

Subject Index

- Actinometry
 chemical, applications in, and self-sensitized photo-oxidation of aromatic compounds and photocycloreversion of endoperoxides, 489
- Airglow
 singlet O_2 , 345
- Allylic hydroperoxides
 a research account of the effect of strain on the rearrangement of, 211
- Anabaena variabilis*
 possible role of singlet O_2 in the control of the phototactic reaction sign of, 317
- Antagonistic effects
 synergistic effects and, and singlet O_2 and free-radical oxidation of polydienes and related problems with stabilization, 519
- Applications
 in chemical actinometry: self-sensitized photo-oxidation of aromatic compounds and photocycloreversion of endoperoxides, 489
 recent, of singlet O_2 reactions in synthesis, 552
- Aqueous solution
 studies on singlet O_2 in, 545
- Backbone breakage
 oxygen-independent direct in deoxyribonucleic acid caused by Rose Bengal and visible light, 309
- Bacteriochlorophyll a
 effects of solvent on the rate of photo-oxidation of, 183
- Biological systems
 convenient method for detecting the superoxide ion from singlet O_2 reactions of, and superoxide formation from hydrogenated nicotinamide adenine dinucleotide and 5-hydroxytryptophan, 511
- tert*-Butylated hydroxytoluene
 photo-oxidation of fatty acids sensitized by, and inhibition by
- 1,4-diazabicyclo[2.2.2]octane and role of singlet O_2 , 275
- Cage displacement model
 modification of for mixed solvent quenching of $O_2(^1\Delta_g)$: the photo-oxidation of unsaturated organic molecules, 145
- Catalysis
 by peroxidase in the aerobic oxidation of an activated $-CH_2-$ substrate, singlet O_2 generation from, 285
- Chemiluminescence
 $O_2(a^1\Delta_g)$ -sensitized, of a $^1\Delta \rightarrow X^3\Sigma^-$ and $b^1\Sigma^+ \rightarrow X^3\Sigma^-$ transitions of group VI-group VI and group V-group VII diatomic molecules, 194
 $O_2(b^1\Sigma_g^+ \rightarrow X^3\Sigma_g^-)$, from the self-reaction of isopropylperoxy radicals, observation of, 409
- 2-Chlorothioxanthone
 oxidation photosensitized by, and the role of singlet O_2 , 267
- Condensed systems
 relaxation of $O_2(^1\Delta_g)$ in, 127
- Control
 of the phototactic reaction sign of *Anabaena variabilis*, possible role of singlet O_2 in, 317
- Cyclobutenes
 methyl-substituted, sensitized photo-oxidation of, 548
- Damage
 sites of, and inactivation, and singlet O_2 and ribosomes, 295
- Decay
 rates of formation and of $O_2(^1\Delta_g)$ in H_2O , D_2O and other solvents, optical determination of, 545
- Deoxyribonucleic acid
 oxygen-independent direct backbone breakage in caused by Rose Bengal and visible light, 309

