

Journal of PHOTOCHEMISTRY AND PHOTOBIOLOGY A:CHEMISTRY

Journal of Photochemistry and Photobiology A: Chemistry 94 (1996) 267-271

Subject Index of Volume 94

Aberchrome 540

kinetics of photobleaching of Aberchrome 540 in various solvents: solvent effects, 243

Absorption

- the interaction of aliphatic amines with safranine T in aqueous solution, 237
- Absorption and scattering effects
 - photocatalytic reactors. II. Quantum efficiencies allowing for scattering effects. An experimental approximation, 173
- Acenaphthylene
- enhanced photoreactivity of acenaphthylene in water: a product and mechanism study, 149
- Aliphatic amines
- the interaction of aliphatic amines with safranine T in aqueous solution, 237

Alkane solvents

- photodechlorination of octachlorodibenzo-p-dioxin and octachlorodibenzofuran in alkane solvents in the absence and presence of triethylamine, 27
- 4-Aminobenzophenone or methanone (4-aminophenyl-phenyl) photochemical reactivity of *para*-aminobenzophenone in polar and non-polar solvents, 145

Aqueous solutions

enhanced photoreactivity of acenaphthylene in water: a product and mechanism study, 149

Aromatic thiketones

the quenching of short-lived S₂ states of aromatic thioketones by hydrocarbons. I. Important contributions of the transient effect from steady-state measurements, 119

Bichromophoric molecules

dependence of the intramolecular electronic energy transfer in bichromophoric molecules on the interchromophore bridge, 93

Cage effect

measurement of the cage effect in the photolysis of the $(\eta^{5}-C_{5}H_{4}(CH_{2})_{2}N(H)C(O)(CH_{2})_{3}CH_{3})_{2}Mo_{2}(CO)_{6}$ complex, 101 photochemical properties of systems containing cytochrome *c* and kojic acid, 163

Carbocations

substituent effects on carbocation photophysics: 9-arylxanthyl and 9arylthioxanthyl carbocations, 7

Carbonate addition

effect of carbonate addition on the photocatalytic decomposition of liquid water over ZrO₂ catalyst, 67

CA reg. 1137-41-3

photochemical reactivity of *para*-aminobenzophenone in polar and non-polar solvents, 145

CdS

formation and photocatalytic properties of Q-sized nanoparticles of various transition metal sulphides in the inner cavities of lecithin vesicles modified with sodium dodecylsulphate, 205 Charge transfer charge transfer and fluorescence behaviour of hexylamine and 7,7,8,8tetracyanoquinodinethane in compartmentalized (reverse micelle and microemulsion) and non-aqueous environments, 53 photochemistry of aqueous methyltrioxorhenium(VII). Intramolecular sensitization in the 2,2'-bipyridine adduct by ligand-to-ligand charge transfer excitation, 135 Charge transfer states photochemical reactivity of para-aminobenzophenone in polar and non-polar solvents, 145 Chloroform decomposition photocatalytic reactors. II. Quantum efficiencies allowing for scattering effects. An experimental approximation, 173 Chlorophenols on the mechanism of photocatalytic degradation of chlorinated phenols to CO2 and HCl by polyoxometalates, 77 Chlorophyll b aggregation of chlorophyll b in model systems, 43 CH radicals UV multiphoton decomposition of di-n-butyl tin diacetate: fluorescence detection of CH radicals, 89 Colloid titanium dioxide the effect of the potential of colloid titanium dioxide on the fluorescence quenching, 63 Concentration effects solvent and concentration effects on the steady state fluorescence of fluorenone, 1 Conjugated base characteristics of the reaction between semiquinone radical anion of hypocrellin A and oxygen in aprotic media, 37 Coronene a new synthesis of 5-aminolevulinic acid via dye-sensitized oxygenation of N-furfurylphthalimide, 167 CuS, formation and photocatalytic properties of Q-sized nanoparticles of various transition metal sulphides in the inner cavities of lecithin vesicles modified with sodium dodecylsulphate, 205 [2+2]-Cycloaddition reaction the photocrosslinking of styrylpyridinium salts via a [2+2]-cycloaddition reaction, 83 γ -Cyclodextrin-C₆₀ complex inclusion complex of γ -cyclodextrin--C₆₀: photophysical properties in the solid state using diffuse reflectance laser flash photolysis (DRLFP), 215 Cytochrome a photochemical properties of systems containing cytochrome c and kojic acid, 163 Decay dynamics decay dynamics of the triplet state of 2,6-dimethyl-4H-1-benzothio-

pyran-4-thione in solution, 107

Delayed luminescence aggregation of chlorophyll b in model systems, 43

Deuterium solvents

photodechlorination of octachlorodibenzo-*p*-dioxin and octachlorodibenzofuran in alkane solvents in the absence and presence of triethylamine, 27

Diffuse reflectance laser-flash photolysis

- inclusion complex of γ -cyclodextrin–C₆₀: photophysical properties in the solid state using diffuse reflectance laser flash photolysis (DRLFP), 215
- 2,6-Dimethyl-4H-1-benzothiopyran-4-thione
- decay dynamics of the triplet state of 2,6-dimethyl-4H-1-benzothiopyran-4-thione in solution, 107

