

ARBEITSGRUPPEN DEPARTEMENT FÜR

CHEMIE UND BIOCHEMIE

Band 1

PROF. BAUMANN

1 - 22

1. J. Benz, H. Trachsel, U. Baumann
Crystal structure of the ATPase domain of translation initiation factor 4A from *Saccharomyces cerevisiae* – the prototype of the DEAD box protein family
Structure 1999, 7, 671-679
2. D. Dominguez, M. Altmann, J. Benz, U. Baumann, H. Trachsel
Interaction of translation initiation factor eIF4G with eIF4A in the yeast *Saccharomyces cerevisiae*
J. Biol. Chem. 1999, 274, 26720-26726
3. J.V. Skelly, M.R. Sanderson, D.A. Suter, U. Baumann, M.A. Read, D.S.J. Gregory, M. Bennett, S.M. Hobbs, S. Neidle
Crystal structure of human DT-diaphorase: A model for interaction with the cytotoxic prodrug 5-(aziridin-1-yl)-2,4-dinitrobenzamide (CB1954)
J. Med. Chem. 1999, 42, 4325-4330

PROF. P. BIGLER

23 - 40

4. K. Ingold, P. Bigler, W. Thormann, T. Cavaliero, B. Gottstein, A. Hemphill
Efficacies of Albendazole Sulfoxide and Albendazole Sulfone against In Vitro-Cultivated *Echinococcus multilocularis* Metacestodes
Antimicrobial Agents and Chemotherapy 1999, 1052-1061
5. N. Hilti, D. Baumann, A.-M. Schweingruber, P. Bigler, M.E. Schweingruber
Gene *ste20* controls amiloride sensitivity and fertility in *Schizosaccharomyces pombe*
Curr. Genet. 1999, 35, 585-592

6. V.K. Nikoulina, A.S. Chunaev, A. Boschetti
Accumulation of ζ -carotene in *Chlamydomonas reinhardtii*
under control of the ac5 gene
Plant Cell Reports 1999, 19, 37-42
7. E. Salimova, A. Boschetti, W. Eichenberger, L. Lutova
Sterol mutants of *Chlamydomonas reinhardtii*:
Characterization of 3 strains deficient in C24(28) reductase
Plant Physiol. Biochem. 1999, 37, 241-249
8. Q.X. Su, A. Boschetti
Effect of phosphatase inhibitor on the protein import into chloroplasts
In: Photosynthesis: Mechanisms and effects (G. Garab, ed.)
Kluwer Acad. Publ., The Netherlands, 1999, pp. 3163-3166
9. Q.X. Su, P. Schumann, Ch. Schild, A. Boschetti
A processing intermediate of a stromal chloroplast import
protein in *Chlamydomonas*
Biochem. J. 1999, 344, 391-395

10. A. Kunzmann, R. Seifert, G. Calzaferri
Particle Distribution in a Microporous Material
J. Phys. Chem. B, 1999, 103, 18-26
11. D. Brühwiler, R. Seifert, G. Calzaferri
Quantum-Sized Silver Sulfide Clusters in Zeolite A
J. Phys. Chem. B 1999, 103, 6397-6399
12. S. Glaus, G. Calzaferri
Silver Chloride Clusters and Surface States
J. Phys. Chem. B 1999, 103, 5622-5630
13. M. Lanz, D. Schürch, G. Calzaferri
Photocatalytic Oxidation of Water to O₂ on AgCl-coated Electrodes
J. Photochem. and Photobiol. A: Chemistry 1999, 120, 105-117
14. N. Gfeller, S. Megelski, G. Calzaferri
Fast Energy Migration in Pyronine-Loaded Zeolite L Microcrystals
J. Phys. Chem. B, 1999, 103, 1250-1257
15. B. Hennessy, S. Megelski, C. Marcolli, V. Shklover, C. Bärlocher, G. Calzaferri
Characterization of Methyl Viologen in the Cannels of Zeolite L
J. Phys. Chem. B 1999, 103, 3340-3351
16. C. Marcolli, G. Calzaferri
Monosubstituted Octasilasesquioxanes
Appl. Organometal. Chem. 1999, 13, 213-226

17. G. Calzaferri
Oxidation Numbers
J. Chem. Education 1999, 76, 362-363
18. G. Calzaferri
Oxidationszahlen in Kohlenstoffverbindungen
Chemie in unserer Zeit 1999, 33, 228-229

PROF. S. DECURTINS

137 - 196

19. S. Ferlay, G. Francese, H.W. Schmalle, S. Decurtins
A New Bidimensional Compound Containing (μ -thiocyanate)(bpy)
Copper(II) Molecules: Synthesis, Crystal Structure and Magnetic
Properties of $[\text{Cu}(\text{bpy})(\text{NCS})_2]_n$ (bpy = 2,2'-bipyridyl)
Inorganica Chimica Acta 1999, 286, 108-113
20. G. Francese, S. Ferlay, H.W. Schmalle, S. Decurtins
A New 1D Bimetallic Thiocyanate-Bridged Copper (II)-Cobalt(II) Compound
New J. Chem. 1999, 267-269
21. G. Francese, H.W. Schmalle, S. Decurtins
A copper(II) dimer: aqua(μ -2,2'-bipyrimidine-*N,N'*)(perchlorato)
bis{[2,6-bis(2-pyridyl)pyridine-*N,N',N'*]copper(II)}triperchlorate
Acta Cryst. 1999, C55, 730-733
22. G. Antorrena, F. Palacio, M. Castro, R. Pellaux, S. Decurtins
Thermal and Magnetic Study of Mixed-Metal Oxalate-Bridged 2D Magnets
Journal of Magnetism and Magnetic Materials 1999, 196-197, 581-583
23. R. Pellaux, S. Decurtins, H.W. Schmalle
Three Anionic Polymeric Networks: Sodium(I)-Ruthenium(III),
Sodium(I)-Rhodium(III) and Sodium(I)-Aluminium(III) μ -Oxalato
Complexes with Tris(2,2'-bi-pyridine)ruthenium(II) Cations
Acta Cryst. 1999, C55, 1075-1079
24. S. Decurtins
Multifunctional coordination compounds: design and properties
Phil. Trans. R. Soc. Lond. A 1999, 357, 3025-3040
25. S. Decurtins, R. Pellaux, G. Antorrena, F. Palacio
Multifunctional coordination compounds: design and properties
Coordination Chemistry Reviews 1999, 190-192, 841-854
26. S. Decurtins, R. Pellaux, G. Antorrena, F. Palacio
Multifunctional Coordination Compounds:
Design and Properties
Mol. Cryst. and Liq. Cryst 1999, 335, 173-181

