SUBJECT INDEX

(Meyer, Tager) (189) 136

Carbonylcyanide m-chlorophenylhydrazone

cin and ——— (Vredenberg) (189) 129

Enhancement of the dark reconstitution of

photosynthetic reaction center 2 by nigeri-

Carbonylcyanide m-chlorophenylhydrazone Antimycin Studies on the mechanism of inhibition of the - as an inhibitor of coupled electron transport in trypsin treated spinach chloromitochondrial electron transport by plasts (Mantai) (189) 449 II. Antimycin as an allosteric inhibitor (Bryła et al.) (189) 317 Carotenoid synthesis Antimycin Absolute requirement for oxygen during illumination for photoinduced Studies on the mechanism of inhibition of (Howes et al.) (189) 298 the mitochondrial electron transport by Chlorella pyrenoidosa -. III. Binding of antimycin to submitochondrial particles and to Complex III A new interpretation of the evidence for a (Bryła et al.) (189) 327 first-order thermal reaction in the oxygen production by -Antimycin A – (Sinclair) (189) 60 as an uncoupler and electron trans-Chlorobium thiosulfatophilum port inhibitor in photoreactions of chloro-Ferredoxin from the photosynthetic bacteplasts (Drechsler et al.) (189) 65 rium, ----: A link to ferredoxins from nonphotosynthetic bacteria (Buchanan et Inhibition by oleate of the binding and al.) (189) 46 exchange of —— by mitochondrial Chlorophyll content membranes (Wojtczak, Załuska) (189) 455 Effect of mineral deficiency and leaf age on **ATPase** the nitrogen and ——— of spinach chloro-Activation by Ca2+ of the plasts (Bottrill, Possingham) (189) 80 of extracted muscle fibrils with variation of ionic Chlorophyll a fluorescence strength, pH, and concentrations of MgATP Control of excitation transfer in photo-(Portzehl et al.) (189) 440 synthesis. III. Light-induced decrease of **ATPase** related to photophosphorylation Effects of monovalent and divalent cations system in spinach chloroplasts (Murata, on the ——— activity of myosin (Seidel) Sugahara) (189) 182 (189) 162 Chloroplasts Activation by manganese of photochemical ATPase Myocardial sarcolemma preparation and oxygen evolution and NADP+ photoreducthe ouabain-sensitive (Na+-K+)~ — (Yamashita et al.) (189) 133 (Stam Jr. et al.) (189) 304 Chloroplasts Antimycin A as an uncoupler and electron Properties of ---- in chloroplasts (Cartransport inhibitor in photoreactions of meli) (189) 256 - (Drechsler et al.) (189) 65 Atractyloside-sensitive nucleotide binding Chloroplasts Localization of the ------ sites in rat liver Carbonylcyanide m-chlorophenylhydrazone mitochondria (Winkler) (189) 152 as an inhibitor of coupled electron transport Bacteriochlorophyll in trypsin treated spinach -Photosynthetic membrane development in (189)449Rhodopseudomonas spheroides: Incorpora-Chloroplasts - and development of energy Control of excitation transfer in phototransfer and photochemical activity (Cellasynthesis. II. Magnesium ion-dependent rius, Peters) (189) 234 distribution of excitation energy between Bromothymol blue two pigment systems in spinach-Energy-linked nature of respiration-de-(Murata) (189) 171 pendent ——— color decrease in submito-Chloroplasts chondrial particles (Kurup, Sanadi) (189) Control of excitation transfer in photo-300 synthesis. III. Light-induced decrease of Butyl malonate chlorophyll a fluorescence related to photo-- and mersalyl on anion-Effect of – phosphorylation system in spinach exchange reactions in rat-liver mitochondria

