

Contents

Contents of Number 1/2

Original Communications

H.-U. Meisch, J. A. Schmitt, and W. Reinle, Heavy Metals in Higher Fungi, III. Vanadium and Molybdenum (In German) 1

G. Müller and F. Prosi, Distribution of Zinc, Copper, and Cadmium in Various Organs of Roaches (*Rutilus rutilus* L.) from the Neckar and Elsenz Rivers (In German) 7

W. Grundler and F. Keilmann, Nonthermal Effects of Millimeter Microwaves on Yeast Growth 15

J. Marañon and O. M. Sorarrain, Polarization, Isopotential Maps and Tunneling in Guanine, Cytosine, and Tautomeric Forms 23

H. Wawra, Investigation of Crystalline Structures in Fats of Animals by X-Ray Scattering (In German) 28

D. L. Dorset, W. A. Pangborn, A. J. Hancock, and I. S. Lee, Influence of Molecular Conformation on the Solid State Packing of 1,2-Diglycerides. Study of 1,2-Dipalmitin and Some Structural Analogs by Electron Diffraction, X-Ray Diffraction, and Infrared Spectroscopy 39

D. L. Dorset, W. A. Pangborn, A. J. Hancock, T. C. van Soest, and S. M. Greenwald, Glycerol Conformation and the Crystal Structure of Lipids. II. A Further Study of Tripalmitin and Conformationally Fixed Analogs by Small-Angle X-Ray Diffraction and Reflection Electron Diffraction 50

F. Seela and H. Rosemeyer, Immobilization of Cytidine and Uridine via 2',3'-O-Cyclic Acetal Derivatives to Agarose (In German) 56

F. Scherr and T. Günther, Inhibition of Mg, Ca-ATPase from *E. coli* by Ruthenium Red 61

C. Postius and H. Kindl, The Occurrence of Phenylalanine Ammonia-Lyase and Cinnamic Acid *p*-Hydroxylase on the Endoplasmic Reticulum of Cell Suspension Cultures of *Glycine max* 65

S. Aziz, S. N. Hasnain, and B. K. Zain, Effect of Cortisone on Aspartate and Alanine Aminotransferases in a Desert Lizard 70

P. Hanfland, G. Assmann, and H. Egge, Enzymatic Determination of the Anomeric Structures of Two Blood-Group B Active Glycosphingolipids Recombined with Apolipoproteins 73

E. Schauenstein, J. Gölls, H. Waltersdorfer, and R. J. Schaur, Association between the Doubling Time of Various Cells and Tissues, and the SH-Content of Their Soluble Proteins 79

K. L. Friedmann and R. Egel, Protein Patterns during Sporulation in Fission Yeast 84

F. Carlassare, F. Baccichetti, F. Bordin, and L. Anselmo, Psoralen Photosensitization of L 1210 Leukaemia Cells: an Approach to a New Combined Therapy 92

P. L. Schell, Uptake of Polynucleotides by Mammalian Cells. XV. Properties and Function of a DNA-Protein Complex Situated in the Outer Membrane of Ehrlich Ascites Tumor Cells 96

S. Bose and G. E. Hoch, Mg^{2+} - H^{+} Exchange in Chloroplast Membranes in Dark 105

S. Bose and G. E. Hoch, 9-Aminoacridine Binding to Chloroplast Membranes in Dark. Reversal by Mg^{2+} 108

L. Packer and W. Cullingford, Stoichiometry of H_2 Production by an *in vitro* Chloroplast, Ferredoxin, Hydrogenase Reconstituted System 113

B. Johannes and H. Budzikiewicz, Photosynthesis of Green Plants, VIII: *in vitro* Oxygen Exchange between Carotenoid Epoxides and Water? (In German) 116

H. Blecher, R. Blecher, R. Müller, and F. Lingens, Isolation and Characterization of Antipyrine-Degrading Bacteria (In German) 120

H. Frank, H. Schwarz, T. Graf, and W. Schäfer, Properties of Mouse Leukemia Viruses. XV. Electron Microscopic Studies on the Organization of Friend Leukemia Virus and Other Mammalian C-Type Viruses 124