PROF. W. EICHENBERGER

197 - 210

27. Y. Xu, W. Eichenberger
Phosphatidylglycerol of *Ectocarpus fasciculatus* (Phaeophyceae).
Analysis of Molecular Species by the Use of Dinitrobenzoyl
Diacylglycerol Derivatives
Fett./Lipid 1999, 101, 104-108
28. E. Salimova, A. Boschetti, W. Eichenberger, L. Lutova
Sterol mutants of *Chlamydomonas reihardtii*:
Characterization of 3 strains deficient in C24(28) reductase
Plant Physiol. Biochem. 1999, 37, 241-249

PROF. B. ERNI / DR. B. BLUM

211 - 255

29. R. Gutknecht, K. Flükiger, R. Lanz, B. Erni
Mechanism of phosphoryl transfer in the dimeric IIAB^{Man}
subunit of the *Escherichia coli* mannose transporter
J. Biol. Chem. 1999, 274, 6091-6096
30. T. Hesterkamp, B. Erni
A reporter gene assay for inhibitors of the bacterial
phosphoenolpyruvate: sugar phosphotransferase system
J. Mol. Microbiol. Biotechnol. 1999, 1(2), 309-317
31. Z. Markovic-Housley, B. Stolz, R. Lanz, B. Erni
Effects of tryptophan to phenylalanine substitutions on the structure,
stability, and enzyme activity of the IIAB^{Man} subunit of the mannose
transporter of *Escherichia coli*
Protein Sci. 1999, 8, 1530-1535
32. S. Sbicego, E. Vassella, U. Kurath, B. Blum, I. Roditi
The use of transgenic *Trypanosoma brucei* to identify compounds
inducing the differentiation of bloodstream forms to procyclic forms
Mol. Biochem. Parasitol. 1999, 104, 311-322
33. C. Schenkels, B. Erni, J.L. Reymond
Phosphofurylalanine, a stable analog of phosphohistidine
Bioorg. Med. Chem. Lett. 9, 1999, 1443-1446
34. J. Zhuang, R. Gutknecht, K. Flükiger, L. Hasler, B. Erni, A. Engel
Purification and electron microscopic characterization of the membrane
subunit (IICB^{Glc}) of the *Escherichia coli* glucose transporter
Arch. Biochem. Biophys. 1999, 372, 89-96

PROF. H. GÄGGELE

256 - 378

35. V.M.H. Lavanchy, H.W. Gäggeler, S. Nyeki, U. Baltensperger
Elemental Carbon (EC) and Black Carbon (BC) Measurements with
a Thermal Method and an Aethalometer at the High-Alpine Research
Station Jungfraujoch
Atmospheric Environment 1999, 33, 2759-2769

- 36.** M. Kalberer, M. Ammann, H. W. Gäggeler, U. Baltensperger
Adsorption of NO₂ on Carbon Aerosol Particles in the Low PPB Range
Atmospheric Environment 1999, 33, 2815-2822
- 37.** M. Schwikowski, S. Brütsch, H.W. Gäggeler, U. Schotterer
A High-Resolution Air Chemistry Record from an Alpine Ice Core:
Fiescherhorn Glacier, Swiss Alps
Journal of Geophysical Research 1999, 104, 13709-13719
- 38.** R. Dressler, B. Eichler, D.T. Jost, D. Piguet, A. Türler
Production of ²⁶²Db (Z = 105) in the Reaction ²⁴⁸Cm(¹⁹F, 5n)
Physical Review C 1999, 59/6, 3433-3436
- 39.** A. Türler, W. Brüchle, R. Dressler, B. Eichler, R. Eichler,
H.W. Gäggeler, M. Gärtner, J.P. Glatz, K.E. Gregorich,
S. Hübner, D.T. Jost, V.Y. Lebedev, V.G. Pershina, M. Schädel,
S. Taut, S.N. Timokhin, N. Trautmann, A. Vahle, A.B. Yakushev
First Measurement of a Thermochemical Property of a
Seaborgium Compound
Angew. Chem. Int. Ed. 1999, 38, No. 15, 2212-2213
- 40.** P. Zanis, E. Schuepbach, H.W. Gäggeler, S. Hübener, L. Tobler
Factors controlling beryllium-7 at Jungfraujoch in Switzerland
Tellus, 1999, 51B, 789-805
- 41.** V.M.H. Lavanchy, H.W. Gäggeler
Historical record of carbonaceous particle concentrations from a
European high-alpine glacier (Colle Gnifetti, Switzerland)
J. of Geophysical Research, 1999, Vol. 104, No. D17, 21,227-21,236
- 42.** M. Schwikowski, A. Döscher, H.W. Gäggeler, U. Schotterer
Anthropogenic versus natural sources of atmospheric sulphate
from an Alpine ice core
Tellus 1999, 51B, 5, 939-951
- 43.** B. Eichler, A. Türler, H.W. Gäggeler
Thermochemical Characterization of Seaborgium Compounds in
Gas Adsorption Chromatography
J. Phys. Chem. A, 1999, 103, 9296-9306
- 44.** V.M.H. Lavanchy, H.W. Gäggeler
Historical record of carbonaceous particle concentrations from
a European high-alpine glacier (Colle Gnifetti, Switzerland)
Journal of Geophysical Research, 1999, Vo. 104, D17, 21,227-21,236
- 45.** M. Kalberer, M. Ammann, F. Arens, H.W. Gäggeler, U. Baltensperger
Hetereogeneous formation of nitrous acid (HONO)
on soot aerosol particles
Journal of Geophysical Research, 1999, Vol. 104, D11, 13,825-13,832