(Murata, Sugahara) (189) 182

different methods (Nobel) (189) 452

Effect of mineral deficiency and leaf age on

- determined by four

Chloroplasts

Chloroplasts

Density of pea -

the nitrogen and chlorophyll content of	Cytochrome photooxidation in Chromatium
spinach ——— (Bottrill, Possingham) (189)	chromatophores: Each P879 oxidizes two
80	(Parson) (189) 397
Chloroplasts	Cytochrome c oxidase
Fluorescence properties of fragments from	Studies of the haem components of
sonicated spinach - — (Boardman,	by EPR spectroscopy (Van Gelder, Beinert)
Thorne) (189) 294	(189) 1
Chloroplasts	Cytochrome photooxidations
Galactoplipid transformations and photo-	in Chromatium chromatophores:
chemical activities of spinach	Each P879 oxidizes two cytochrome C422
(Wintermans et al.) (189) 95	haems (Parson) (189) 397
Chloroplasts	Cytochrome photooxidation
Influence of oxygen on the electron trans-	at liquid nitrogen temperatures in
fers of photosynthesis. II. Influence of very	photosynthetic bacteria (Kihara, Chance)
low oxygen concentration on the NADP+	(189) 116
reduction by isolated ——— (Mathieu)	Electron acceptors
(189) 422	Reaction between primary and secondary
Chloroplasts	———— in bacterial photosynthesis (Parson)
Inhibition of photosynthesis in isolated	(189) 384
spinach ——— by added fructose-1,6-	Electron transfers
diphosphatase (Springer-Lederer et al.)	Influence of oxygen on the ——— of photo-
(189) 464	synthesis. I. Influence of some oxygen
Chloroplasts	concentrations on some Hill reactions
Isolation procedures affecting the retention	(Mathieu) (189) 411
of water-soluble nitrogen by spinach ———	Electron transfers
in aqueous media (Bottrill, Possingham)	Influence of oxygen on the of
(189) 74	photosynthesis. II. Influence of very low
Chloroplasts	oxygen concentration on the NADP+
Properties of ATPase in ——— (Carmeli)	reduction by isolated chloroplasts (Mathieu)
(189) 256	(189) 422
Chloroplasts	Electron transfer reactions
Studies on hydroxylamine photooxidation	One- — in biochemical systems. IV. A
by spinach ——— (Bennoun, Joliot) (189)	mixed mechanism in the reaction of milk
85	xanthine oxidase with electron acceptors
Chloroplasts	(Nakamura, Yamazaki) (189) 29
Studies with manganese-deficient spinach	Electron transport
(Anderson, Pyliotis) (189) 280	Carbonylcyanide m-chlorophenylhydrazone
Chromatophores	as an inhibitor of coupled ———————in trypsin
Cytochrome photooxidations in Chroma-	treated spinach chloroplasts (Mantai) (189)
tium ——: Each P879 oxidizes two cyto-	449
chrome C422 haems (Parson) (189) 397	Electron transport
Chromatophores	Studies on the mechanism of inhibition of
High potential cytochrome c from Chro-	the mitochondrial ——— by antimycin. II.
matium ——— (Cusanovich, Bartsch)	Antimycin as an allosteric inhibitor (Bryła
(189) 245	et al.) (189) 317
Cytochrome c	Electron transport
Autocatalytic peroxidation of ferro————	Studies on the mechanism of inhibition of
(Mochan, Degn) (189) 354	the mitochondrial ——— by antimycin.
Cytochrome of from Nitro	III. Binding of antimycin to submitochon-
Characterization of ———— from Nitro-	drial particles and to Complex III (Bryła et
bacter agilis (Ketchum et al.) (189) 360	al.) (189) 327 Floatron transport chain
Cytochrome c	Electron transport chain Photosynthetic —— of a mutant strain of
High potential ————————————————————————————————————	Chlamydomonas reinhardti lacking P700
	activity (Givan, Levine) (189) 404
(189) 245 Cytochrome b ₅	Electron transport inhibitor
Purification of ——————————————————————————————————	Antimycin A as an uncoupler and ———
from anaerobically grown yeast (Yoshida,	in photoreactions of chloroplasts (Drechsler
Kumaoka) (189) 461	et al.) (189) 65
Cytochrome c	5'-Endonuclease
Re-evaluation of ——— concentrations in	Studies on the localization of rat liver
rat organs using a new method for cyto-	mitochondrial ——— (Morais) (189) 38
chrome c (Williams Jr., Thorp) (189) 25	Energized state
Cytochrome C422 haems	of mitochondria: Lifetime and
•	