D. Dvorak and A. Snyder, The Relationship between Visual Acuity and Illumination in the Fly, *Lucilia sericata* 139

Notes

A. Koedam and M. J. M. Gijbels, Isolation and Identification of 3-Octanone in the Essential Oil of *Rosmarinus officinalis* L. 144

J. L. Ingham, Flavonoid and Isoflavonoid Compounds from Leaves of Sainfoin (*Onobrychis viciifolia*) 146

J. B. Stothers, A. Stoessl, and E. W. B. Ward, A ^{13}C -NMR Study of the Biological Oxidation of Capsidiol (In German) 149

D. Petz, F. Schneider, and H.-G. Löffler, Model Reactions of the Concerted Amide-SH Catalysis of Ester Hydrolysis (In German) 151

R. C. Hardie and P. Duelli, Properties of Single Cells in Posterior Eyes of Jumping Spiders 156

S. Bamberger, G. Valet, F. Storch, and G. Ruhentrost-Bauer, Electromagnetically Induced Fluid Streaming as a Possible Mechanism of the Biomagnetic Orientation of Organisms 159

Contents of Number 3/4

Report

H. Böhme and P. Böger, Dual-Wavelength Spectroscopy in Photosynthesis 161

Original Communications

D. Adamiak, M. Noltemeyer, W. Saenger, and F. Seela, X-Ray Structure of 2',3'-O-(2-Carboxyethyl)-ethylideneadenosine. A Spacer Extended Ligand for Affinity Resins 169

W. Carius, Modulation of Light Scattering by an Electric Voltage at Planar Lipid Membranes (In German) 174

H.-R. Schulten, R. Ziskoven, and W. D. Lehmann, Cesium Determination in Physiological Fluids and Tissues by Field Desorption Mass Spectrometry 178

M. K. Gbordzoe and W. Kreutz, Determination of the Electron Density Profile of the Nerve Myelin Membrane in Different States Taking Paracrystalline Lattice Distortions into Account 184

V. Jakubick and H. Delincée, Radiation-Induced Aggregation of Proteins: Binding of Amino Acids to Myoglobin (In German) 203

G. Schmetterer, ATP Dependent Uptake of Zinc by Human Erythrocyte Ghosts 210

F. Bertini, M. E. Otta, and M. Gonzalez, Isopycnic Equilibrium of Mouse Liver [^{131}I]Albumin Digesting Particles in Sucrose Gradients 216