- 46.** V.M.H. Lavanchy, H.W. Gäggeler, U. Schotterer, M. Schwikowski, U. Baltensperger
 Historical Record of Carbonaceous Particle Concentrations from a European High-alpine Glacier (Colle Gnifetti, Switzerland)
J. Aerosol Sci. 1999, Vol. 30, Suppl. 1, 5611-5612
- 47.** S. Henning, M. Lugauer, E. Weingartner, S. Nyeki, B. Buchmann, H.W. Gäggeler, U. Baltensperger
 Influence of Synoptic Weather Conditions on the Aerosol Size Distribution at the High-Alpine Site Jungfraujoch
J. Aerosol Sci. 1999, Vol. 30, Suppl. 1, 5579-5580
- 48.** N. Streit, E. Weingartner, S. Nyeki, U. Baltensperger, R. van Dingenen, J.-P. Putaud, A. Even, H. ten Brink, A. Blatter, A. Neftel, H.W. Gäggeler
 Aerosol Characterization during Summer Smog Events in the Greater Milan Area
J. Aerosol Sci. 1999, Vol. 30, Suppl. 1, 5115-5116
- 49.** F. Arens, M. Ammann, M. Kalberer, H.W. Gäggeler, U. Baltensperger
 The Effect of Sampling Conditions on the Reactivity of Diesel Soot Particles towards NO₂
J. Aerosol Sci. 1999, Vol. 30, Suppl. 1, 5873-5874
- 50.** R. Eichler, B. Eichler, H.W. Gäggeler, D.T. Jost, R. Dressler, A. Türler
 The Gas Phase Oxide and Oxyhydroxide Chemistry of Trace Amounts of Rhenium
Radiochim. Acta 1999, 458, 1-9

PROF. H. U. GÜDEL

379 - 613

- 51.** N. Cavadini, H. Henggeler, A. Furrer, H.-U. Güdel, K. Krämer, H. Mutka
 Magnetic Excitations in the Quantum Spin System KCuCl₃
Eur. Phys. J. B 7, 1999. 519-522
- 52.** R. Schenker, H. Weihe, H.U. Güdel
 Double Exchange in the Charge-Transfer States of [Cr₂(OH)₃(tmtame)₂]³⁺
Chem. Phys. Letters 1999, 303, 229-234
- 53.** D. Hernández, F. Rodríguez, M. Moreno, H.U. Güdel
 Pressure Dependence of the Crystal Field Spectrum of the NH₄MnCl₃ Perovskite: Correlation between 10Dq, Ne and Nt, and the Mn-Cl Distance in MnCl₆⁴⁻ Complexes
Physica B 1999, 265, 186-190
- 54.** B. Dorner, D. Petitgrand, H.U. Güdel
 Minute Splitting of Magnetic Excitations due to Dipolar Interactions in CsFeCl₃ and RbFeCl₃ Observed with Polarised Neutrons
Physica B 1999, 267-268, 263-265
- 55.** S.R. Lüthi, H.U. Güdel, M.P. Hehlen
 Influence of the Chemical Environment on the Electronic Structure and Spectroscopic Properties of Er³⁺ Doped Cs₃Lu₂Cl₉, Cs₃Lu₂Br₉, and Cs₃Y₂I₉
J. of Chem. Physics 1999. 110/24, 12033-12043
- 56.** S.R. Lüthi, M. Pollnau, H.U. Güdel, M.P. Hehlen
 Near-Infrared to Visible Upconversion in Er³⁺-Doped Cs₃Lu₂Cl₉,

$\text{Cs}_3\text{Lu}_2\text{Br}_9$, and $\text{Cs}_3\text{Y}_2\text{I}_9$ Excited at 1.54 μm
Phys. Rev. B 1999, 60/1, 162-178

57. P.L.W. Tregenna-Piggott, S.R. Best, H.U. Güdel, H. Weihe, Ch.C. Wilson
Influence of the Mode of Water Coordination on the Electronic
Structure of the $[\text{V}(\text{OH}_2)_6]^{3+}$ Cation
J. of Solid State Chem. 1999, 145, 460-470
58. K.W. Krämer, H.U. Güdel, B. Roessli, P. Fischer, A. Dönni,
N. Wada, F. Fauth, M.T. Fernandez-Diaz, T. Hauss
Noncollinear Two- and Three-Dimensional Magnetic Ordering in the
Honeycomb Lattices of ErX_3 ($X = \text{Cl}, \text{Br}, \text{I}$)
Phys. Rev. B 1999, 60/6, 3724-3727
59. M.P. Hehlen, A. Kuditcher, S.C. Rand, S.R. Lüthi
Site-Selective, Intrinsically Bistable Luminescence of
 Vb^{3+} Ion Pairs in CsCdBr_3
The American Physical Society 1999, Physicl Review Letters,
82, No. 15, 3050-3053
60. O.S. Wenger, D.R. Gamelin, H.U. Güdel, A.V. Butashin, A.A. Kaminskii
Site-selective optical spectroscopy and upconversion mechanisms
of the laser material $\text{BaLu}_2\text{F}_8:\text{Er}^{+3}$
The American Physical Society 1999, Physical Review B,
60, No. 8, 5312-5320
61. R. Schenker, H. Weihe, H.U. Güdel
Exchange Interactions Derived from Electron-Transfer Processes
in $[\text{Cr}_2(\text{OH})_3(\text{tmtame})_2](\text{NO}_3)_3$
Inorg. Chem. 1999, 38, 5593-5601
62. J.M. Clemente-Juan, H. Andres, J. Borrás-Almenar,
E. Coronado, H.U. Güdel, M. Aebersold, G. Kearly,
H. Büttner, M. Zolliker
Magnetic Excitations in Polyoxometalate Clusters Observed
by Inelastic Neutron Scattering: Evidence for Ferromagnetic
Exchange Interactions and Spin Anisotropy in the Tetrameric
Nickel(II) Cluster $[\text{Ni}_4(\text{H}_2\text{O})_2(\text{PW}_9\text{O}_{34})_2]^{10-}$ and Comparison
with the Magnetic Properties
J. Am. Chem. Soc. 1999, 121, 10021-10027
63. H. Andres, J.M. Clemente-Juan, M. Aebersold, H.U. Güdel,
E. Coronado, H. Büttner, G. Kearly, J. Melero, R. Burriel
Magnetic Excitations in Polyoxometalate Clusters Observed
by Inelastic Neutron Scattering: Evidence for Anisotropic
Ferromagnetic Exchange Interactions in the Tetrameric
Cobalt(II)Cluster $[\text{Co}_4(\text{H}_2\text{O})_2(\text{PW}_9\text{O}_{34})_2]^{10-}$, Comparison with
the Magnetic and Specific Heat Properties
J. Am. Chem. Soc. 1999, 121, 10028-10034

