

# ARBEITSGRUPPEN DEPARTEMENT FÜR CHEMIE UND BIOCHEMIE

Ordner 1

## PROF. U. BAUMANN

1. Bieniossek C, Niederhauser B, Baumann UM: **The crystal structure of apo-FtsH reveals domain movements necessary for substrate unfolding and translocation.** *Proceedings of the National Academy of Sciences of the United States of America* 2009, **106**(51):21579-21584.
2. Drogemuller C, Becker D, Brunner A, Haase B, Kircher P, Seeliger F, Fehr M, Baumann U, Lindblad-Toh K, Leeb T: **A Missense Mutation in the SERPINH1 Gene in Dachshunds with Osteogenesis Imperfecta.** *Plos Genetics* 2009, **5**(7).
3. Oberholzer AE, Bumann M, Hege T, Russo S, Baumann U: **Metzincin's canonical methionine is responsible for the structural integrity of the zinc-binding site.** *Biological Chemistry* 2009, **390**(9):875-881.
4. Oberholzer AE, Schneider P, Siebold C, Baumann U, Erni B: **Crystal Structure of Enzyme I of the Phosphoenolpyruvate Sugar Phosphotransferase System in the Dephosphorylated State.** *Journal of Biological Chemistry* 2009, **284**(48):33169-33176.
5. Tan KM, Clancy S, Borovilos M, Zhou M, Horer S, Moy S, Volkart LL, Sassoon J, Baumann U, Joachimiak A: **The Mannitol Operon Repressor MtlR Belongs to a New Class of Transcription Regulators in Bacteria.** *Journal of Biological Chemistry* 2009, **284**(52):36670-36679.

## PROF. P. BIGLER

6. P. Bigler, R. Brenneisen  
*J. Pharm. Biomed. Anal.*, 49, 1060-1064 (2009)  
Improved Impurity Fingerprinting of Heparin by High Resolution <sup>1</sup>H NMR
7. A. Alder, P. Bigler D. Werck-Reichhart, S. Al-Babili  
*FEBS J.*, 276, 5416-5431 (2009)  
In vitro characterization of Synechocystis CYP120A1 revealed the first nonanimal retinoic acid hydroxylase
8. **Buchbeiträge (Artikel in Sammelbänden)**  
The Virtopsy Approach: 3D Optical and Radiological Scanning and Reconstruction in Forensic Medicine  
Herausgeber: Michael J. Thali, Richard Dirnhofer, Peter Vock  
2009 Taylor and Francis Group  
E. Scheurer, P. Bigler, M. Ith, C. Boesch, Kapitel B2.4.3, 93-114

9. **Tagungsbeiträge**

*mit peer-review*

Mattia Marzorati, Martina Vermathen and Peter Bigler  
NMR Studies on the Physical Chemistry of Porphyrinic Photosensitizers and their Membrane Interactions.

Poster : Fall Meeting of the Swiss Chemical Society, Lausanne, Sept. 4<sup>th</sup>, 2009  
*CHIMIA* 2009, 63 (7-8), (P 90).

*ohne peer-review*

Marzorati M, Vermathen P

High Resolution Magic Angle Spinning (HR-MAS) for NMR Spectroscopic Investigations of Semi-solid Liquid-like Materials.

oral contribution: 21.10.2009

"Grundlagen und aktuelle Entwicklungen in der Magnetresonanz"

Seminar der Abteilung für Magnetresonanz-Spektroskopie und Methodik, Departement Klinische Forschung, Universität Bern.

Martina Vermathen, Mattia Marzorati, Peter Bigler

Application of NMR for investigating Porphyrinic Photosensitizers.

oral contribution: 18<sup>th</sup> Swiss NMR Symposium: Geneva, Sept. 9<sup>th</sup>, 2009