R. Strasser and M. Volm, Studies on the Specific of Serum and Cytoplasm of the Liver on the [^3H]TTP-Incorporation of Isolated Liver Nuclei (In German)	219	H. I. Karan, R. E. Hirsch, and S. S. Brody, Stability and Regeneration of Rhodopsin Absorption Spectra at an Air-Water Interface	317
R. Merz, M. Löffler, and F. Schneider, Further Investigations on the <i>p</i> -Nitrophenylphosphatase Activity of Intact Ehrlich Ascites Tumor Cells	227	L. Sportelli, H. Neubacher, and W. Lohmann, ESR and Optical Studies on the Interaction between Cu(II) and Pepsin	321
K. Hofmann, M. Günderoth-Palmowski, G. Wiedenmann, and W. Engelmann, Further Evidence for Period Lengthening Effect of Li^+ on Circadian Rhythms	231	E. Schlimme, Preparation of (9- β -D-Ribofuranosyl)-s-triazolo-[1,2 a]-purine-6-one by Cyclization of N-1-Amino Guanosine (In German)	326
M. Grieshaber, On the Evolution of an Oligocephalic Enzyme. Glutamine-Chorismate-Amidotransferase-Free Anthranilate Phosphoribosyltransferases from Mutant Strains of <i>Salmonella typhimurium</i>	235	N. Zagris and C. G. Melton, Hemoglobins in Single Chick Erythrocytes as Determined by a Differential Elution Procedure	330
D. Werner and R. Stripf, Differentiation of <i>Rhizobium japonicum</i> , I. Enzymatic Comparison of Nitrogenase Repressed and Derepressed Free Living Cells and of Bacteroids	245	W. J. Baas and C. G. Figdor, Isolation of a New secenor-Triterpenol from <i>Hoya australis</i> Leaf Wax	337
K. Scheller, P. Karlson, and D. Bodenstein, Effects of Ecdysterone and the Juvenile Hormone Analogue Methoprene on Protein, RNA and DNA Synthesis in Wing Discs of <i>Calliphora vicina</i>	253	B. Renner and E. Gerstner, Identification of Lichen Substances by Isolation from Thin Layer Chromatograms (In German)	340
R. G. Binder and B. R. Selman, Ferredoxin Catalyzed Cyclic Photophosphorylation: Reversal of Dibromothymoquinone Inhibition by N,N,N',N'-Tetramethyl- <i>p</i> -phenylenediamine	261	H. Wesch, R. Jonak, H. Nemetschek-Gansler, H. Riedl, and Th. Nemetschek, Trace Elements in Several Organs and Mechanical Properties of Collagen under the Influence of D-Penicillamin (In German)	346
G. Vierke and P. Struckmeier, Inhibition of Millisecond Luminescence by Copper(II) in Spinach Chloroplasts	266	J. Pfisterer, Messenger Ribonucleoprotein Particles from Plant Cell Cultures	359
J. M. Bowes and A. R. Crofts, Interactions of Protons with Transitions of the Watersplitting Enzyme of Photosystem II as Measured by Delayed Fluorescence	271	W. Barz, R. Schlepphorst, P. Wilhelm, K. Kratzl, and E. Tengler, Metabolism of Benzoic Acids and Phenols in Cell Suspension Cultures of Soybean and Mung Bean	363
E. F. Elstner and D. Frommeyer, Analysis of Different Mechanisms of Photosynthetic Oxygen Reduction	276	J. Köster, M. Ohm, and W. Barz, Metabolism of Anthranilic Acid in Plant Cell Suspension Cultures	368
W. Menke, F. Koenig, G. H. Schmid, and A. Radunz, Functional Characterization of Four Thylakoid Membrane Polypeptides with Apparent Molecular Weights between 40 000 and 48 000	280	R. Stripf and D. Werner, Differentiation of <i>Rhizobium japonicum</i> . II. Enzymatic Activities in Bacteroids and Plant Cytoplasm during the Development of Nodules of <i>Glycine max</i>	373