64. O. Gullot-Noël, J.C. van't Spijker, J.T.M. de Haas, P. Dorenbos
C.W.E. van Eijk, K.W. Krämer, H.U. Güdel
Scintillation Properties of RbGd₂Br₇: Ce Advantages and Limitations
IEEE Transactions on Nuclear Science, 1999, 46, 1274-1284
65. D.R. Gamelin, M. Wermuth, H.U. Güdel
Up-conversion processes of 5d transition metal ions in crystals
Journal of Luminescence 1999, 83-84, 405-410
66. D.R. Gamelin, H.U. Güdel
Spectroscopy and Dynamics of Re⁴⁺ Near-IR-to-Visible
Luminescence Upconversion
Inorganic Chemistry, 1999, 38, 22, 5154-5164
67. M. Wermuth, H.U. Güdel
Photon Avalanche in Cs₂ZrBr₆: Os⁴⁺
J. Am. Chem. Soc., 1999, 121, 43, 10102-10111
68. P.L.W. Tregenna-Piggott, H. Weihe, J. Bendix, A-L.Barra, H.U. Güdel
High-Field Multifrequency EPR Study of the Vanadium(III)
Hexaaqua Cation
Inorg. Chem. 1999, 38, 5928-5929
69. O. Waldmann, J. Schülein, R. Koch, P. Müller, I. Bernt,
R.W. Saalfrank, H.P. Andres, H.U. Güdel, P. Allenspach
Magnetic Anisotropy of Two Cyclic Hexanuclear Fe(III)
Clusters Entrapping Alkaline Ions
Inorganic Chemistry, 1999, 38, Nr. 25, 5879-5886
70. T.C. Brunold, H.U. Güdel in
"Inorganic Electronic Structure and Spectroscopy",
E.I. Solomon and A.B.P. Lever (editors)
„Luminescence Spectroscopy“
Wiley, 1999, Vol. 1, 259-306
71. I. Mirebeau, M. Hennion, H. Casalta, H. Andres,
H.U. Güdel, A.V. Irodova and A. Caneschi
Low-Energy Magnetic Excitations of the Mn₁₂-Acetate
Spin Cluster Observed by Neutron Scattering
Phys. Rev. Lett. 1999, 83, 628-631
72. W. Henggeler, N. Cavadini, A. Furrer, H.U. Güdel,
K. Krämer, H. Mutka
Magnetic excitations in the quantum spin system KCuCl₃
ILL Annual Report 1999, 98, 22-23
73. F. Rodriguez, D. Hernández, H.U. Güdel
Double-excitation transitions in the perovskite
NH₄MnCl₃ studied by pressure techniques
Phys. Rev. B 1999, 60, 10598-10601

- 74.** C.M. Combes, P. Dorenbos, C.W.E. van Eijk,
K.W. Krämer, H.U. Güdel Optical and scintillation properties
of pure and Ce³⁺-doped Cs₂LiYCl₆ and Li₃YCl₆:Ce³⁺ crystals
J. of Luminescence 1999, 82, 299-305
- 75.** O. Guillot-Noël, J.T.M. de Haas, P. Dorenbos,
C.W.E. van Eijk, K. Krämer, H.U. Güdel
Optical and scintillation properties of cerium-doped
LaCl₃, LuBr₃ and LuCl₃
J. of Luminescence 1999, 85, 21-35
- 76.** J.C. van 't Spijken, P. Dorenbos, C.W.E. van Eijk,
K. Krämer, H.U. Güdel
Scintillation and luminescence properties of
Ce³⁺ doped K₂LaCl₅
J. of Luminescence 1999, 85, 1-10

PROF. J. HULLIGER

614 - 776

- 77.** J. Hulliger, P.J. Langley, A. Quintel, P. Rechsteiner S.W. Roth
The Prediction and Production of Polar Molecular Materials:
from Markov's Theory to Crystal Growth
J. Veciana et al. eds., Supramolecular Engineering of Synthetic
Metallic Materials, NATO Ser. C 518, 1999, 67-81
- 78.** P.J. Langley, J. Hulliger
Nanoporous and mesoporous organic structures: new openings for
materials research
Chem. Soc. Rev. 1999, 28, 279-291
- 79.** J. Hulliger, S.W. Roth, A. Quintel
The Prediction and Production of Polarity in Crystalline Supra-
molecular Materials
D. Braga et al. (eds), Crystal Engineering: From Molecules and
Crystals to Materials, NATO Ser. C 538, 349-368
- 80.** J. Hulliger
Orientational Disorder at Growing Surfaces of Molecular Crystals:
General Comments on Polarity Formation and on Secondary Defects
Z. Kristallogr. 1999, 214, 9-13
- 81.** A. Quintel, J. Hulliger
A theoretical base for optimising intramolecular interactions
driving polarity formation in channel-type host-guest materials
Chem. Phys. Lett., 1999, 312, 567-571
- 82.** A. Quintel, J. Hulliger
Steady-state photoconductivity of a supramolecular assembly of
nonlinear optical molecules showing evidence of rectifier properties
Synth. Metals 1999, 107, 183-190