## DR. P. BROEKMANN

10. Q. Huang, B.C. Maker-O'Neal, J.J. Kelly, P. Broekmann, A. Wirth, M. Martin, M. Hahn, A. Wagner, D. Mayer  
"Suppressor Effects during Copper Superfilling of Sub-100 nm Lines"  
*Electrochem. Solid-State Lett.* 12 (2009) D27.
11. D.-T. Pham, H. Keller, S. Breuer, S. Huemann, N.T.N Hai, C. Zoerlein, K. Wandelt and P. Broekmann  
"Anion/Cation layers at Electrified Interfaces: A Comprehensive STM, XRD, and XPS Case Study"  
*Chimia* 63 (3) (2009) 115-121. (Not peer reviewed)
12. M. Saracino, P. Broekmann, K. Gentz, M. Becker, H. Keller, F. Janetzko, Th. Bredow, K. Wandelt and H. Dosch  
"Surface relaxation phenomena at electrified interfaces: revealing adsorbate, potential and solvent effects by combined x-ray diffraction, STM and DFT studies"  
*Phys. Rev. B* 79 (11) (2009) 115448(1-11).
13. C. Schlaup, D. Friebel, P. Broekmann, K. Wandelt  
"Surface confined electrochemical compound formation: Incipient sulfidation of Au(111)"  
*Physics and Engineering of New Materials* 127 (2009) 113-122.
14. N.T.M. Hai, S. Furukawa, T. Vosch, S. DeFeyter, P. Broekmann, and K. Wandelt  
"Electrochemical reactions at a porphyrin-copper interface"  
*Phys. Chem. Chem. Phys.* 11 (2009) 5422-5430.

15. **Tagungsbeiträge**

Chemiedozententagung der GDCh, Göttingen, Deutschland 10/03/2009

„Copper/Electrolyte Interfaces under Reactive Conditions“ (talk)

*ECOSS-26-Conference (European Conference on Surface Science), Parma, Italy, 30/08/09 – 04/09/09*

“Additive/Copper and Additive/Additive Interactions at Electrified Interfaces under Reactive Conditions” (*Invited talk*)

16. **Herausgeberschriften**

TOPICS IN CURRENT CHEMISTRY (Eds. P. Broekmann, K.-H Dötz, C.A. Schalley)

“Templates in Chemistry III“

**PROF. G. CALZAFERRI**

17. Energy transfer in Nanochannels  
Gion Calzaferri  
Il Nuovo Cimento, Vol. 123 B, 2008, 1337 – 1367; published: April 2009
18. Energy Transfer in Fluorescent Nanofibers Embedding Dye-Loaded Zeolites L Crystals  
Varun Vohra, André Devaux, Le-Quyen Dieu, Guido Scavia, Marinella Catellani, Gion Calzaferri, Chiara Botta  
Adv. Mater. 21, 2009, 1146 – 1150.
19. Two-Step Energy Transfer: Energy Transfer in Fluorescent Nanofibers Embedding Dye-Loaded Zeolite L Crystals  
Varun Vohra, André Devaux, Le-Quyen Dieu, Guido Scavia, Marinella Catellani, Gion Calzaferri, Chiara Botta  
Adv. Mater. 21, 2009, Inside Front Cover March Nos. 10-11.
20. Thermally stable luminescent lanthanide complexes in zeolite L  
Yige Wang, Huanrong Li, Lijian Gu, Quanying Gan, Yanni Li, Gion Calzaferri  
Microporous Mesoporous Materials, 121, 2009, 1 - 6.
21. Nanochannels for supramolecular organization of luminescent guests  
Dominik Brühwiler, Gion Calzaferri, Tomas Torres, Jan Hinrich Ramm, Nando Gartmann, Le-Quyen Dieu, Ismael López-Duarte, M. Victoria Martínez-Díaz  
J. Mater. Chem. 19, 2009, 8040 - 8067.
22. Multilevel Organization in Hybrid Thin Films for Optoelectronic Applications  
Varun Vohra, Alberto Bolognesi, Gion Calzaferri, Chiara Botta  
Langmuir, 25, 2009, 12019 – 12023.
23. Manipulation of energy transfer processes in nanochannels  
André Devaux, Gion Calzaferri  
International Journal of Photoenergy, Volume 2009, Article ID 741834, 9 pages  
doi:10.1155/2009/741834
24. **Patente**
- Transparent zeolite-polymer hybrid material with tunable properties  
H.J. Metz, G. Calzaferri, S. Suarez, A. Devaux, A. Kunzmann,  
EP 18732002B, granted 11.02.2009.