- Deuterium oxide
and H₂O and other solvents, optical determination of the rates of formation and decay of O₂(¹Δ_g) in, 545
- 1,4-Diazabicyclo[2.2.2]octane
inhibition by, and role of singlet O₂:
tert-butylated-hydroxytoluene-sensitized photo-oxidation of fatty acids, 275
- 1,2,4-Dioxazolidines
photochemical preparation of 1,2,4-trioxolanes, 1,2-dioxolanes and, and cosensitized electron transfer photo-oxygenation, 167
- 1,2-Dioxolanes
photochemical preparation of 1,2,4-trioxolanes, 1,2,4-dioxazolidines and, and cosensitized electron transfer photo-oxygenation, 167
- Dye sensitizers
production and quenching of singlet O₂ by in photo-oxygenations, 117
- Efficiency
of triplet energy transfer to O₂(³Σ_g⁻):
sensitizer and medium dependence, 115
- Electron transfer
in cosensitized photo-oxygenation, and photochemical preparation of 1,2,4-trioxolanes, 1,2-dioxolanes and 1,2,4-dioxazolidines, 167
- Emission intensities
relative, and O₂(¹Δ_g) quenching rates in high pressure O₂ gas, optical determination of using pulsed laser excitation at 1.064 μm, 550
- Emission spectra
(0,0) ¹Δ_g → ³Σ_g⁻ IR, and discovery of enzyme generation of O₂(¹Δ_g), 327
- Endoperoxides
photocycloreversion of, and self-sensitized photo-oxidation of aromatic compounds: applications in chemical actinometry, 489
- Energy transfer
collisional, and the excitation of O₂(b¹Σ_g⁺) in the atmosphere, 365
from O₂(¹Δ) to IF(X¹Σ⁺), IF(B³Π(0⁺)) pumping by, and a review of studies investigating a potential chemical laser pumping scheme, 465
- triplet, to O₂(³Σ_g⁻), efficiency of, and sensitizer and medium dependence, 115
- Enol ethers
construction of 1,2,4-trioxane rings by photo-oxygenation of and related methods, 537
- Enzymes
generation of O₂(¹Δ_g) from, discovery of, and spectra of (0,0) ¹Δ_g → ³Σ_g⁻ IR emission, 327
- Epoxides
formation of from singlet O₂ reactions, stereochemical studies of, 161
- Erythrocyte ghosts
and microemulsions, self-sensitized photo-oxidation of protoporphyrin IX and related porphyrins in, and a novel photo-oxidation pathway involving singlet O₂, 235
- Excitation
direct laser, gas phase generation of O₂(¹Δ_g) at atmospheric pressure by, 439
of O₂(b¹Σ_g⁺) in the atmosphere and collisional energy transfer, 365
pulsed laser, at 1.064 μm, optical determination of O₂(¹Δ_g) quenching rates and relative emission intensities in high pressure O₂ gas using, 550
- Fatty acids
tert-butylated-hydroxytoluene-sensitized photo-oxidation of, and inhibition by 1,4-diazabicyclo[2.2.2]octane and role of singlet O₂, 275
- Fluorine
a review of studies investigating a potential chemical laser pumping scheme: IF(B³Π(0⁺)) pumping by energy transfer from O₂(¹Δ) to IF(X¹Σ⁺), 465
- Formation
epoxide, from singlet O₂ reactions, stereochemical studies of, 161
possible, of singlet O₂ from vibrationally excited H₂O, 99
and quenching of singlet O₂ by the sensitizer in dye-sensitized photo-oxygenations, 117
rates of decay and of O₂(¹Δ_g) in H₂O, D₂O and other solvents, optical determination of, 545

- singlet O_2 , by lactoperoxidase, and halide dependence and quantitation of yield, 105
- singlet O_2 , from photodynamic sensitizers, 549
- superoxide, from hydrogenated nicotinamide adenine dinucleotide and 5-hydroxytryptophan, and a convenient method for detecting the superoxide ion from singlet O_2 reactions of biological systems, 511
- Generation**
- enzyme, of $O_2(^1\Delta_g)$, discovery of, and spectra of $(0,0) ^1\Delta_g \rightarrow ^3\Sigma_g^-$ IR emission, 327
- gas phase, of $O_2(^1\Delta_g)$ at atmospheric pressure by direct laser excitation, 439
- of 1O_2 from oxygen quenching of the lowest excited singlet and triplet states of some aromatic compounds, 475
- singlet O_2 , from the peroxidase-catalysed aerobic oxidation of an activated $-CH_2-$ substrate, 285
- Halides**
- dependence on and quantitation of yield in the singlet O_2 production by lactoperoxidase, 105
- 5-Hydroxytryptophan**
- and hydrogenated nicotinamide adenine dinucleotide, superoxide formation from, and a convenient method for detecting the superoxide ion from singlet O_2 reactions of biological systems, 511
- Inactivation**
- and sites of damage, and singlet O_2 and ribosomes, 295
- Inhibition**
- by 1,4-diazabicyclo[2.2.2]octane and role of singlet O_2 in the *tert*-butylated-hydroxytoluene-sensitized photo-oxidation of fatty acids, 275
- Iodine**
- behaviour of singlet O_2 in the oxygen-iodine transfer laser, 449
- laser kinetic studies of $I(^2P_{1/2})$ and $O_2(^1\Delta_g)$, 551
- the mechanism of quenching of $O_2(^1\Delta_g)$ by I_2 , 153
- a review of studies investigating a potential chemical laser pumping scheme: $IF(B^3\Pi(0^+))$ pumping by energy transfer from $O_2(^1\Delta)$ to $IF(X^1\Sigma^+)$, 465
- Isopropylperoxy radical**
- observation of $O_2(b^1\Sigma_g^+ \rightarrow X^3\Sigma_g^-)$ chemiluminescence from the self-reaction of, 409
- Kinetics**
- laser, of $I(^2P_{1/2})$ and $O_2(^1\Delta_g)$, 551
- of the thermal decomposition and structure of organic phosphite ozonides, 227
- Lactoperoxidase**
- singlet O_2 production by, and halide dependence and quantitation of yield, 105
- Laser**
- chemical pumping, a review of studies investigating a potential scheme for, and $IF(B^3\Pi(0^+))$ pumping by energy transfer from $O_2(^1\Delta)$ to $IF(X^1\Sigma^+)$, 465
- gas phase generation of $O_2(^1\Delta_g)$ at atmospheric pressure by direct excitation using a, 439
- kinetic studies of $I(^2P_{1/2})$ and $O_2(^1\Delta_g)$ using a, 551
- oxygen-iodine transfer, behaviour of singlet O_2 in, 449
- pulsed, excited at $1.064 \mu m$, optical determination of $O_2(^1\Delta_g)$ quenching rates and relative emission intensities in high pressure oxygen gas using a, 550
- Lignin**
- aspects of the photosensitized oxygenation of, 197
- Liposomes**
- photosensitization of by porphyrins, 253
- Malonaldehyde**
- singlet O_2 generation from the peroxidase-catalysed aerobic oxidation of an activated $-CH_2-$ substrate, 285
- Mechanisms**
- of quenching of $O_2(^1\Delta_g)$ by I_2 , 153