Notes		H. Heithier, H.-J. Galla, and H. Möhwald, Fluorescence Spectroscopic and Thermodynamic Studies of Chlorophyll Containing Monolayers and Vesicles. Part I: Mixed Monolayers of Pheophytin A and Lecithin	382
H.-P. Ros, E. Schöpp, and M. Hesse, Indole Alkaloids from the Leaves of <i>Pagianta cerifera</i> Markgraf (In German)	290	W. Haehnel, A. Heupel, and D. Hengstermann, Investigations on a Galvanic Cell Driven by Photosynthetic Electron Transport	392
F. J. Gonzalez-Vila, C. Saiz-Jimenez, H. Lentz, and H.-D. Lüdemann, ^{13}C Nuclear Magnetic Resonance Spectra of Fungal Melanins	291	Ch. Holzapfel, Analysis of the Prompt Fluorescence Induction by Means of Computer Simulation of the Primary Photosynthetic Reactions	402
H. Besl, R. Halbauer, and W. Steglich, New Anthraquinone Pigments from <i>Cortinarius armillatus</i> and <i>C. miniatopus</i> (Agaricales) (In German)	294	S. Schoch and W. Schäfer, Tetrahydrogeranylgeraniol, a Precursor of Phytol in the Biosynthesis of Chlorophyll a — Localization of the Double Bonds	408
F. Bordin, F. Baccichetti, and F. Carlassare, 4,5'-Dimethylangelicin, a New Very Active Monofunctional Furocoumarin	296	J. J. S. van Rensen, D. Wong, and Govindjee, Characterization of the Inhibition of Photosynthetic Electron Transport in Pea Chloroplasts by the Herbicide 4,6-Dinitro- <i>o</i> -cresol by Comparative Studies with 3-(3,4-Dichlorophenyl)-1,1-dimethylurea	413
J. Kraft-Creech, I. Pietsch, and E.-R. Lochmann, The Content of Membrane-Bound and Free Ribosomes in <i>Saccharomyces</i> after the Inhibition of Protein Synthesis with Cycloheximid (In German)	299	P. Gräber and S. Saphon, Conformational Changes of the Membrane-Bound ATPase of Bacterial Chromatophores Revealed by Fluorescence Changes of Fluorescamine-Labelled Coupling Factors	421
U. Lappe and W. Barz, Degradation of Pisatin by Fungi of the Genus <i>Fusarium</i>	301	B. Agostini, M. Stromer, and W. Hasselbach, Effect of Lipid Modification on Fusion of Sarcoplasmic Reticulum Vesicles	428
I. Richter, N. Weber, H. K. Mangold, and K. D. Mukherjee, Incorporation of Positional Isomers of <i>cis</i> - and <i>trans</i> -Octadecenoic Acids into the Acyl Lipids of Cultured Soya Cells	303	P. Kuppert, M. Büchler, and K.-D. Spindler, Distribution and Transport of Molting Hormones in the Crayfish, <i>Orconectes limosus</i>	437
Contents of Number 5/6		Notes	
Original Communications		G. Uhlenbruck, B. P. Chatterjee, and U. Schuldes, Schiff Base Formation: Demonstrated by a Precipitin Reaction in Agar	
H.-D. Lüdemann, H. Plach, E. Westhof, and L. B. Townsend, Conformations of 3-Deazaadenosine, 3-Deaza-8-azaadenosine, and Benzimidazole-1- β -D-ribose in Solution: HRNMR-, Proton-Relaxation-Time-, and Nuclear-Overhauser-Effect Studies	305	E. Steudle, A. Läuchli, and A. Sievers, X-Ray Microanalysis of Barium and Calcium in Plant Material: Significance for the Analysis of Statoliths	