- 83.** P.J. Langley, J.M. Rawson, J. N.B. Smith, M. Schuler, R. Bachmann, A. Schweiger, F. Palacio, G. Antorrena, G. Gescheidt, A. Quintel, P. Rechsteiner, J. Hulliger
Probing Magnetic Exchange Interactions in Molecular Magnets:
An Inclusion Compound of a Dithiadiazolyl Radical
J. Mater. Chem. 1999, 9, 1431-1434
- 84.** Ph. Egger, J. Hulliger
Optical Materials for Short Wavelength Generation
Coord. Chem. Rev. 1999, 183, 101-115
- 85.** P. Mikhail, J. Hulliger
 Sm^{2+} in Oxide Lattices: An unexplored Chapter of Crystal Chemistry
Comment. Inorg. Chem. 1999, 21, 263-283
- 86.** P. Mikhail, J. Hulliger, K. Ramseyer
Cathodoluminescence and photoluminescence of Sm^{n+} ($n = 2,3$)
in oxide environments
Solid State Comm. 1999, 112, 483-488
- 87.** P. Mikhail, M. Schnieper, H. Bill, J. Hulliger
Optical Hole Burning on Sm^{2+} at 5 K in Czochralski Grown
 $\text{Sr}_2\text{MgSi}_2\text{O}_7$: Sm Crystals
Phys. Stat. Sol. (b) 1999, 215, R17-R18
- 88.** T. Armbruster, R. Basler, P. Mikhail, J. Hulliger
Defect-Structure of Ytterbium(III)Doped Na_2SO_4 Phase I
J. Solid State Chem. 1999, 145, 309-316
- 89.** P. Mikhail, R. Basler, J. Hulliger
Czochralski growth and spectroscopic investigations of
 Yb^{3+} , La^{3+} : $\text{Na}_2\text{SO}_4(\text{I})$ and Nd^{3+} : $\text{Na}_2\text{SO}_4(\text{I})$
J. Mater. Res. 1999, 14, 4093-4097
- 90.** Ph. Egger, N. Peters, J. Hulliger
The Copper Ampoule: A New Reactor for the Solid-State Synthesis
of Complex Lanthanide Fluorides
J. Solid State Chem. 1999, 142, 152-155
- 91.** P. Egger, R. Burkhalter, J. Hulliger
Czochralski Growth of $\text{Ba}_2\text{Y}_{1-x}\text{Er}_x\text{Cl}_7$ ($0 < x < 1$) Using Growth
Equipment Integrated Into A Dry-Box
J. Cryst. Growth 1999, 200, 515-520
- 92.** R. Burkhalter, P. Rogin, A. Eckau, C. Buchal, J. Hulliger
Structuring of LiYF_4 for 1-D waveguide laser investigations by
chemical wet etching techniques
J. Crystal Growth 1999, 206, 187-196
- 93.** P. Rogin, G. Huber, J. Hulliger
 LiYF_4 Liquid-Phase Epitaxy Using an Inverted Slider Geometry
J. Cryst. Growth 1999, 198/199, 564-567

- 94.** J. Findeisen, J. Hulliger, A.A. Kaminskii, H.J. Eichler, R. Macdonald, P. Franz, P. Peuser
New All Solid-State Nanosecond NaBrO₃ Raman Laser at 1.1628
and 0.581 μm Wavelength
Phys. Stat. Sol. (a) 1999, 172, R5-R6
- 95.** A.A. Kaminskii, J. Hulliger, H.J. Eichler, J. Findeisen, P. Egger
Multicomponent Stimulated Raman Scattering and Second Harmonic
Generation in Sr(NO₃)₂ and CsNO₃ Single Crystals
Docl. Akad. Nauk. 1999, 364, 761-765
- 96.** A. Hählen, G. Baars, J. Hulliger
Kristallisation, eine neue Unterrichtseinheit -
Kristallisation einer neuen Unterrichtsform
Praxis Naturwiss. Chem. 1999, 48, 21-25

ARBEITSGRUPPEN DEPARTEMENT FÜR

CHEMIE UND BIOCHEMIE

Band 2

DR. J. HUNZIKER

777 - 786

97. J. Hunziker
Synthesis of 5-(2-Amino-2-Deoxy- β -D-Glucopyranosyloxymethyl)-2'-Deoxyuridine and its Incorporation into Oligothymidylates
Bioorganic & Medicinal Chemistry Letters 1999, 9, 201-204
98. R. Buff, J. Hunziker
Z-DNA-Formation by 2'-C-Ethynyl-modified Oligonucleotides
Synlett 1999, S1, 905-908
99. R. Buff, J. Hunziker
2'-Deoxy-2'-(S)-ethynyl Oligonucleotides: Synthesis
and Pairing Properties
Nucleosides & Nucleotides 1999, 18, 1387

PROF. R. KEESE

787 - 824

100. Z. Teng, R. Keese
Palladium-Induced Intramolecular Coupling Reactions of
Some Alkenyl(*o*-iodobenzyl)silanes
Helv. Chim. Acta 1999, 82, 515-521
101. B. Ding, R. Keese, H. Stoeckli-Evans
Synthese und Struktur des ersten Tetraazasilafenestrans
Angew. Chem. 1999, 111/3, 387-388;
Int. Ed. 1999, 38, No. 3, 375-376
102. D. Zheng, T. Darbre, R. Keese
Methanol and Dimethylaniline as Methylating Agents of Co(I)
Corrinoids under Acidic Conditions
J. of Inorganic Biochemistry 1999, 73, 273-275
103. V. Helbling, M.K. Eberle, R. Keese
The Sakurai Reaction of 4-Acetoxyxycyclopentenone –

Synthesis of *trans*-3-Allyl-4-vinylcyclopentanone
Synlett 1999, S1, 881-884

- 104.** F. Sun, T. Darbre, R. Keese
Synthesis of Vitamin B₁₂ Derivatives Incorporating Peripheral
Cytosine and N-Acetylcytosine
Tetrahedron 1999, 55, 9777-9786
- 105.** C. Wedemeyer-Exl, T. Darbre, R. Keese
A Model for the Cobalamin-Dependent Methionine Synthase
Helv. Chim. Acta, 1999, 82, 1173-1184