Microemulsions

and erythrocyte ghosts, self-sensitized photo-oxidation of protoporphyrin IX and related porphyrins in, and a novel photo-oxidation pathway involving singlet O_2 , 235

Model

cage displacement, modification of for mixed solvent quenching of O_2 ($^1\Delta_g$), and photoperoxidation of unsaturated organic molecules, 145

Nicotinamide adenine dinucleotide

hydrogenated, and 5-hydroxytryptophan, superoxide formation of, and a convenient method for detecting the superoxide ion from singlet O_2 reactions of biological systems, 511

Ocular tissues

active oxygen chemistry of, 549

Optical determination

of $O_2(^1\Delta_g)$ quenching rates and relative emission intensities in high pressure O_2 gas using pulsed laser excitation at $1.064 \mu\text{m}$, 550

of the rates of formation and decay of $O_2(^1\Delta_g)$ in H_2O , D_2O and other solvents, 545

Oxidation

peroxidase-catalysed aerobic, of an activated $-CH_2-$ substrate, singlet O_2 generation from, 285

photosensitized by 2-chlorothioxanthone, and the role of singlet O_2 , 267

singlet O_2 and free-radical, of polydienes and related problems with stabilization: synergistic and antagonistic effects, 519

singlet O_2 , of substituted thiobenzamides, 335

Oxygen

see also Singlet oxygen

active oxygen chemistry of ocular tissues, 549

the efficiency of triplet energy transfer to $O_2(^3\Sigma_g^-)$: sensitizer and medium dependence, 115

nucleophilic oxygen atom transfer from a perepoxide intermediate to sulphoxides, 547

oxygen-independent direct deoxyribonucleic acid backbone breakage caused by Rose Bengal and visible light, 309

relaxation of the $^1\Delta_g$ state in pure liquid O_2 and in liquid mixtures of $^{16}O_2$ and $^{18}O_2$, 131

Oxygenation

aspects of photosensitized lignin, 197

Perepoxides

intermediates of, nucleophilic oxygen atom transfer to sulphoxides from, 547

Peroxidase

singlet O_2 generation from the aerobic oxidation of an activated $-CH_2-$ substrate catalysed by, 285

Phosphite ozonides

organic, structure of and kinetics of the thermal decomposition of, 227

Photocycloreversion

of endoperoxides and self-sensitized photo-oxidation of aromatic compounds: applications in chemical actinometry, 489

Photo-oxidation

bacteriochlorophyll a, effects of solvent on the rate of, 183

self-sensitized, of aromatic compounds and photocycloreversion of endoperoxides: applications in chemical actinometry, 489

self-sensitized, of protoporphyrin IX and related porphyrins in erythrocyte ghosts and microemulsions: a novel photo-oxidation pathway involving singlet O_2 , 235

sensitized, of methyl-substituted cyclobutenes, 548

tert-butylated-hydroxytoluene-sensitized, of fatty acids: inhibition by 1,4-diazabicyclo[2.2.2]octane and role of singlet O_2 , 275

