

LIST of PUBLICATIONS

Prof. Dr. Bernhard Kräutler

<https://www.uibk.ac.at/organic/kraeutler/>

2025

327. Clemens Vergeiner and Bernhard Kräutler
Blue Fluorescent Chlorophyll Catabolites from Banana Leaves Hypermodified with Terpenoidic Groups Related to Absciscic Acid
Helvetica Chimica Acta **2025**, e202500042 <https://doi.org/10.1002/hlca.202500042>
Dedicated to Professor Peter Chen on the occasion of his 65th birthday
326. Florian J. Widner, Christoph Kieninger and Bernhard Kräutler
Adenosylrhodibinamide and methylrhodibinamide – organometallic rhodium analogues of the natural cobinamides
J. Porphyrins & Phthalocyanines **29**, 408-417 (2025)
<https://doi.org/10.1142/S1088424625500348>
Dedicated to Prof. Karl Kadish on the occasion of his 80th birthday
325. Steffen Jockusch and Bernhard Kräutler
H/D-Isotope sensitive dual fluorescence of the corrin-ligand of vitamin B₁₂
Chemical Communications **61**, 3904-3907 (2025)
<https://doi.org/10.1039/d4cc06373b>

2024

324. Theresia Erhart; Christian Nadegger; Stefan Vergeiner; Christoph Kreutz; Thomas Müller; Bernhard Kräutler
Novel Types of Phyllobilins in a Fern - Molecular Reporters of the Evolution of Chlorophyll Breakdown in the Paleozoic Era
Chem. Eur. J. **30**, e202401288 (2024)
<https://doi.org/10.1002/chem.202401288>
Dedicated to Helmut Schwarz

323. Ricardo Pérez-Castaño, Juan Aranda, Florian J. Widner, Christoph Kieninger, Evelyne Deery, Martin J. Warren, Modesto Orozco, Montserrat Elías-Arnanz, S. Padmanabhan, and Bernhard Kräutler
The Rhodium Analogue of Coenzyme B₁₂ as an Anti-Photoregulatory Ligand Inhibiting Bacterial CarH Photoreceptors
Angew. Chem. Int. Ed. **63**, e202401626 (2024)
<https://doi.org/10.1002/anie.202401626>
Dedicated to the memory of Albert Eschenmoser

2023

322. Alexandra Tsybizova, Lukas Fritsche, Larisa Miloglyadova, Bernhard Kräutler and Peter Chen
Cryogenic Ion Vibrational Predissociation (CIVP) Spectroscopy of Aryl Cobinamides in the Gas Phase: How Good Are the Calculations for Vitamin B₁₂ Derivatives?
J. Am. Chem. Soc. **145**, 19561-19570 (2023)
<https://doi.org/10.1021/jacs.3c03001>
321. Christoph Kieninger, Evelyne Deery, Andrew D. Lawrence, Martin J. Warren and Bernhard Kräutler
Hydrogenobinamide and Nibinamide - Metal-Free Ligand and Ni(II)-Analogue of the Vitamin B₁₂ Precursor Cobinamide
J. Porphyrins & Phthalocyanines **27**, 627-633 (2023)
<https://doi.org/10.1142/S1088424623500463>
Dedicated to Prof. Tomás Torres on the occasion of his 70th birthday
320. Markus Wiedemair, Christoph Kieninger, Klaus Wurst, Maren Podewitz, Evelyne Deery, Martin J. Warren & Bernhard Kräutler
Solution, Crystal and in-Silico Structures of the Organometallic Vitamin B₁₂-Derivative Acetylcobalamin and of its Novel Rhodium-Analogue Acetyl rhodibalamin
Helv. Chim. Acta **106**, e202200158 (2023) <http://dx.doi.org/10.1002/hlca.202200158>
Dedicated to the memory of Professor Jack D. Dunitz
314. Chengjie Li, Bernhard Kräutler
Facile Retro-Dieckmann Cleavage of a Pink Phyllobilin – New Type of Potential Chemical Downstream Steps of Natural Chlorophyll Breakdown
Chemical Monthly (Monatshefte der Chemie) **154**, 1359-1368 (2023)
<https://doi.org/10.1007/s00706-022-02894-z>
Dedicated to the memory of Professor Fritz Sauter
312. Bernhard Kräutler
Cobalt Enzymes
in *Bioinorganic Chemistry and Homogeneous Biomimetic Inorganic Catalysis*
Comprehensive Inorganic Chemistry III, Vol. 2, pp 268-301 (2023), Elsevier, Oxford
<https://doi.org/10.1016/B978-0-12-823144-9.00146-1>