H. Singh, S. Sharma, R. N. Iyer, J. C. Katiyar, and A. B. Sen, 2'-Chloro-1-hydroxy-2-naphthanilide-4'-isothiocyanate — a New Cestodicidal Agent	447
Y. Solberg and G. Remedios, Studies on the Chemistry of Lichens, XVIII. Chemical Investigation of the Species <i>Letharia vulpina</i> (L.) Hue and New Derivatives of Vulpinic Acid	449
H.-H. Sommer, Light and Shadow Reactions in <i>Balanus balanus</i> L. (Cirripedia). The Dependence of Response Intensity on Stimulus Duration under Speedy Light-Dark Cycles (In German)	452
M. Spüler and G. Heide, Simultaneous Recordings of Torque, Thrust and Muscle Spikes from the Fly <i>Musca domestica</i> during Optomotor Responses	455

Contents of Number 7/8

Original Communications

F. Dallacker, L. Erkens, and In-O Kim, Derivatives of 1,3-Benzodioxoles, 42. Amino-1,3-benzodioxoles (In German)	459
F. Dallacker, V. Mues, and In-O Kim, Derivatives of 1,3-Benzodioxoles, 43. 1,3-Benzodioxolecarboxylic Acids (In German)	465
M. Raudaskoski and H. Pyysalo, Occurrence of N-methyl-N-formylhydrazones in Mycelia of <i>Gyromitra esculenta</i>	472
J. Kamsteeg, J. van Brederode, F. J. E. M. Küppers, and G. van Nigtevecht, Anthocyanins Isolated from Petals of Various Genotypes of the Red Campion (<i>Silene dioica</i> (L.) Clairv.)	475
H.-R. Schulten, W. D. Lehmann, and R. Ziskoven, Determination of Thallium in Brain Tissue by Stable Isotope Dilution and Field Desorption Mass Spectrometry	484
D. Bade and F. Parak, Mössbauer Spectroscopy on Oxygenated Sperm Whale Myoglobin: Evidence for an Fe ³⁺ O ₂ ⁻ Coupling at the Active Center	488
R. Thauer, H. Schirmacher, W. Schymanski, and P. Schönheit, A Rapid Procedure for the Purification of Ferredoxin from Spinach Using Polyethyleneimine	495
H. Rembold, J. Rascher, J. Eder, and Y. Umebachi, Partial Structure of Papiliochrome, the Yellow Wing Pigment of the Papilionid Butterflies	498
P. Zipper and H. Durchschlag, Small-Angle X-Ray Scattering on Malate Synthase from Baker's Yeast. Considerations on the Effects of Bound Ligands	504
J. P. Pichotka and H. J. Schmidt, Is Oxygen Consumption of Surviving Tissues Determined by the Oxygen Tension of the Suspension Medium?	511
W. Wagner, H. Follmann, and A. Schmidt, Multiple Functions of Thioredoxins	517
V. D. Breazeale, B. B. Buchanan, and R. A. Wolosiuk, Chloroplast Sedoheptulose 1,7-Bisphosphatase: Evidence for Regulation by the Ferredoxin/Thioredoxin System	521
F. Koenig, A. Radunz, G. H. Schmid, and W. Menke, Antisera to the Coupling Factor of Photophosphorylation and Its Subunits	529
K.-P. Heise and G. Harnischfeger, Correlation between Photosynthesis and Plant Lipid Composition	537
H. Spiller, A. Ernst, W. Kerfin, and P. Böger, Increase and Stabilization of Photoproduction of Hydrogen in <i>Nostoc muscorum</i> by Photosynthetic Electron Transport Inhibitors	541
J. R. Dawson, P. E. Dickerson, J. M. King, F. Sakai, A. R. H. Trim, and J. W. Watts, Improved Methods for Infection of Plant Protoplasts with Viral Ribonucleic Acid	548

K. S. Boos, E. Schlimme, and M. Ikehara, Conformationally Restricted Adenine Nucleotide Analogs in Mitochondrial Adenine Nucleotide Transport	552
M. Valentin, W. E. Bollenbacher, L. I. Gilbert, and H. Kroeger, Alterations in Ecdysone Content during the Post-Embryonic Development of <i>Chironomus thummi</i> : Correlations with Chromosomal Puffing	557
J. R. Sommer, N. R. Wallace, and W. Hasselbach, The Collapse of the Sarcoplasmic Reticulum in Skeletal Muscle	561
H. Stieve and M. Bruns, Extracellular Calcium, Magnesium, and Sodium Ion Competition in the Conductance Control of the Photosensory Membrane of <i>Limulus</i> Ventral Nerve Photoreceptor	574
M. Mimura and J. D. Murray, Spatial Structures in a Model Substrate-Inhibition Reaction Diffusion System	580

Notes

M. Nakayama, T. Horie, M. Tsukayama, M. Masumura, and S. Hayashi, Isolation of Kaempferol-3-O-rhamnoglucoside, a Flavonoid Glycoside from <i>Zephyranthes candida</i>	587
J. Reichling and H. Becker, Essential Oil of <i>Radix Chamomillae</i> (In German)	589
S. Imre and L. Ersoy, About the Synthesis of Some <i>Digitalis</i> Anthraquinones (In German)	592
B. Flehmig, H. D. Royer, and H.-J. Gerth, Isolation of Single Stranded DNA from Purified Hepatitis A-Virus	594
N. Rieder and F. Schlecht, Discovery of Cilia in the Mid-Gut of Arthropoda (In German)	598
C. C. Krischer, R. D. Dahl, and M. Körfer, Responses of Barnacle Photoreceptors to High Energy Flashes of Short Duration	600
Erratum	604