Lumineszenzkonzentratoren und Lumineszenzdispergatoren auf der Basis orientierter Farbstoff-Zeolith Antennen  
Gion Calzaferri, Andreas Kunzmann, Dominik Brühwiler, Christophe Bauer  
CH-698333B, granted 15.07.2009.

Method for the preparation of Micro-Porous Crystals and Conjugates thereof  
Z. Popović, M. Tsotsalas, M. Busby, L. De Cola, G. Calzaferri, H. P. Josel  
China1128455A, published 07.09.2009.

## PROF. M. CASCELLA

25. **M. Cascella**, I-C. Lin, I. Tavernelli and U. Rothlisberger  
*Dispersion Corrected Atom-Centered Potentials for Phosphorus*  
J. Chem. Theory Comput. 5: 2030-2034 (2009)
26. **M. Cascella** and M. Dal Peraro  
*Challenges and Perspectives in Biomolecular Simulations: From the Atomistic Picture to Multiscale Modeling*  
CHIMIA 63: 14-18 (2009)
27. V. Garbuio, **M. Cascella** and O. Pulci  
*Excited State Properties of Liquid Water*  
J. Phys.-Condens. Matter 21: 033101 (2009)
28. **F. Simona**, A. Magistrato, M. Dal Peraro, A. Cavalli, A.J. Vila and P. Carloni  
*Common Mechanistic Features among Metallo-beta-lactamases: a Computational Study of Aeromonas Hydrophila CphA Enzyme*  
J. Biol. Chem. 284: 28164-28171 (2009)

### 29. Tagungsbeiträge

#### Invited talks:

M. Cascella:

WORKSHOP "From structure to function: influx and efflux systems" – Location: Cagliari, Italy, May 2009.

*New protocols for multiscale representations of proteins*

ESF COST-action BM0701 Meeting "ATENS: Antibiotic Transport and Efflux: New strategies to combat bacterial resistances" – Location: Krakow, Poland, May 2009.

*New protocols for multiscale representations of proteins*

SUMMER SCHOOL on "Simulation approaches to problems in molecular and cellular biology" – Location: San Sebastian, Spain, August 2009.

Two seminars:

1 – *New methods in multiscale simulations of biological polymers*

2 – *Electronic structure-function relationship in copper bound proteins*

Francesca Collu:

University of Cagliari, Dept. of Physics - Location: Cagliari, September 2009

*A nonradial coarse grained potential for proteins produces stable secondary structure elements*

#### Contributed talks (M. Cascella):

Chemiedozententagung 2009 – Location: Göttingen, Germany, March 2009.

*New methods in multiscale simulations of biological polymers*

Posters (F. Collu):

SUMMER SCHOOL on "Simulation approaches to problems in molecular and cellular biology" – Location: San Sebastian, Spain, August 2009.

*"A nonradial coarse grained potential for proteins produces stable secondary structure elements"*

CECAM Workshop "Linking Systems Biology and Biomolecular Simulations" – Location, Lausanne, November 2009

*"A nonradial coarse grained potential for proteins produces stable secondary structure elements"*