PROF. U. KRÄHENBÜHL

825 - 890

- 106.** E. Polnau, O. Eugster, U. Krähenbühl, K. Marti
Evidence for precompaction exposure to cosmic rays in a chondrule
from the H6 chondrite ALH76008
Geochim. Cosmochim. Acta 1999, 63, 925-933
- 107.** A. Weigel, O. Eugster, C. Koeberl, R. Michel, U. Krähenbühl, S. Neumann
Relationship among lodranites and acapulcoites: Noble gas isotopic
abundances, chemical composition, cosmic-ray exposure ages, and
solar cosmic ray effects.
Geochim. Cosmochim. Acta 1999, 63, 175-192
- 108.** U. Thomet, E. Vogel, U. Krähenbühl
The uptake of cadmium and zinc by mycelia and their accumulation
in mycelia and fruiting bodies of edible mushrooms
Eur Food Res Technol 1999, 209, 317-324
- 109.** Ch. R. Widmer, U. Krähenbühl, J. Kramers, L. Tobler
Lead isotopes used for source differentiation of aerosol samples
collected in the vicinity of Bern, Switzerland
J. Aerosol. Sci. 1999, 30 suppl. 1 S661-S662
- 110.** B. Hinder, M. Gabathuler, B. Steiner, K. Hanselmann, H.R. Preisig
Seasonal dynamics and phytoplankton diversity in high mountain
lakes (Jöri lakes, Swiss Alps)
J. Limnol. 1999, 59, 152-161
- 111.** B. Steiner, Urs Krähenbühl et al.
The MOLAR Project: atmospheric deposition and lake water chemistry
The MOLAR water chemistry Group:
J. Limnol. 1999, 59, 88-106

PROF. C. LEUMANN

891 - 939

- 112.** R. Steffens, C. Leumann
Synthesis, Thermodynamic and Biophysical Properties of Tricyclo-DNA
J. Am. Chem. Soc., 1999, 121, 3249-3255
- 113.** E. Stulz, C. Leumann
X-ray structure and solvolytic activity towards phosphate diesters
of a Zirconium(IV)-complex
J. Chem. Soc. Chem. Commun., 1999, 239-240

- 114.** C.D. Roberts, R. Schütz, C. Leumann
The synthesis of a thymine containing E-olefinic peptide nucleic acid (OPA) monomer
Synlett, 1999, 819-821
- 115.** A. Egger, C.J. Leumann
Bicyclo[3.2.1]amide-DNA : Synthesis and base-pairing properties
Synlett, 1999, 913-916
- 116.** I. Prévot-Halter, C. Leumann
Selective Recognition of a C-G Base-Pair in the Parallel DNA Triple-Helical Binding Motif
Bioorg. Med. Chem. Lett., 1999, 9, 2657-2660.
- 117.** C.D. Roberts, C. Epple and C. Leumann, Bicyclo[3.2.1]-DNA:
A DNA Analog Containing a Rigid Backbone and a Flexible Base-Pairing Region
Nucleosides & Nucleotides, 1999, 18, 1413-1415.
- 118.** H. Simon, I. Förtsch, G. Burckhardt, A. Gabrielyan, E. Birch-Hirschfeld,
A. Stelzner, I. Prévot-Halter, C. Leumann, C. Zimmer
Triple Helix Formation Inhibits DNA Gyrase Activity
Antisense & Nucleic Acid Drug Development, 1999, 9, 527-531.
- 119.** R. Meier, S. Grüschorow, C. Leumann
Nucleic Acid Analogs with restricted Conformational Flexibility in the Sugar-Phosphate Backbone (Bicyclo-DNA). Part 7. Synthesis and Properties of Oligodeoxynucleotides Containing [(3'S,5'S,6'R)-6'-Amino-2'-deoxy-3',5'-ethano-b-D-ribofuranosyl]thymine (6'-Amino-bicyclothymidine)
Helv. Chimica Acta, 1999, 82, 1813-1828.
- 120.** C. Leumann, M. Allan, U. Burger, B. Erni, H. Grützmacher,
A. Hauser, H. Heimgartner, H.-P. Huber, T. Jenny, R. Neier, M. Oehme,
G. Süss-Fink, H. Wyler
NSCG-Kommission 'Curriculum Chemie':
Eine Bestandesaufnahme über Studium, Promotion und Berufsaussichten junger Chemikerinnen und Chemiker von 1992-1996 (Statistischer Teil)
Chimia 1999, 53/6, 256-260

PROF. S. LEUTWYLER

940 - 1010

- 121.** D. Sabo, Z. Bacic, S. Graf, S. Leutwyler
Calculated and experimental rotational constants of $(H_2O)_3$:
Effects of intermolecular torsional and symmetric stretching excitations
J. Chem. Phys. 1999, 111, 10727-10729

- 122.** D. Sabo, Z. Bacic, S. Graf, S. Leutwyler
Calculated and experimental rotational constants of (D₂O)₃: Effects of intermolecular torsional and symmetric stretching excitations
J. Chem. Phys. 1999, 111, 5331-5337
- 123.** S. Coussan, Y. Bouteiller, J. P. Perchard, V. Brenner, P. Millié, W. Q. Zheng, F. Talbot
Methanol-acetonitrile complexes trapped in argon and nitrogen matrices: Infrared induced isomerization and theoretical calculations
J. Chem. Phys. 1999, 110, 10046-10057
- 124.** D. Sabo, Z. Bacic, S. Graf, S. Leutwyler
Rotational constants of all H/D substituted water trimers:
Coupling of intermolecular torsional and symmetric stretching modes
J. Chem. Phys. 1999, 110, 5745-5757
- 125.** S. Graf, W. Mohr, S. Leutwyler
An ab initio study of the torsional-puckering pseudorotation in the cyclic water pentamer
J. Chem. Phys. 1999, 110, 7893-7908
- 126.** A. Bach, S. Leutwyler
Water-chain clusters: vibronic spectra of 7-hydroxyquinoline · (H₂O)_n, n=1-4
Chem. Phys. Letters 1999, 299, 381-388
- 127.** A. Inauen, J. Hewel, S. Leutwyler
Intermolecular bonding and vibrations of phenol · oxirane
J. Chem. Phys. 1999, 110, 1463-1474