SUBJECT INDEX 473

ATTD 1 - 1 /A - 1 - Cl) /-O-)	M 11
ATP equivalence (Azzi, Chance) (189) 141	Mersalyl Effect of butyl malenate and on
Energy metabolism	Effect of butyl malonate and ——— on anion-exchange reactions in rat-liver mito-
Comparison of inosine and glucose as a substrate for ———————————————————————————————————	chondria (Meyer, Tager) (189) 136
nuclei (Konings) (189) 125	Mersalyl
Ferredoxin	Effect of —— on the succinate oxidation
from the photosynthetic bacterium,	by housefly mitochondria (Tulp, Van Dam)
Chlorobium thiosulfatophilum: A link to	(189) 337
ferredoxins from nonphotosynthetic bac-	Mitochondria
teria, (Buchanan et al.) (189) 46	Effect of butyl malonate and mersalyl on
Ferrocytochrome c	anion-exchange reactions in rat-liver ———
Autocatalytic peroxidation of ——— (Mo-	(Meyer, Tager) (189) 136
chan, Degn) (189) 354	Mitochondria
Fructose-1,6-diphosphatase	Effect of mersalyl on the succinate oxidation
Inhibition of photosynthesis in isolated	by housefly ——— (Tulp, Van Dam) (189)
spinach chloroplasts by added ———	337 Mitochondria
(Springer-Lederer et al.) (189) 464 Galactolipid transformations	"Energized state" of ———————————————————————————————————
Galactolipid transformations ————————————————————————————————————	ATP equivalence (Azzi, Chance) (189) 141
spinach chloroplasts (Wintermans et al.)	Mitochondria
(189) 95	Inorganic phosphate transport and malate
Glucose	transport in rat-liver —— (Papa et al.)
Comparison of inosine and ——— as a	(189) 311
substrate for energy metabolism in isolated	Mitochondria
rat-thymus nuclei (Konings) (189) 125	Localization of the atractyloside-sensitive
Haemoprotein	nucleotide binding sites in rat liver ———
Purification of cytochrome b ₅ -like ——	(Winkler) (189) 152
from anaerobically grown yeast (Yoshida,	Mitochondrial cristae
Kumaoka) (189) 461 Hydroxylomino photogyidation	Action of phospholipase A on ———
Studies on ——— by spinach chloroplasts	(Awasthi et al.) (189) 457 Mitochondrial electron transport
(Bennoun, Joliot) (189) 85	Studies on the mechanism of inhibition of
Inorganic phosphate transport	the — by antimycin. II. Antimycin as an
and malate transport in rat-liver	allosteric inhibitor (Bryła et al.) (189) 317
mitochondria (Papa et al.) (189) 311	Mitochondrial electron transport
Inosine	Studies on the mechanism of inhibition of
Comparison of ——— and glucose as a	the —— by antimycin. III. Binding of
substrate for energy metabolism in isolated	antimycin to submitochondrial particles
rat-thymus nuclei (Konings) (189) 125	and to Complex III (Bryla et al.) (189) 327
Leghaemoglobin	Mitochondrial 5'-endonuclease
Separation and properties of low-spin (haemochrome) and native, high-spin forms	Studies on the localization of rat liver ————————————————————————————————————
of —— from soybean nodule extracts	Mitochondrial membranes
(Appleby) (189) 267	Inhibition by oleate of the binding and
Magnesium	exchange of ATP by ——— (Wojtczak,
Control of excitation transfer in photo-	Załuska) (189) 455
synthesis. II. ——— ion-dependent distri-	Muscle fibrils
bution of excitation energy between two	Activation by Ca ²⁺ of the ATPase of
pigment systems in spinach chloroplasts	extracted — with variation of ionic
(Murata) (189) 171	strength, pH, and concentration of MgATP
Malate transport	(Portzehl et al.) (189) 440
Inorganic phosphate transport and —— in	Myocardial sarcolemma
rat liver mitochondria (Papa et al.) (189) 311 Manganese	—— preparation and the ouabain- sensitive (Na ⁺ -K ⁺)-ATPase (Stam Ir. et
Activation by ——— of photochemical	al.) (189) 304
oxygen evolution and NADP+ photo-	Myofibrils
reduction in chloroplasts (Yamashita et al.)	Association and dissociation of thick and
(189) 133	thin filaments within ————————————————————————————————————
Manganese	of "contraction" and "relaxation" (Port-
Functional site of ——— in photosynthetic	zehl et al.) (189) 429
oxygen evolution (Heath, Hind) (189) 222	Myosin
Manganese-deficient	Effects of monovalent and divalent cations
Studies with ——— spinach chloroplasts (Anderson, Pyliotis) (189) 267	on the ATPase activity of ——— (Seidel)
(IIIIdeloon, 1 yhous) (109) 20/	(189) 162

