602761