Photo-oxygenation

cosensitized electron transfer, and photochemical preparation of 1,2,4-trioxolanes, 1,2-dioxolanes and 1,2,4-dioxazolidines, 167

dye-sensitized, production and quenching of singlet O_2 by the sensitizer in, 117

of enol ethers and related methods, construction of 1,2,4-trioxane rings by, 537

Photoperoxidation

of unsaturated organic molecules: modification of the cage displacement model for mixed solvent quenching of $O_2(^1\Delta_g)$, 145

- Photosensitization**
 aspects of lignin oxygenation after, 197
 of liposomes by porphyrins, 253
 of oxidation by 2-chlorothioxanthone,
 and role of singlet O_2 , 267
- Phototactic reaction sign**
 of *Anabaena variabilis*, possible role
 of singlet O_2 in the control of, 317
- Planetary atmospheres**
 singlet O_2 in, 379
- Polydienes**
 singlet O_2 and free-radical oxidation of,
 and related problems with stabili-
 zation: synergistic and antagonistic
 effects, 519
- Porphyrins**
 photosensitization of liposomes by, 253
 related, protoporphyrin IX and, in ery-
 throcyte ghosts and microemulsions,
 self-sensitized photo-oxidation of,
 and a novel photo-oxidation path-
 way involving singlet O_2 , 235
- Preparation**
 of 1,2,4-trioxane rings by photo-oxy-
 genation of enol ethers and related
 methods, 537
 photochemical, of 1,2,4-trioxolanes,
 1,2-dioxolanes and 1,2,4-dioxazoli-
 dines, and cosensitized electron
 transfer photo-oxygenation, 167
- Pressure**
 atmospheric, gas phase generation of
 $O_2(^1\Delta_g)$ at, by direct laser excita-
 tion, 439
- Prospects**
 for solar synthesis, and a new method
 for singlet O_2 reactions using
 natural sunlight, 501
- Protoporphyrin IX**
 and related porphyrins in erythrocyte
 ghosts and microemulsions, self-
 sensitized photo-oxidation of, and
 a novel photo-oxidation pathway
 involving singlet O_2 , 235
- Quantitation**
 of yield and halide dependence in the
 singlet O_2 production of lacto-
 peroxidase, 105
- Quenching**
 high temperature, of singlet O_2 , 399
 mixed solvent, of $O_2(^1\Delta_g)$, modifica-
 tion of the cage displacement model
 for, and photoperoxidation of un-
 saturated organic molecules, 145
- of $O_2(^1\Delta_g)$ by I_2 , mechanism of, 153
 oxygen, of the lowest excited singlet
 and triplet states of some aromatic
 compounds, generation of 1O_2
 from, 475
 production and, of singlet O_2 by the
 sensitizer in dye-sensitized photo-
 oxygenations, 117
 rates of $O_2(^1\Delta_g)$, and relative emission
 intensities in high pressure O_2 gas,
 optical determination of using pulsed
 laser excitation at 1.064 μm , 550
- Rearrangement**
 of allylic hydroperoxides, a research
 account of the effect of strain on, 211
- Recombination**
 oxygen atom, yield of $O_2(b^1\Sigma_g^+)$ in,
 389
- Relaxation**
 of the $^1\Delta_g$ state in pure liquid O_2 and
 in liquid mixtures of $^{16}O_2$ and $^{18}O_2$,
 131
 of $O_2(^1\Delta_g)$ in condensed systems, 127
- Ribosomes**
 and singlet O_2 : inactivation and sites
 of damage, 295
- Rose Bengal**
 and visible light, oxygen-independent
 direct deoxyribonucleic acid back-
 bone breakage caused by, 309
- Self-reaction**
 of isopropylperoxy radicals, observa-
 tion of $O_2(b^1\Sigma_g^+ \rightarrow X^3\Sigma_g^-)$ chemi-
 luminescence from, 409
- Self-sensitization**
 photo-oxidation after of aromatic
 compounds and photocycloreversion
 of endoperoxides: applications in
 chemical actinometry, 489
 photo-oxidation after of protoporphyrin
 IX and related porphyrins in
 erythrocyte ghosts and microemul-
 sions: a novel photo-oxidation path-
 way involving singlet O_2 , 235
- Sensitization**
 by $O_2(a^1\Delta_g)$ of the chemiluminescence
 of $a^1\Delta \rightarrow X^3\Sigma^-$ and $b^1\Sigma^+ \rightarrow X^3\Sigma^-$
 transitions of group VI-group VI
 and group V-group VII diatomic
 molecules, 419
 of the photo-oxidation of methyl-
 substituted cyclobutenes, 548