Contents of Number 9/10

Peter Karlson — 60 Jahre	606
------------------------------------	-----

Original Communications

J. A. Schmitt, H.-U. Meisch, and W. Reinle, Heavy Metals in Higher Fungi, IV. Silver (In German)	608
H.-U. Meisch, W. Reinle, and B.-A. Richter, The Question of Biogenous Enrichments of Vanadium and Nickel in Plants of the Carbon Age (In German)	616
H.-U. Meisch, H. Hoffmann, and W. Reinle, Vanadium Catalysis in the Nonenzymatic Transamination of δ -Aminolevulinic Acid	623
I. Richter, K. D. Mukherjee, and N. Weber, Mixed Substrates: <i>trans</i> - and <i>cis</i> -[1- ¹⁴ C] Monounsaturated Fatty Acids with a Fairly Uniform Distribution of Positional Isomers	629
J. Berlin and J. M. Widholm, Amino Acid Uptake by Amino Acid Analog Resistant Tobacco Cell Lines	634
J. Berlin and U. Mutert, Evidence for Distinct Amino Acid Transport Systems in Cultured Tobacco Cells	641
B. Kopp, W. Löffelhardt, and W. Kubelka, Cardenolide Biogenesis in <i>Convallaria majalis</i> L. (In German)	646
B. Contag, The Carcinogenic Effect of Polycyclic Aromatic Hydrocarbons (In German)	651
N. R. K. Rauber †, K.-D. Jany, and G. Pfeleiderer, Ribonuclease A Digestion by Proteinase K	660
H. J. Rurainski and G. Mader, The Effect of Mg ²⁺ on the Reduction of NADP by an Artificial Electron Donor	664