PD DR. J. LÜTHY

1011 - 1048

- 128.** C. Wolf, J. Rentsch, P. Hübner
PCR-RFLP Analysis of Mitochondrial DNA: A Reliable Method for Species Identification
J. Agric. Food Chem. 1999, 47, 1350-1355
- 129.** E. Studer, J. Lüthy, P. Hübner
Study of presence of *Campylobacter jejuni* and *C. coli* in sand samples from four Swiss chicken farms
Res. Microbiol. 1999, 150, 213- 219
- 130.** P. Hübner, E. Studer, D. Häfliger, M. Stadler, C. Wolf, M. Looser
Detection of genetically modified organisms in food: critical points for quality assurance
Accred Qual Assur 1999 , 4, 292-298
- 131.** J. Lüthy
Detection strategies for food authencity and genetically modified foods
Food Control 1999, 10, 359-361

132. P. Hübner, E. Studer, J. Lüthy
Quantitative competitive PCR for the detection of genetically modified organisms in food
Food Control 1999, 10, 353-358
133. P. Hübner, E. Studer, J. Lüthy
Quantitation of genetically modified organisms in food
Nature Biotechnology 1999, 17, 1137-1138
134. C. Wolf, P. Hübner, J. Lüthy
Differentiation of sturgeon species by PCR-RFLP
Food Research International 1999, 32, 699-705

PROF. H. PFANDER

1049 - 1122

135. Marcel Zürcher, Hanspeter Pfander
Oxidation of Carotenoids - II: Ozonides as Products of the Oxidation of Canthaxanthin
Tetrahedron, 55, 1999, 2307-2310
136. Péter Molnár, Józef Deli, Zoltán Matus, Gyula Tóth, Andrea Steck, Hanspeter. Pfander
Partial Synthesis and Characterization of Karopxanthins and Cucurbitaxanthin A Epimers
Helv. Chim. Acta, 82, 1999, 1994-2002
137. Christiane Dufresne, François Cormier, Sonia Dorion, Urs A. Niggli, Stefan Pfister, Hanspeter Pfander
Glycosylation of encapsulated crocetin by a *Crocus sativus* L. cell culture
Enzyme and Microbial Technology, 24, 1999, 453-462
138. Adriana Z. Mercadante, Andrea Steck, Hanspeter Pfander
Carotenoids from Guava (*Psidium guajava* L.): Isolation and Structure Elucidation
J. Agricultural and Food Chemistry, 47, 1999, 145-151
139. Frederick Khachik, Andrea Steck, Hanspeter Pfander
Isolation and Structural Elucidation of (13Z,13'Z,3R, 3'R, 6'R)-Lutein from Marigold Flowers, Kale, and Human Plasma
J. Agricultural and Food Chemistry, 47, 1999, 455-461
140. A.Z. Mercadante, A. Steck, Hanspeter Pfander
Three minor carotenoids from annatto (*Bixa orellana*) seeds
Phytochemistry 52, 1999, 135-139
141. Adrian Häberli, Hanspeter Pfander
Synthesis of Bixin and Three Minor Carotenoids from Annatto (*Bixa orellana*)
Helv. Chim. Acta, 82, 1999, 696-706
142. Urs A.Niggli, Hanspeter Pfander
Carotenoid Glycosides and Glycosyl Esters
in Raphael Ikan (Ed): Naturally Occurring Glycosides, Wiley, 1999, ISBN 0471 98 602 X, S. 125 - 145

PROF. J.-L. REYMOND

1123 - 1197

- 143.** J.-L. Reymond
 Catalytic Antibodies for Organic Synthesis.
Topics in Current Chemistry 1999, Vol. 200, Springer Verlag, 59 - 93
- 144.** P. Geymayer, N. Bahr and J.-L. Reymond
 A General Fluorogenic Assay for Catalysis Using Antibody Sensors.
Chem. Eur. J. 1999, 5, 1006 - 1012
- 145.** N. Bensel, N. Bahr, M.T. Reymond, C. Schenkels, J.-L. Reymond
 Catalytic Antibodies by Fluorescence Screening.
Helv. Chim. Acta 1999, 82, 44 - 52
- 146.** G. Klein, J.-L. Reymond
 Enantioselective Fluorogenic Assay of Acetate Hydrolysis for
 Detecting Lipase Catalytic Antibodies
Helv. Chim. Acta 1999, 82, 400 - 407
- 147.** A. Blaser, J.-L. Reymond
 A Selective α-L-Fucosidase Inhibitor Based on an Aminocyclopentane Framework
Helv. Chim. Acta 1999, 82, 760 - 768
- 148.** C. Schenkels, B. Erni, J.-L. Reymond
 Phosphofurylalanine, a Stable Analog of Phosphohistidine
Bioorganic & Medicinal Chemistry Letters 1999, 9, 1443-1446
- 149.** E. Leroy, J.-L. Reymond
 Anomer-Selective Inhibition of Glycosidases Using Aminocyclopentanols
Organic Letters 1999, 1, 775-777

PD DR. J. SCHALLER

1198 - 1232

- 150.** V.O. Lewis, M. Gehrmann, L. Weissbach, J.E. Hyman, A. Rielly,
 D.G. Jones, M. Llinas, J. Schaller
 Homologous Plasminogen N-Terminal and Plasminogen-Related
 Gene A and B Peptides
Eur. U. Biochem. 1999, 259, 618-625
- 151.** J. Bürgin, J. Schaller
 Expression, Isolation and Characterization of a Mutated Human
 Plasminogen Kringle 3 with a Functional Lysine Binding Site
CMLS, Cell. Mol. Life Sci. 1999, 55, 135-141
- 152.** E.B. Babiychuk, R.-J.T.S. Palstra, J. Schaller, U. Kämpfer, A. Draeger
 Annexin VI Participates in the Formation of a Reversible,
 Membrane-Cytoskeleton Complex in Smooth Muscle Cells
The Journal of Biological Chemistry 1999, 274, 49, 35191-35195
- 153.** D.N. Marti, J. Schaller, M. Llinás
 Solution Structure and Dynamics of the Plasminogen Kringle 2-AMCHA
 Complex: 3₁-Helix in Homologous Domains
Biochemistry 1999, 38, 15741-15755