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319. Naoki Shibata, Yoshiki Higuchi, Bernhard Kräutler, and Tetsuo Toraya
Structural Insights into the Very Low Activity of the Homocoenzyme B₁₂
Adenosylmethylcobalamin in Coenzyme B₁₂-Dependent Diol Dehydratase and
Ethanamine Ammonia-Lyase
Chemistry - Europ J. **28**, e202202196 (2022) <https://doi.org/10.1002/chem.202202196>
318. Cornelia A. Karg, Lucia Parrakova, Dietmar Fuchs, Harald Schennach, Bernhard
Kräutler, Simone Moser and Johanna M. Gostner
A Chlorophyll-Derived Phylloxanthobilin is a Potent Antioxidant that Modulates
Immunometabolism in Human PBMC
Antioxidants, **11**, 2056 (2022) <https://doi.org/10.3390/antiox11102056>
317. Rokas Juodeikis, Emily Jones, Evelyne Deery, David M. Beal, Régis Stentz, Bernhard
Kräutler, Simon R. Carding and Martin J. Warren
Nutrient smuggling: Commensal gut bacteria-derived extracellular vesicles scavenge
vitamin B₁₂ and related cobamides for microbe and host acquisition
J of Extracellular Bio. **1**:e61 (2022) <https://doi.org/10.1002/jex2.61>
316. Karl Gruber, Vanessa Csitkovits, Andrzej Łyskowski, Christoph Kratky and Bernhard
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Structure-Based Demystification of Radical Catalysis by a Coenzyme B₁₂-dependent
Enzyme – Crystallographic Study of Glutamate Mutase with Cofactor Homologues
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<https://doi.org/10.1002/anie.202208295>
Dedicated to Professor Albert Eschenmoser on the occasion of his 97th birthday
315. Markus Ruetz, Markos Koutmos and Bernhard Kräutler
Antivitamins B₁₂ – Synthesis and Application as Inhibitory Ligand of the B₁₂-
Tailoring Enzyme CblC
Coenzyme B₁₂ Enzymes, N.E. Marsh (ed.), Methods in Enzymology, vol. 668, pp. 157-
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<https://www.sciencedirect.com/science/article/pii/S007668792100522X>
314. Chengjie Li, Bernhard Kräutler
Facile Retro-Dieckmann Cleavage of a Pink Phyllobilin – New Type of Potential
Chemical Downstream Steps of Natural Chlorophyll Breakdown
Chemical Monthly (Monatshefte der Chemie) **154**, 1359-1368 (2023)
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Dedicated to the memory of Professor Fritz Sauter

313. Bernhard Kräutler
Antivitamins B₁₂
Vitamins & Hormones, vol. 119, G. Litwack (Ed.), p.221-240 (2022) Academic Press,
<https://doi.org/10.1016/bs.vh.2022.01.003>
280. Bernhard Kräutler and Bernhard Jaun
Vitamin B₁₂ and Cofactor F430
in *Porphyrins for the 21st Century* (P.J.Brothers & M.O.Senge, Eds.),
Vol. II, pp 777-814, Wiley & Sons Ltd, Chichester (2022)

