

LIST OF PUBLICATIONS FROM THE PROJECT I-563-N17

B. Christ, A. Egert, I. Süssenbacher, B. Kräutler, D. Bartels, S. Peters, S. Hörtensteiner
Water deficit induces chlorophyll degradation via the „PAO/phyllobilin“ pathway in leaves of
homoio- (*Craterostigma plantagineum*) and poikilochlorophyllous (*Xerophyta viscosa*)
resurrection plants
Plant, Cell & Environment, 37, 2521-2531 (2014), open access
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T. Erhart, C. Mittelberger, C. Vergeiner, G. Scherzer, B. Holzner, P. Robatscher, M.
Oberhuber, B. Kräutler
Chlorophyll Catabolites in Senescent Leaves of the Plum Tree (*Prunus domestica*)
Chem. & Biodiversity, 13, 1441-1453 (2016)

S. Jockusch, N. J. Turro, S. Banala, B. Kräutler
Photochemical Studies of a Fluorescent Chlorophyll Catabolite – Source of Bright Blue
Fluorescence in Plant Tissue and Efficient Sensitizer of Singlet Oxygen
Photochem. Photobiol. Sci., 13, 407-411, (2014), open access
doi: 10.1039/c3pp50392e
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B. Kräutler
Breakdown of Chlorophyll in Higher Plants - Phyllobilins as Abundant, Yet Hardly Visible
Signs of Ripening, Senescence and Cell Death
Angew. Chem. Int. Ed. 55, 4882-4907 (2016), open access
doi: 10.1002/anie.201508928
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sichtbare Zeichen von Reifung, Seneszenz und Zelltod
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B. Kräutler, S. Hörtensteiner
Chlorophyll Breakdown – Chemistry, Biochemistry and Biology
Handbook of Porphyrin Science, (Eds. G. C. Ferreira, K. M. Kadish, K. M. Smith, R.
Guilard), Vol. 28, 117-185, World Scientific Publishing Co. (USA), (2013)
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B. Kräutler, B. Puffer, T. Müller
Was passiert, wenn's bunt wird
Nachrichten aus der Chemie, 60, 1082-1088 (2012)
doi: 10.1002/nadc.201290394
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C. Li, B. Kräutler

Transition Metal Complexes of Phyllobilins – A New Realm of Bioinorganic Chemistry
Dalton Transactions, 44, 10116-10127 (2015), open access
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<http://pubs.rsc.org/en/content/articlepdf/2015/dt/c5dt00474h>

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Zn-complex of a natural yellow chlorophyll catabolite
J. Porph. Phthalocyanines, **20**, 388-396 (2016)

C. Li, M. Ulrich, K. Wurst, T. Müller and B. Kräutler

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(β,β' -sulfoleno)pyrin – Model for Zn-complexes of bilirubin and of phylloxanthobilins
Monatsh. Chem., **147**, 1031-1036 (2016)

C. Li, K. Wurst, S. Jockusch, K. Gruber, M. Podewitz, K. R. Liedl, B. Kräutler

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Photoswitches

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chirale Photoschalter

Angewandte Chemie **128**, 15992-15997 (2016)

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Pyro-Phyllobilins – Elusive Chlorophyll Catabolites Lacking a Critical Carboxylate Function
of the Natural Chlorophylls

Chem. Europ. J. 2018, **24**, 2987 – 2998 DOI: 10.1002/chem.201705331

S. Moser, G. Scherzer and B. Kräutler

On the Nature of Isomeric Nonfluorescent Chlorophyll Catabolites in Leaves and Fruit - A
Study with a Ubiquitous Phylloleucobilin and its Main Isomerization Product

Chemistry and Biodiversity **2017**, *14*, e1700368

T. Müller, B. Kräutler

Leuchtende Bananen – Chlorophyll-Abbau in Blättern und Früchten

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R. Porra, H. Scheer, B. Kräutler

Biosynthesis and Breakdown of Chlorophylls

Photosynthetic Pigments – Chemical Structure, Biological Function and Ecology, Eds. T. Golovko, W. Gruszecki, M. Prasad, K. Strzalka, *Russ. Acad. Science Syktyvkar*, 55-85 (2014) ISBN: 581.132.1: 581.174.1/2:581.5

M. Roiser, T. Müller, B. Kräutler

Colorless Chlorophyll Catabolites in Senescent Florets of Broccoli (*Brassica oleracea var. Italica*)

J. Agric. Food Chem. **63**, 1385-1392 (2015), open access

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M. Scherl, T. Müller, C. R. Kreuz, R. G. Huber, E. Zass, K. R. Liedl, B. Kräutler

Chlorophyll Catabolites in Fall Leaves of the Wych Elm Tree Present a Novel Glycosylation Motif
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I. Süßenbacher, S. Hörtensteiner, B. Kräutler

A Dioxobilin-Type Fluorescent Chlorophyll Catabolite as a Transient Early Intermediate of the Dioxobilin-Branch of Chlorophyll Breakdown in *Arabidopsis thaliana*

Angew. Chem. Int. Ed., **54**, 13777-13781 (2015), open access

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Hydroxymethylated Dioxobilins in Senescent *Arabidopsis thaliana* Leaves – Sign of a Puzzling Biosynthetic Intermezzo of Chlorophyll Breakdown

Chem. Eur. J., **21**, 11664-11670 (2015), open access

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Chem. Eur. J., **20**, 87-92 (2014), open access

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C. Vergeiner, M. Ulrich, C. Li, X. Liu, T. Müller, B. Kräutler

Stereo- and Regioselective Phyllobilane Oxidation in Leaf Homogenates of the Peace Lily (*Spathiphyllum wallisii*) – Hypothetical Endogenous Path to Yellow Chlorophyll Catabolites

Chem. Eur. J., **21**, 136-149 (2015), open access

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Cover Profile: Stereo- and Regioselective Phyllobilane Oxidation in Leaf Homogenates of the
Peace Lily (*Spathiphyllum wallisii*) – Hypothetical Endogenous Path to Yellow Chlorophyll
Catabolites

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C. Vergeiner, S. Banala, B. Kräutler
Chlorophyll Breakdown in Senscent Banana Leaves – Catabolism Reprogrammed for
Biosynthesis of Persisten Blue Fluorescent Tetrapyrroles

Chem. Eur. J., **19**, 12294-12305 (2013), open access

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