G. Sandmann and W. Hilgenberg, Phosphoenolpyruvate Carboxykinase in <i>Phycomyces blakesleeana</i> Bgff. (In German)	667	D. L. Nandi, Lysine as the Substrate Binding Site of Porphobilinogen Synthase of <i>Rhodospseudomonas spheroides</i>	799
H. Seefried and F.-C. Czygan, Carotenoid Composition and Metabolism of <i>Arctodiaptomus bacillifer</i> KOEBEL (Crustacea, Copepoda) (In German)	671	B. Janistyn, Short Time Effect of Adenosine-3':5'-monophosphoric Acid (c-AMP) on Corn (<i>Zea mays</i>) Coleoptile Growth (In German)	801
M. Patzlaff and W. Barz, Peroxidatic Degradation of Flavanones	675	E. Schauenstein and F. Dachs, Quantification and Localisation of SH-Groups in Human Blood Serum Proteins	803
K.-P. Heise, Variation in Chloroplast Lipid Content and Its Correlation to Photosynthetic Activities	685	A. Taketo, Host Factors Involved in the Growth of Microvirid Phage α 3	804
P. Böger and K. J. Kunert, Phytotoxic Action of Paraquat on the Photosynthetic Apparatus	688	Erratum	806
W. Oettmeier, S. Reimer, and K. Link, Quantitative Structure-Activity Relationship of Substituted Benzoquinones as Inhibitors of Photosynthetic Electron Transport	695		
J. R. Bowyer, A. Baccarini-Melandri, B. A. Melandri, and A. R. Crofts, The Role of Ubiquinone-10 in Cyclic Electron Transport in <i>Rhodospseudomonas capsulata</i> Ala ⁺ pho ⁺ : Effects of Lyophilization and Extraction	704		
S. Schoch, The Esterification of Chlorophyllide a in Greening Bean Leaves	712		
S. Saphon and P. Gräber, External Proton Uptake, Internal Proton Release and Internal pH Changes in Chromatophores from <i>Rps. sphaeroides</i> Following Single Turnover Flashes	715		
G. H. Schmid, W. Menke, A. Radunz, and F. Koenig, Polypeptides of the Thylakoid Membrane and Their Functional Characterization	723		
A. Radunz, Binding of Antibodies onto the Thylakoid Membrane. III. Proteins in the Outer Surface of the Thylakoid Membrane	731		
M. Rich and S. S. Brody, Symmetric and Asymmetric Bilayers of Retinal	735		
J.-P. Seher and G. Adam, Dependence of Cellular Surface Area on Growth Density of 3T3 and SV40-3T3 Cells	739		
R. Cook, The Reproductive Behaviour of Gynandromorphic <i>Drosophila melanogaster</i>	744		
M. Hühn, Mixed Random Mating and Selfing with Different Models of Frequency-Dependent Selection (In German)	755		
Notes		Contents of Number 11/12	
J. Stauff, I. Simo, and W. L. Tsai, Chemiluminescence of Epoxides (In German)	769	Original Communications	
H. Becker, J. Exner, and G. Schilling, Isolation and Identification of 2'-Hydroxy-4',6'-dimethoxychalcon-4-glucoside of <i>Viscum album</i> L. (In German)	771	B. M. Giannetti, W. Steglich, W. Quack, T. Anke, and F. Oberwinkler, Antibiotics from Basidiomycetes. VI. Merulinic Acids A, B, and C, New Antibiotics from <i>Merulius tremellosus</i> and <i>Phlebia radiata</i> (In German)	807
N. Hayashi, M. Scholichin, H. Komae, and T. Sakao, Terpenic Constituents of <i>Asarum</i>	774	J. A. Schmitt, On the Odorous Substance of Two <i>Inocybe</i> Species (Agaricales, Basidiomycetes) (In German)	817
G. J. Niemann, Flavonoids and Related Compounds in Leaves of Pinaceae. III. <i>Pinus jeffreyi</i>	777	H. Besl, A. Bresinsky, L. Kopanski, and W. Steglich, Pigments of Fungi, XXXV. 3-O-Methylvariegatic Acid and Related Pulvinic Acid Derivatives from Cultures of <i>Hygrophoropsis aurantiaca</i> (Boletales) (In German)	820
G. J. Niemann and W. J. Baas, Phenolics from <i>Larix</i> Needles. XIV. Flavonoids and Phenolic Glucosides and Ester of <i>L. decidua</i>	780	B. Renner, A. Henssen, and E. Gerstner, Methyl-virensate and 5-Chloro-methyl-virensate from Species of the Lichen Genus <i>Pseudocyphellaria</i> (In German)	826
G. Löfroth, The Mutagenicity of Dichloroacetaldehyde G. Brunet, N. A. M. Saleh, and R. K. Ibrahim, Stepwise Methylation of Quercetin by Cell-Free Extracts of Citrus Tissues	783	E. Wollenweber, J. Favre-Bonvin, and M. Jay, A Novel Type of Flavonoids: Flavonol Esters from Fern Exudates	831
E. Bast, F. Marx, and K. Pfeilsticker, Formation of Erythroascorbic Acid and 2,3-Enediol Pentonic Acid from L-Ascorbic Acid by Purple Sulfur Bacteria	786	H. Stransky, A Method for the Quantitative Estimation of Chloroplast Pigments in the Picomole-Range by Use of a Isocratic HPL-System (In German)	836
K. Saito, A. Komamine, and S.-I. Hatanaka, Biosynthesis of Stizolobic and Stizolobinic Acids in <i>Amanita pantherina</i>	789	R. Sütfield, B. Kehrel, and R. Wiermann, Characterization, Development and Localization of "Flavanone Synthase" in Tulip Anthers	841
D. L. Nandi, Physical Parameters and Possible Regulation of ζ -Aminolevulinic Acid Synthetase	796	H. Hagenguth and H. Rembold, Identification of Juvenile Hormone 3 as the Only JH Homolog in All Developmental Stages of the Honey Bee	847
		D. von Wachtendonk and J. Neef, Influence of Ions and Chelating Agents on the Haemolymphacetylcholinesterase of <i>Mytilus edulis</i>	851
		D. Werner, Differentiation of <i>Rhizobium japonicum</i> , III. Inhibition of Nitrogenase Derepression by Chloramphenicol and Rifampicin Concentrations, Not Inhibiting Growth	859
		D. Wong, K. Vacek, H. Merkelo, and Govindjee, Excitation Energy Transfer among Chlorophyll a Molecules in Polystyrene: Concentration Dependence of Quantum Yield, Polarization and Lifetime of Fluorescence	863
		H.-H. Paul, H. Sapper, and W. Lohmann, ¹ H-NMR Investigations on the Hydrogen Bond Formation between the Tranquilizers Diazepam and Nitrazepam and Some Nucleobases	870
		M. J. Nowak, K. Szczepaniak, A. Barski, and D. Shugar, Spectroscopic Studies on Vapour Phase Tautomerism of Natural Bases Found in Nucleic Acids	876
		J. Bode and U.-D. Standt, Structural Aspects of Histone Complexes and Nucleosomes Revealed by the Accessibility of Cysteine Side Chains	884
		W. Bors, C. Michel, M. Saran, and E. Lengfelder, Kinetic Investigations of the Autoxidation of Adrenalin	891