## PROF. S. DECURTINS

30. X. Guégano, A. L. Kanibolotsky, C. Blum, S. F. L. Mertens, S.-X. Liu, A. Neels, H. Hagemann, P. J. Skabara, S. Leutwyler, T. Wandlowski, A. Hauser, S. Decurtins, *Chem. Eur. J.*, **2009**, *15*, 63-66.  
Pronounced Electrochemical Amphotericity of a Fused Donor-Acceptor Compound: A Planar Merge of TTF with a TCNQ-Type Bithienoquinoline.
31. T. D. Keene, Y.-H. Deng, F.-G. Li, Y.-F. Ding, B. Wu, S.-X. Liu, C. Ambrus, O. Waldmann, S. Decurtins, X.-J. Yang, *Inorg. Chim. Acta*, **2009**, *362*, 2265-2269.  
Magnetostructural investigations into an  $S = 1/2$  sheet and a tetranuclear cluster.
32. J. Wu, N. Dupont, S.-X. Liu, A. Neels, A. Hauser, S. Decurtins, *Chem. Asian J.*, **2009**, *4*, 392-399.  
Imidazole-Annulated Tetrathiafulvalenes Exhibiting pH-Tuneable Intramolecular Charge Transfer and Redox Properties.
33. J.-T. Li, T. D. Keene, D.-K. Cao, S. Decurtins, L.-M. Zheng, *Cryst. Eng. Comm.*, **2009**, *11*, 1255-1260.  
[M(OOCC<sub>6</sub>H<sub>4</sub>PO<sub>3</sub>H)(H<sub>2</sub>O)] (M(II) = Mn, Co, Ni): Layered Metal Phosphonates Showing Variable Magnetic Behavior.
34. C. Yi, C. Blum, S.-X. Liu, T. D. Keene, G. Frei, A. Neels, S. Decurtins, *Org. Lett.*, **2009**, *11*, 2261-2264.  
Isolable Zwitterionic Pyridinio-semiquinone  $\pi$ -Radicals. Mild and Efficient Single-Step Access to Stable Radicals.
35. H.-P. Jia, S.-X. Liu, L. Sanguinet, E. Levillain, S. Decurtins, *J. Org. Chem.*, **2009**, *74*, 5727-5729.  
Star-Shaped Tetrathiafulvalene-Fused Coronene with Large  $\pi$ -Extended Conjugation.
36. M. Jaggi, C. Blum, N. Dupont, J. Grilj, S.-X. Liu, J. Hauser, A. Hauser, S. Decurtins, *Org. Lett.*, **2009**, *11*, 3096-3099.  
A Compactly Fused  $\pi$ -Conjugated Tetrathiafulvalene-Perylenediimide Donor-Acceptor Dyad.
37. M. Schnippering, A. Zahn, S.-X. Liu, C. Leumann, S. Decurtins, D. Fermin, *Chem. Commun.*, **2009**, 5552-5554.  
Synthesis and Electrochemical Properties of TTF Modified Oligodeoxynucleotides.
38. J. E. Beves, E. C. Constable, S. Decurtins, E. L. Dunphy, C. E. Housecroft, T. D. Keene, M. Neuburger, S. Schaffner, J. Zampese, *Cryst. Eng. Comm.*, **2009**, *11*, 2406-2416.  
Structural diversity in the reaction of 4'-(pyridyl)-2,2':6',2''-terpyridine ligands and bis {4'-(4-pyridyl)-2,2':6',2''-terpyridine}iron(II) with copper(II) salts.

39. C. Yi, S.-X. Liu, A. Neels, P. Renaud, S. Decurtins, *Org. Lett.*, **2009**, *11*, 5530-5533.  
Preparation of Zwitterionic Hydroquinone-Fused [1,4]-Oxazinium Derivatives via a Photoinduced Intramolecular Dehydrogenative-Coupling Reaction.
40. T. Samuely, S.-X. Liu, M. Haas, S. Decurtins, T. A. Jung, M. Stöhr, *J. Phys. Chem. C*, **2009**, *113*, 19373-19375.  
Self-Assembly of Individually Addressable Complexes of C<sub>60</sub> and Phthalocyanines on a Metal Surface: Structural and Electronic Investigations.
41. F. Dumur, X. Guégano, N. Gautier, S.-X. Liu, A. Neels, S. Decurtins, P. Hudhomme, *Eur. J. Org. Chem.*, **2009**, 6341-6354.  
Approaches to Fused Tetrathiafulvalene/Tetracyanoquinodimethane Systems.

## PROF. B. ERNI

42. Oberholzer AE, Schneider P, Siebold C, Baumann U, Erni B.  
Crystal structure of enzyme I of the phosphoenolpyruvate sugar phosphotransferase system in the dephosphorylated state. *J Biol Chem.* 2009 Nov 27;284(48):33169-76. Epub 2009 Sep 28. PubMed PMID: 19801641; PubMed Central PMCID: PMC2785159.
43. Bizzini A, Entenza JM, Michielin O, Arnold I, Erni B, Moreillon P.  
A single mutation in enzyme I of the sugar phosphotransferase system confers penicillin tolerance to *Streptococcus gordonii*. *Antimicrob Agents Chemother.* 2010 Jan;54(1):259-66. Epub 2009 Oct 26. PubMed PMID: 19858257; PubMed Central PMCID: PMC2798540.