NA	DH dehydrogenase	Photoreactions
	Reconstitutively active (Albracht,	Antimycin A as an uncoupler and electron
	Slater) (189) 308	transport inhibitor in — of chloroplasts
	DP ⁺ photoreduction	(Drechsler et al.) (189) 65
	Activation by manganese of photochemical	Photosynthesis
	oxygen evolution and ——— in chloroplasts	Control of excitation transfer in —
	(Yamashita et al.) (189) 133	Magnesium ion-dependent distribution of
	ericin	excitation energy between two pigment
-	Enhancement of the dark reconstitution of	systems in spinach chloroplasts (Murata)
	photosynthetic reaction center 2 by ———	(189) 171
	and carbonylcyanide m-chlorophenylhydra-	Photosynthesis
	zone (Vredenberg) (189) 129	Control of excitation transfer in ——.
Nuc		III. Light-induced decrease of chlorophyll a
	Comparison of inosine and glucose as a	fluorescence related to photophosporylation
	substrate for energy metabolism in isolated	system in spinach chloroplasts (Murata,
		•
	rat-thymus (Konings) (189) 125	Sugahara) (189) 182
Ole		Photosynthesis
	Inhibition by ———————————————————————————————————	Influence of oxygen on the electron transfers
	exchange of ATP by mitochondrial mem-	of I. Influence of some oxygen
	branes (Wojtczak, Załuska) (189) 455	concentrations on some Hill reactions
	abain	(Mathieu) (189) 411
	Myocardial sarcolemma preparation and	Photosynthesis
	the ——-sensitive (Na+-K+)-ATPase	Influence of oxygen on the electron transfers
	(Stam, Jr. et al.) (189) 304	of — — . II. Influence of very low oxygen
Ox	ygen	concentration on the NADP+ reduction
	Absolute requirement for — during	by isolated chloroplasts (Mathieu) (189)
	illumination for photoinduced carotenoid	422
	synthesis (Howes et al.) (189) 298	Photosynthesis
	ygen	Inhibition of in isolated spinach
	Influence of — — on the electron transfers	chloroplasts by added fructose-1,6-diphos-
	of photosynthesis. I. Influence of some	phatase (Springer-Lederer et al.) (189) 464
	oxygen concentrations on some Hill re-	Photosynthesis
	actions (Mathieu) (189) 411	Reaction between primary and secondary
-	ygen	electron acceptors in bacterial ——
OA.	Influence of ——— on the electron transfers	(Parson) (189) 384
	of photosynthesis. II. Influence of very low	Photosynthetic bacteria
	oxygen concentration on the NADP+	Low potential titration of the fluorescence
		yield changes in ——— (Cramer) (189) 54
	reduction by isolated chloroplasts (Mathieu)	
0	(189) 422	Photosynthetic carbon reduction
Ox.	ygen evolution	Free energy changes and metabolic regula-
	Fluorescence and ——— from Chlorella	tion in steady-state ——— (Bassham,
	pyrenoidosa (Bonaventura, Myers) (189) 366	Krause) (189) 207
Ox	ygen evolution	Photosynthetic electron transport
	Functional site of manganese in photo-	——————————————————————————————————————
	synthetic ——— (Heath, Hind) (189) 222	domonas reinhardti lacking P700 activity
Ox	ygen production	(Givan, Levine) (189) 404
	New interpretation of the evidence for a	Photosynthetic membrane
	first-order thermal reaction in the — — by	— development in Rhodopseudomonas
	Chlorella pyrenoidosa (Sinclair) (189) 60	spheroides: Incorporation of bacteriochloro-
Pal	mitoyl-CoA: carnitine palmitoyltransferase	phyll and development of energy transfer
	Localization of ——— in rat liver (Van Tol,	and photochemical activity (Cellarius,
	Hülsmann) (189) 342	Peters) (189) 234
Ph	ospholipase A	Photosynthetic mutants
	Action of —— on mitochondrial cristae	Studies on three — — of Scenedesmus
	(Awasthi, et al.) (189) 457	(Gee et al.) (189) 106
Ph	otophosphorylation	Photosynthetic oxygen evolution
	Effects of plastocyanin on (Ander-	Functional site of manganese in
	son, McCarty) (189) 193	(Heath, Hind) (189) 222
Ph	otophosphorylation system	Photosynthetic reaction center 2
	Control of excitation transfer in photo-	Enhancement of the dark reconstitution of
	synthesis. III. Light-induced decrease of	by nigericin and carbonylcyanide
	chlorophyll a fluorescence related to	m-chlorophenylhydrazone (Vredenberg)
	in spinach chloroplasts (Murata, Sugahara)	(189) 129
	(189) 182	Plastocyanin

SUBJECT INDEX 475

Effects of — on photophosphorylation dent bromothymol blue color decrease in (Anderson, McCarty) (189) 193 — (Kurup, Sanadi) (189) 300 Succinate oxidation Scenedesmus Studies on three photosynthetic mutants of Effect of mersalyl on the ---- by ---- (Gee et al.) (189) 106 housefly mitochondria (Tulp, Van Dam) Sodium-potassium activated ATPase Myocardial sarcolemma preparation and the Xanthine oxidase ouabain-sensitive ——— (Stam Jr. et al.) One-electron transfer reactions in biochemical systems. IV. A mixed mechanism in the (189) 304 Submitochondrial particles reaction of milk — with electron Energy-linked nature of respiration-depenacceptors (Nakamura, Yamazaki) (189) 29