R. Müller and M. F. Rajewsky, Sensitive Radioimmunoassay for Detection of O ⁶ -Ethyldeoxyguanosine in DNA Exposed to the Carcinogen Ethylnitrosourea <i>in vivo</i> or <i>in vitro</i>	897	W. Köller and H. Kindl, Studies Supporting the Concept of Glyoxyperoxisomes as Intermediary Organelles in Transformation of Glyoxysomes into Peroxisomes	962
R. Pless, L. Dudycz, R. Stolarski, and D. Shugar, Purine Nucleosides and Nucleotides Unequivocally in the <i>Syn</i> Conformation: Guanosine and 5'-GMP with 8- <i>tert</i> -Butyl and 8-(α -Hydroxyisopropyl) Substituents	902	F. Deinhardt, C. Bergholz, G. Hunsmann, J. Schneider, H.-J. Thiel, H. Beug, and W. Schäfer, Studies of Simian Sarcoma and Simian Sarcoma-Associated Virus. I. Analysis of Viral Structural Proteins, and Preparation and Characterization of Antiserum Specific for Viral Envelope Components	969
W. Strassburger, A. Wollmer, H. Thiele, J. Fleischhauer, W. Steigemann, and E. Weber, Calculation of the Circular Dichroism of <i>Chironomus</i> Hemoglobin in Light of the Quality of Its X-Ray Structure	908	H. Bothe and L. Floener, Physiological Characterization of <i>Cyanophora paradoxa</i> , a Flagellate Containing Cyanelles in Endosymbiosis	981
M. G. Peter, Reactions of Nascent Quinones with Methyl β -Alanate in Glacial Acetic Acid and in Aqueous Solution (In German)	912	H. Wolburg, Growth and Myelination of Goldfish Optic Nerve Fibers after Retina Regeneration and Nerve Crush	988
A. Trebst, H. Wietoska, W. Draber, and H. J. Knops, The Inhibition of Photosynthetic Electron Flow in Chloroplasts by the Dinitrophenylether of Bromo- or Iodo-nitrothymol	919	<i>Notes</i>	
Th. Nemetschek, R. Jonak, H. Nemetschek-Gansler, H. Riedl, and G. Rosenbaum, On the Determination of Changes in the Large Periodic Structure of Collagen (In German)	928	K. Seferiadis and L. Jaenicke, Biomimetic Synthesis of the <i>Fucus</i> Pheromone, Fucoserraten. A Contribution to the Heterolytic Fragmentation of Unsaturated 1,5-Diols	997
M. Ernst and G. Adam, High-Temperature Inactivation of Passive Potassium Transport in Electrically Non-Excitable Cells	937	E. Priesner, H. Bogenschütz, W. Altenkirch, and H. Arn, A Sex Attractant for the Pine Beauty Moth, <i>Panolis flammea</i>	1000
A. Radunz, Binding of Antibodies onto the Thylakoid Membrane. IV. Phosphatides and Xanthophylls in the Outer Surface of the Thylakoid Membrane	941	D. L. Nandi, Mode of Binding of Pyridoxal Phosphate to 5-Aminolevulinate Synthase	1003
A. Widmann and R. Süssmuth, Protein Synthesis with Cell Extracts of <i>Micrococcus radiodurans</i> (In German)	948	Š. Šimaga and E. Kos, Uracil Catabolism by <i>Escherichia coli</i> K 12S	1006
H. J. Schmidt, Circadian Rhythm of Metabolic Rate in Isolated Tissue (In German)	955	K. Kirschfeld, R. Feiler, and B. Minke, The Kinetics of Formation of Metarhodopsin in Intact Photoreceptors of the Fly	1009
		Subject Index	1011
		Authors Index	1029