## PROF. R. FASEL

44. M. Bieri, M. Treier, J. Cai, K. Ait-Mansour, P. Ruffieux, O. Gröning, P. Gröning, M. Kastler, R. Rieger, X. Feng, K. Müllen, and R. Fasel, *Porous graphenes: Two-dimensional polymer synthesis with atomic precision*, *Chem. Commun.* **45**, 6919-6921 (2009).
45. M. Treier and R. Fasel, *Surface Science Approaches to Molecular Nanostructures*, *Chimia* **63** 122–127 (2009).

## PROF. H. GÄGGELER / PROF. A. TÜRLER

### HEAVY ELEMENTS

46. R. C. Barber, H. W. Gäggeler, P. J. Karol, H. Nakahara, E. Vardaci, E. Vogt  
*Discovery of the element with atomic number 112*  
*Pure Appl. Chem.*, **81** (7) 1331 (2009).
47. L. Canella, P. Kudejova, R. Schulze, A. Türler, J. Jolie  
*PGAA, PGAI and NT with cold neutrons: Test measurement on a meteorite sample*  
*Appl. Rad. Isotopes* **67** (12): 2070-2074 (2009).
48. R. Dressler, R. Eichler, D. Schumann, S. Shishkin  
*Long-term alpha - and spontaneous fission measurement of a Rf/Db sample chemically prepared in a Ca-48 on Am-243 experiment*  
*Phys. Rev. C* **79**(5), 054605 (2009).

49. J. Dvorak, W. Brüche, C. E. Düllmann, Z. Dvorakova, K. Eberhardt, R. Eichler, E. Jäger, Y. Nagame, Z. Qin, M. Schädel, B. Schausten, E. Schimpf, R. Schuber, A. Semchenkov, P. Thörle, A. Türler, M. Wegrzecki, A. Yakushev  
*Cross section limits for the Cm-248(Mg-25,4n-5n) Hs-(268,269) reactions*  
Phys. Rev. C 79(3), 037602 (2009).
50. C. M. Folden Iii, I. Dragojević, C. E. Düllmann, R. Eichler, M. A. Garcia, J. M. Gates, S. L. Nelson, R. Sudowe, K. E. Gregorich, D. C. Hoffman, H. Nitsche  
*Measurement of the Pb-208 (Cr-52,n) Sg-259 excitation function*  
Phys. Rev. C 79(2), 027602 (2009).
51. X. Lin, H. Gerstenberg, Ch. Lierse von Gostomski, R. Henkelmann, A. Türler, M. Rossbach  
*Determination of k0-values for the reactions 94Zr (n,  $\gamma$ ) 95Zr and 96Zr (n,  $\gamma$ ) 97Zr -97mNb by irradiation in highly thermalized neutron flux*  
Appl. Rad. Isotopes 67 (12): 2092-2096 (2009).

#### SURFACE CHEMISTRY

52. B. D'Anna, A. Jammoul, C. George, K. Stemmler, S. Fahrni, M. Ammann, A. Wisthaler  
*Light-induced ozone depletion by humic acid films and submicron aerosol particles*  
J. Geophys. Res. 114 (2009).
53. A. Rouviere, P. F. DeCarlo, A. Schlierf, O. Favez, B. D'Anna, C. George, A. Prevot, M. Ammann  
*Photosensitized aging of succinic acid aerosol*  
Geochim. Cosmochim. Acta 73(13), A1125 (2009).
54. Y. Sosedova, A. Rouvière, H.W. Gäggeler, M. Ammann  
*Uptake of NO<sub>2</sub> to deliquesced dihydroxybenzoate aerosol particles*  
J. Phys. Chem. A 113(41), 10979-10987 (2009).
55. M.G.C. Vernooij, M. Mohr, G. Tzvetkov, V. Zelenay, T. Huthwelker, R. Kaegi, R. Gehrig, B. Grobety  
*On source identification and alteration of single diesel and wood smoke soot particles in the atmosphere; an X-Ray microspectroscopy study*  
Environ. Sci. Technol. 43(14), 5339-5344 (2009).
56. O. Vesna, M. Sax, M. Kalberer, A. Gaschen, M. Ammann  
*Product study of oleic acid ozonolysis as function of humidity*  
Atmos. Environ. 43(24), 3662-3669 (2009).
57. A. Vlasenko, T. Huthwelker, H. W. Gäggeler, M. Ammann  
*Kinetics of the heterogeneous reaction of nitric acid with mineral dust particles: An aerosol flowtube study*  
Phys. Chem. Chem. Phys. 11(36), 7921-7930 (2009).