by *tert*-butylated hydroxytoluene of the photo-oxidation of fatty acids: inhibition by 1,4-diazabicyclo-[2.2.2]octane and role of singlet O_2 , 275

Sensitizers

and medium, dependence on of the efficiency of triplet energy transfer to $O_2(^3\Sigma_g^-)$, 115

photodynamic, singlet O_2 production from, 549

production and quenching of singlet O_2 by in dye-sensitized photo-oxygenations, 117

Singlet oxygen

behaviour of singlet O_2 in the oxygen-iodine transfer laser, 449

collisional energy transfer and the excitation of $O_2(b^1\Sigma_g^+)$ in the atmosphere, 365

a convenient method for detecting the superoxide ion from singlet O_2 reactions of biological systems: superoxide formation from hydrogenated nicotinamide adenine dinucleotide and 5-hydroxytryptophan, 511

discovery of enzyme generation of $O_2(^1\Delta_g)$: spectra of $(0,0)^1\Delta_g \rightarrow ^3\Sigma_g^-$ IR emission, 327

gas phase generation of $O_2(^1\Delta_g)$ at atmospheric pressure by direct laser excitation, 439

generation of 1O_2 from oxygen quenching of the lowest excited singlet and triplet states of some aromatic compounds, 475

high temperature quenching reactions of singlet O_2 , 399

laser kinetic studies of $I(^2P_{1/2})$ and $O_2(^1\Delta_g)$, 551

the mechanism of quenching of $O_2(^1\Delta_g)$ by I_2 , 153

observation of $O_2(b^1\Sigma_g^+ \rightarrow X^3\Sigma_g^-)$ chemiluminescence from the self-reaction of isopropylperoxy radicals, 409

optical determination of $O_2(^1\Delta_g)$ quenching rates and relative emission intensities in high pressure O_2 gas using pulsed laser excitation at $1.064 \mu\text{m}$, 550

optical determination of the rates of formation and decay of $O_2(^1\Delta_g)$ in H_2O , D_2O and other solvents, 545

$O_2(a^1\Delta_g)$ -sensitized chemiluminescence of $a^1\Delta \rightarrow X^3\Sigma^-$ and $b^1\Sigma^+ \rightarrow X^3\Sigma^-$ transitions of group VI-group VI and group V-group VII diatomic molecules, 419

oxidation photosensitized by 2-chloro-thioxanthone: the role of singlet O_2 , 267

the photoperoxidation of unsaturated organic molecules: modification of the cage displacement model for mixed solvent quenching of $O_2(^1\Delta_g)$, 145

possible formation of singlet O_2 from vibrationally excited H_2O , 99

possible role of singlet O_2 in the control of the phototactic reaction sign of *Anabaena variabilis*, 317

production and quenching of singlet O_2 by the sensitizer in dye-sensitized photo-oxygenations, 117

prospects for solar synthesis: a new method for singlet O_2 reactions using natural sunlight, 501

recent applications of singlet O_2 reactions in synthesis, 552

the relaxation of $O_2(^1\Delta_g)$ in condensed systems, 127

a review of studies investigating a potential chemical laser pumping scheme: $IF(B^3\Pi(0^+))$ pumping by energy transfer from $O_2(^1\Delta)$ to $IF(X^1\Sigma^+)$, 465

self-sensitized photo-oxidation of protoporphyrin IX and related porphyrins in erythrocyte ghosts and microemulsions: a novel photo-oxidation pathway involving singlet O_2 , 235

singlet O_2 airglow, 345

singlet O_2 and free-radical oxidation of polydienes and related problems with stabilization: synergistic and antagonistic effects, 519

singlet O_2 generation from the peroxidase-catalysed aerobic oxidation of an activated $-CH_2-$ substrate, 285