PROF. H. SIEGENTHALER

1233 - 1254

- 154.** D. Alliata, P. Häring, O. Haas, R. Kötz, H. Siegenthaler
"Anion Intercalation into Highly Oriented Pyrolytic Graphite

Studied by Electrochemical Atomic Force Microscopy"
Electrochim. Commun. 1999, 1, 5-9

155. D. Alliata, P. Häring, O. Haas, R. Kötz, H. Siegenthaler
"In Situ Atomic Force Microscopy of Electrochemically Activated Glassy Carbon"
Electrochim. Solid State Lett. 1999, 2, 33-35
156. D. Alliata, R. Kötz, O. Haas, H. Siegenthaler
"In Situ AFM Study of Interlayer Spacing during Anion Intercalation into HOPG in Aqueous Electrolyte"
Langmuir 1999, 15, 8483-8489
157. R. Grunder, P. Gehr, H. Bachofen, S. Schürch, H. Siegenthaler
"Structures of Surfactant Films: A Scanning Force Microscopy Study"
Eur. Resp. J. 1999, 14, 1290-1296

DR. T.R. WARD

1255 - 1283

158. B. Therrien, T. R. Ward
„Synthesis of a Configurationally Stable Three Legged Piano Stool Complex“
Angew. Chem. Int. Ed. 1999, 38, 405-408
159. T. R. Ward
„From Catalyst Design to Molecular Devices:
Theory and Experiments“
Chimia, 1999, 53, 19-28
160. B. Therrien, A. König, T. R. Ward
„Synthesis of a Diastereomerically Pure, Configurationally Stable Three-Legged Piano-Stool Complexes“
Organometallics, 1999, 18, 1565-1568
161. T. R. Ward, A. Lutz, S. L Parel, J. Ensling, P. Gütlich,
P. Buglyó, C. Orvig
„An Iron-Based Molecular Redox Switch as a Model for Iron Release from Enterobactin via the Salicylate Binding Mode“
Inorg. Chem, 1999, 38, 5007-5017

- 162.** H.B. Bürgi, M. Förtsch
Dynamic processes and disorder in crystal structures as seen
by temperature-dependent diffraction experiments
Journal of Molecular Structure, 1999 Vol. 485-486, 457-463
- 163.** H.B. Bürgi, S.C. Capelli
Dynamic processes and disorder in materials as seen by
temperature-dependent diffraction experiments
In: Implications of Molecular and Materials Structure
for New Technologies
J.A.K. Howard et al. (eds.), 1999, 45-58,
Kluwer Academic Publishers, The Netherlands
- 164.** Th. Armbruster
Si, Al ordering in the double-ring silicate armenite, $\text{BaCa}_2\text{Al}_6\text{Si}_9\text{O}_{30}\cdot 2\text{H}_2\text{O}$:
A single-crystal X-ray and ^{29}Si MAS NMR study
American Mineralogist 1999, 84, 92-101
- 165.** T. Wüst, J. Stoltz, Th. Armbruster
Partially dealuminated heulandite produced by acidic REECl_3 solution:
A chemical and single-crystal X-ray study
American Mineralogist 1999, 84, 1126-1134
- 166.** P. Berlepsch, R. Miletich, Th. Armbruster
The crystal structures of synthetic KSb_5S_8 and $(\text{Tl}_{0.598}, \text{K}_{0.402})\text{Sb}_5\text{S}_8$
and their relation to parapierrotite (TiSb_5S_8)
Z. Kristallogr. 1999, 214, 57-63
- 167.** Ch.A. Geiger, Th. Armbruster
The crystal structure of a garnet solid solution $(\text{Ca}_{0.9}\text{Mg}_{0.1})_3\text{Al}_2[\text{SiO}_4]_3$
at 295 K and 100 K: Local site behavior - dynamic and static disorder
Z. Kristallogr. 1999, 214, 211-215
- 168.** T. Wüst, Th. Armbruster
Na- and K-exchange experiments on laumontite
N. Jb. Miner. Mh. 1999, 1, 27-34
- 169.** T. Arlt, Th. Armbruster
Single-crystal X-ray structure refinement of cornwallite,
 $\text{Cu}_5(\text{AsO}_4)_2(\text{OH})_4$: A comparison with its polymorph
cornubite and the PO_4 -analogue pseudomalachite
N. Jb. Miner. Mh. 1999, 10, 468-480
- 170.** P. Berlepsch, Th. Armbruster, J. Brugger, E.Y. Bykova, P.M. Kartashov
The crystal structure of vergasovaite $\text{Cu}_3\text{O}[(\text{Mo}, \text{S})\text{O}_4\text{SO}_4]$,
and its relation to synthetic $\text{Cu}_3\text{O}[\text{MoO}_4]_2$
Eur. J. Mineral. 1999, 11, 101-110
- 171.** Th. Armbruster, R. Basler, P. Mikhail, J. Hulliger
Defect-Structure of Ytterbium(III) Doped Na_2SO_4 Phase I
Journal of Solid State Chemistry 1999, 145, 309-316

- 172.** S. Merlino, E. Bonaccorsi, Th. Armbruster
Tobermorites: Their real structure and order-disorder (OD) character
Amer. Miner. 1999, 84, 1613-1621
- 173.** G.A. Lager, Q. Xie, F.K. Ross, G.R. Rossman, Th. Armbruster,
F.J. Rotella, A.J. Schultz
Hydrogen-atom positions in $P4/nnc$ Vesuvianite
The Canadian Mineralogist 1999, 37, 763-768