#### ANALYTICAL CHEMISTRY

58. A. Eichler, S. Brütsch, S. Olivier, T. Papina, M. Schwikowski  
*A 750 year ice core record of past biogenic emissions from Siberian boreal forests*  
Geophys. Res. Lett. 36 (2009).
59. A. Eichler, S. Olivier, K. Henderson, A. Laube, J. Beer, T. Papina, H. W. Gäggeler, M. Schwikowski  
*Temperature response in the Altai region lags solar forcing*  
Geophys. Res. Lett. 36 (2009).
60. A. Eichler, S. Olivier, K. Hendersen, A. Laube, J. Beer, T. Papina, H.W. Gäggeler, M. Schwikowski  
*Temperature changes in the Altai are driven by solar and anthropogenic forcing*  
Chimia 63, 1 (2009).

61. U. Heikkilä, J. Beer, J. Feichter, V. Alfimov, H. A. Synal, U. Schotterer, A. Eichler, M. Schwikowski, L. Thompson  
*Cl-36 bomb peak: Comparison of modeled and measured data*  
Atmos. Chem. Phys. **9**(12), 4145-4156 (2009).
62. T. M. Jenk, S. Szidat, D. Boliuss, M. Sigl, H. W. Gäggeler, L. Wacker, M. Ruff, C. Barbante, C. F. Boutron, M. Schwikowski  
*A novel radiocarbon dating technique applied to an ice core from the Alps indicating late Pleistocene ages*  
J. Geophys. Res. **114** (2009).
63. S. Panebianco, K. Berg, J.C. David, M. Eid, U. Filges, F. Gröschel, A. Guertin, A.Y. Konobeyev, C. Latge, S. Lemaire, S. Leray, A. Letourneau, M. Luthy, F. Michel-Sendis, S. Scazzi, G. Stankunas, N. Thiolliere, L. Tobler, L. Zanini  
*Neutronic characterization of the MEGAPIE target*  
Ann. Nucl. Energy **36**, 350 (2009).
64. M. Schwikowski, A. Eichler, I. Kalugin, D. Ovtchinnikov, T. Papina  
*Past climate variability in the Altai*  
PAGES News Vol. **17** N°1, 44-45 (2009).
65. M. Sigl, T. M. Jenk, T. Kellerhals, S. Szidat, H. W. Gäggeler, L. Wacker, H.-A. Synal, C. Boutron, C. Barbante, J. Gabrieli, M. Schwikowski  
*Towards radiocarbon dating of ice cores*  
J. Glaciol. **55** (194), 986-996 (2009).
66. F. Thevenon, F. S. Anselmetti, S. M. Bernasconi, M. Schwikowski  
*Mineral dust and elemental black carbon records from an alpine ice core (Colle Gnifetti glacier) over the last millennium*  
J. Geophys. Res. **114** (2009).
67. F. Vimeux, P. Ginot, M. Schwikowski, M. Vuille, G. Hoffmann, L. G. Thompson, U. Schotterer  
*Climate variability during the last 1000 years inferred from Andean ice cores: A review of methodology and recent results*  
Palaeogeogr., Palaeoclim., Palaeoeco. **281**(3-4), 229-241 (2009).
- RADWASTE ANALYTICS
68. M. Ayranov, U. Krähenbühl, S. Röllin, M. Burger  
*Sensitivity of DF-ICP-MS, PERALS and alpha spectrometry for the determination of actinides: A comparison*  
J. Radioanal. Nucl. Chem. **279**(2), 475 - 480 (2009).
69. M. Ayranov, J. Cobos, K. Popa, V.V. Rondinella  
*Determination of REE, U, Th, Ba, and Zr in simulated hydrogeological leachates by ICP-AES after matrix solvent extraction*  
Journal of Rare Earths **27**(1), 123 (2009).
70. C. Domingo-Pardo, I. Dillmann, T. Faestermann, U. Giesen, J. Gorres, M. Heil, S. Horn, F. Kappeler, S. Köchli, G. Korschinek, J. Lachner, M. Maiti, J. Marganec, J. Neuhausen, R. Nolte, M. Poutivtsev, R. Reifarh, R. Rugel, D. Schumann, E. Uberseder, F. Voss, S. Walter, M. Wiescher  
*S-process nucleosynthesis in massive stars: New results on Fe-60, Ni-62 and Ni-64*  
Capture Gama-Ray Spectroscopy and Related Topics **1090** 230-237 (2009).
71. G. Rugel, T. Faestermann, K. Knie, G. Korschinek, M. Poutivtsev, D. Schumann, N. Kivel, I. Günther-Leopold, R. Weinreich, M. Wohlmuther  
*New measurement of the Fe-60 half-life*  
Phys. Rev. Lett. **103**(7), 072502-4 (2009).
72. D. Schumann, J. Neuhausen, J. Eikenberg, M. Rüthi, M. Wohlmuther, P. W. Kubik, H.-A. Synal, V. Alfimov, G. Korschinek, G. Rugel, T. Faestermann  
*Radiochemical analysis of a copper beam dump irradiated with high-energetic protons*  
Radiochim. Acta **97**(3), 123-131 (2009).