singlet O_2 oxidation of substituted thiobenzamides, 335

singlet O_2 in planetary atmospheres, 379

singlet O_2 production by lactoperoxidase: halide dependence and quantitation of yield, 105

singlet O_2 production from photodynamic sensitizers, 549

- singlet O_2 and ribosomes: inactivation and sites of damage, 295
- stereochemical studies of epoxide formation from singlet O_2 reactions, 161
- studies on singlet O_2 in aqueous solution, 545
- tert*-butylated-hydroxytoluene-sensitized photo-oxidation of fatty acids: inhibition by 1,4-diazabicyclo-[2.2.2]octane and role of singlet O_2 , 275
- the yield of $O_2(b^1\Sigma_g^+)$ in oxygen atom recombination, 389
- Singlet states**
 see also Singlet oxygen
 generation of 1O_2 from oxygen quenching of the lowest excited singlet and triplet states of some aromatic compounds, 475
 relaxation of the $^1\Delta_g$ state in pure liquid O_2 and in liquid mixtures of $^{16}O_2$ and $^{18}O_2$, 131
- Solvents**
 effects of on the rate of bacteriochlorophyll a photo-oxidation, 183
 H_2O , D_2O and other optical determination of the rates of formation and decay of $O_2(^1\Delta_g)$ in, 545
 quenching of $O_2(^1\Delta_g)$ by mixed, modification of the cage displacement model for, and photoperoxidation of unsaturated organic molecules, 145
- Stabilization**
 singlet O_2 and free-radical oxidation of polydienes and related problems with, and synergistic and antagonistic effects, 519
- Stereochemistry**
 of epoxide formation from singlet O_2 reactions, 161
- Strain**
 a research account of the effect of on the rearrangement of allylic hydroperoxides, 211
- Structure**
 of organic phosphite ozonides, and kinetics of their thermal decomposition, 227
- Substrate**
 activated $-CH_2-$, singlet O_2 generation from the peroxidase-catalysed aerobic oxidation of, 285
- Sulphoxides**
 nucleophilic oxygen atom transfer from a perepoxide intermediate to sulphoxides, 547
- Sunlight**
 natural, new method for singlet O_2 reactions using, and prospects for solar synthesis, 501
- Superoxide ion**
 from singlet O_2 reactions of biological systems, a convenient method for detecting, and superoxide formation from hydrogenated nicotinamide adenine dinucleotide and 5-hydroxytryptophan, 511
- Synergistic effects**
 and antagonistic effects, and singlet O_2 and free-radical oxidation of polydienes and related problems with stabilization, 519
- Synthesis**
 recent applications of singlet O_2 reactions in, 552
 solar, prospects for, and a new method for singlet O_2 reactions using natural sunlight, 501
- Temperature**
 high, quenching reactions of singlet O_2 at, 399
- Thermal decomposition**
 kinetics of, and structure of organic phosphite ozonides, 227
- Thiobenzamides**
 substituted, singlet O_2 oxidation of, 335
- Transitions**
 $a^1\Delta \rightarrow X^3\Sigma^-$ and $b^1\Sigma^+ \rightarrow X^3\Sigma^-$, of group VI-group VI and group V-group VII diatomic molecules, $O_2(a^1\Delta_g)$ -sensitized chemiluminescence of, 419
- 1,2,4-Trioxanes**
 rings of, construction of by photooxygenation of enol ethers and related methods, 537
- 1,2,4-Trioxolanes**
 photochemical preparation of 1,2-dioxolanes, 1,2,4-dioxazolidines and, and cosensitized electron transfer photo-oxygenation, 167
- Triplet states**
 the efficiency of triplet energy transfer to $O_2(^3\Sigma_g^-)$: sensitizer and medium dependence, 115

generation of $^1\text{O}_2$ from oxygen quenching of the lowest excited singlet and triplet states of some aromatic compounds, 475

Visible light
and Rose Bengal, oxygen-independent direct deoxyribonucleic acid backbone breakage caused by, 309

Water
and D_2O and other solvents, optical

determination of the rates of formation and decay of $\text{O}_2(^1\Delta_g)$ in, 545
vibrationally excited, possible formation of singlet O_2 from, 99

Yield
of $\text{O}_2(\text{b}^1\Sigma_g^+)$ in oxygen atom recombination, 389
quantitation of and halide dependence in the singlet O_2 production of lactoperoxidase, 105