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311. Chengjie Li, Maren Podewitz and Bernhard Kräutler
A Blue Zinc-Complex of a Dioxobilin-Type Pink Chlorophyll Catabolite Exhibiting
Bright Chelation-Enhanced Red Fluorescence
Europ. J. Inorg. Chem. **20**, 1904-1912 (2021)
<https://doi.org/10.1002/ejic.202100206>
310. Sylvain Aubry, Bastien Christ, Bernhard Kräutler, Enrico Martinoia, Howard Thomas,
Cyril Zipfel
An ever-green mind and a heart for the colors of fall (Obituary Stefan Hörtensteiner)
J. Exp. Botany, **72**, 4625–4633 (2021) <https://doi.org/10.1093/jxb/erab162>
Dedicated to the memory of Prof. Stefan Hörtensteiner
309. Bernhard Kräutler
Bioorganometallic Chemistry of Vitamin B₁₂-Derivatives
Comprehensive Organometallic Chemistry IV, Vol. 15, pp 73-95 (2022)
Elsevier, <https://doi.org/10.1016/B978-0-12-820206-7.00014-7>
308. Alexandra Tsybizova, Christopher Brenig, Christoph Kieninger, Bernhard Kräutler &
Peter Chen
Surprising Homolytic Gas Phase (Co-C)-Bond Dissociation Energies of
Organometallic Aryl-Cobinamides Reveal Notable Non-Bonded Intramolecular
Interactions
Chem.- Eur. J. **27**, 7252-7264 (2021) <https://doi.org/10.1002/chem.202004589>
Dedicated to the memory of Prof. François Diederich
307. Felix Zelder and Bernhard Kräutler
Vitamin B₁₂ – ein kobalthaltiges molekulares Geschenk aus der Welt der Bakterien
Neujahrsblatt der Naturforschenden Gesellschaft in Zürich, 223. Stück, 2021

304. Florian J. Widner, C. Kieninger, K. Wurst, Evelyne Deery, Andrew D. Lawrence, Martin J. Warren and Bernhard Kräutler
Synthesis, Spectral Characterization and Crystal Structure of Chloro-Rhodibalamine –
A Synthesis Platform for Rhodium Analogues of Vitamin B₁₂ and for Rh-Based
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306. Mohammad Abbadi, Sarah Spurgeon, Martin Warren, Naziyat Khan and Bernhard Kräutler
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Antivitamins B₁₂ – Some Inaugural Milestones
Chem. – Eur. J. **26**, 15438-15445 (2020) <https://doi.org/10.1002/chem.202003788>
Dedicated to the memory of Professor Duilio Arigoni
303. Elvin V. Salerno, Nicholas A. Miller, Arkaprabha Konar, Yan Li, Christoph Kieninger, Bernhard Kräutler and Roseanne J. Sension
Ultrafast Excited State Dynamics and Fluorescence from Vitamin B₁₂ and Organometallic [Co]-C=C-R Cobalamins
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302. Simone Moser, Theresia Erhart and Bernhard Kräutler
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301. Radu A. Talmazan, Klaus. R. Liedl, Bernhard Kräutler and Maren Podewitz
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300. Christoph Kieninger, Klaus Wurst, Maren Podewitz, Maria Stanley, Evelyne Deery, Andrew Lawrence, Klaus R. Liedl, Martin J Warren and Bernhard Kräutler
Replacement of the Cobalt-Center of Vitamin B₁₂ by Nickel - Nibalamin and Nibyrlic Acid Prepared from Metal-Free B₁₂-Ligands Hydrogenobalamin and Hydrogenobyric Acid
Angew.Chem.Int.Ed. **59**, 20129-20136 (2020) *Angew.Chem.* **132**, 20304-20311 (2020)
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Dedicated to Professor Albert Eschenmoser on the occasion of his 95th birthday
299. Steffen Jockusch and Bernhard Kräutler
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295. Christoph Kieninger, Evelyne Deery, Andrew D. Lawrence, Maren Podewitz, Klaus Wurst, Emi Nemoto-Smith, Florian J. Widner, Joseph A. Baker, Steffen Jockusch, Christoph R. Kreutz, Klaus R. Liedl, Karl Gruber, Martin J. Warren & Bernhard Kräutler
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Dedicated to Professor Albert Eschenmoser on the occasion of his 94th birthday
294. Simone Moser and Bernhard Kräutler
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Dedicated to the memory of Professor Mordecai Rubin and Rivka Rubin
293. Stefan Hörtensteiner, Mareike Hauenstein and Bernhard Kräutler
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Dedicated to Professor Heinz Falk on the occasion of his 80th birthday
291. Bernhard Kräutler, Thomas Müller and Steffen Jockusch
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Bernhard Kräutler
Pyro-Phyllobilins – Elusive Chlorophyll Catabolites Lacking a Critical Carboxylate
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276. F. J. Widner, F. Gstrein and Bernhard Kräutler
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