73. E. Uberseder, R. Reifarth, D. Schumann, I. Dillmann, C. D. Pardo, J. Gorres, M. Heil, F. Kappeler, J. Marganec, J. Neuhausen, M. Pignatari, F. Voss, S. Walter, M. Wiescher  
*Measurement of the Fe-60( $n,\gamma$ )Fe-61 cross section at stellar temperatures*  
Phys. Rev. Lett. **102**(15), (2009).

#### ENVIRONMENTAL RADIONUCLIDES UNIVERSITÄT BERN

74. R. Fisseha, M. Saurer, M. Jaggi, R.T.W. Siegwolf, J. Dommen, S. Szidat, V. Samburova, U. Baltensperger  
*Determination of primary and secondary sources of organic acids and carbonaceous aerosols using stable carbon isotopes*  
Atmos. Environ. **43**(2), 431-437 (2009).
75. K. Hippe, F. Kober, H. Baur, M. Ruff, L. Wacker, R. Wieler  
*The current performance of the in situ  $^{14}\text{C}$  extraction line at ETH*  
Quaternary Geochronology **4**, 493-500, doi:10.1016/j.quageo.2009.06.001 (2009).
76. K. Li, E. Vogel, U. Krähenbühl  
*Measurement of I-129 in environmental samples by ICP-CRI-QMS: possibilities and limitations*  
Radiochim. Acta **97**, 453-458, doi:10.1524/ract.2009.1639 (2009).
77. S. Szidat  
*Atmosphere sources of Asian haze*  
Science **323**(5913), 470-471 (2009).
78. S. Szidat, M. Ruff, N. Perron, L. Wacker, H.A. Synal, M. Hallquist, A.S. Shannigrahi, K.E. Yttri, C. Dye, D. Simpson  
*Fossil and non-fossil sources of organic carbon (OC) and elemental carbon (EC) in Goteborg, Sweden*  
Atmos. Chem. Phys. **9**(5), 1521-1535 (2009).
79. S. Szidat  
*Radiocarbon analysis of carbonaceous aerosols: Recent developments*  
Chimia **63**(3), 157-161 (2009).
80. **Technical report**  
J. Neuhausen, D. Schumann, Ch. Zumbach, M. Dubs  
*Arbeitsschritte zur Zerlegung der Megapie-Schnitte H07, H08 und H09 (Expansionstank) und zur Probennahme für radiochemische Untersuchungen*  
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