Dye aggregation

- aggregation of chlorophyll b in model systems, 43
- Dye-sensitized oxygenation
- a new synthesis of 5-aminolevulinic acid via dye-sensitized oxygenation of N-furfurylphthalimide, 167

Dynamics

spectral properties and dynamics of the excited state structural relaxation of the ortho analogues of POPOP. Effective, abnormally large, Stokes shift luminophores, 15

Electron transfer

characteristics of the reaction between semiquinone radical anion of hypocrellin A and oxygen in aprotic media, 37

Excited state structural relaxation

spectral properties and dynamics of the excited state structural relaxation of the ortho analogues of POPOP. Effective, abnormally large, Stokes shift luminophores, 15

Flash photolysis

- flash photolysis study of 2,4,6-trimethylpyrylium and 2,4,6-triphenylpyrylium ions: evidence for oxoniabenzvalene intermediate, 129 Fluorenone
 - solvent and concentration effects on the steady state fluorescence of fluorenone, 1

Fluorescence

- substituent effects on carbocation photophysics: 9-arylxanthyl and 9arylthioxanthyl carbocations, 7
- charge transfer and fluorescence behaviour of hexylamine and 7,7,8,8tetracyanoquinodinethane in compartmentalized (reverse micelle and microemulsion) and non-aqueous environments, 53
- UV multiphoton decomposition of di-n-butyl tin diacetate: fluorescence detection of CH radicals, 89
- the interaction of aliphatic amines with safranine T in aqueous solution, 237

Fluorescence lifetime

aggregation of chlorophyll b in model systems, 43

Fluorescence quantum yields

- the effect of the potential of colloid titanium dioxide on the fluorescence quenching, 63
- Fluorescence quenching
- the effect of the potential of colloid titanium dioxide on the fluorescence quenching, 63

Formic acid

solution factors affecting the photocatalytic and photoelectrocatalytic degradation of formic acid using supported TiO₂ thin films, 221

Fullerene

a new synthesis of 5-aminolevulinic acid via dye-sensitized oxygenation of N-furfurylphthalimide, 167

Germylenes

- photoreaction of 7-Me₂-germanorbornadiene to tetraphenylnaphthalene, 157
- ¹H chemically induced dynamic nuclear polarization (CIDNP) photoreaction of 7-Me₂-germanorbornadiene to tetraphenylnaphthalene, 157

Heteroatomic effect

n heteroatomic effect on the photophysics of a polyphenyl system: 2,2'-dipyridylamine, 113

Heterogeneous photocatalysis

- standardization protocol of process efficiencies and activation parameters in heterogeneous photocatalysis: relative photonic efficiencies ζ_r , 191
- Hexylamine-TCNQ
 - charge transfer and fluorescence behaviour of hexylamine and 7,7,8,8tetracyanoquinodinethane in compartmentalized (reverse micelle and microemulsion) and non-aqueous environments, 53

Hydrogen peroxide

- photocatalytic degradation of trinitrotoluene and trinitrobenzene: influence of hydrogen peroxide, 231
- photodelignification of *Eucalyptus grandis* organosolv chemical pulp, 253

Hypocrellin A

characteristics of the reaction between semiquinone radical anion of hypocrellin A and oxygen in aprotic media, 37

Interaction

the interaction of aliphatic amines with safranine T in aqueous solution, 237

Interactions

ground and excited state interactions between tetrahydroharmane and pyridine, 139

Inter-chromophore bridge

dependence of the intramolecular electronic energy transfer in bichromophoric molecules on the interchromophore bridge, 93

Intramolecular electronic energy transfer

dependence of the intramolecular electronic energy transfer in bichromophoric molecules on the interchromophore bridge, 93

Kinetics

kinetics of photobleaching of Aberchrome 540 in various solvents: solvent effects, 243

Kojic acid

photochemical properties of systems containing cytochrome c and kojic acid, 163

Lignin

photodelignification of *Eucalyptus grandis* organosolv chemical pulp, 253

Lipid vesicles

formation and photocatalytic properties of Q-sized nanoparticles of various transition metal sulphides in the inner cavities of lecithin vesicles modified with sodium dodecylsulphate, 205

Liquid water

effect of carbonate addition on the photocatalytic decomposition of liquid water over ZrO₂ catalyst, 67

Microemulsions

charge transfer and fluorescence behaviour of hexylamine and 7,7,8,8tetracyanoquinodinethane in compartmentalized (reverse micelle and microemulsion) and non-aqueous environments, 53

Multiphoton dissociation

UV multiphoton decomposition of di-n-butyl tin diacetate: fluorescence detection of CH radicals, 89

Nanocrystalline TiO2

efficient photosensitization of nanocrystalline TiO₂ films by tannins and related phenolic substances, 217

Nematic liquid crystal

aggregation of chlorophyll b in model systems, 43

Non-aqueous environments

charge transfer and fluorescence behaviour of hexylamine and 7,7,8,8tetracyanoquinodinethane in compartmentalized (reverse micelle and microemulsion) and non-aqueous environments, 53 Ortho analogues of POPOP

spectral properties and dynamics of the excited state structural relaxation of the ortho analogues of POPOP. Effective, abnormally large, Stokes shift luminophores, 15

Oxoniabenzvalene

flash photolysis study of 2,4,6-trimethylpyrylium and 2,4,6-triphenylpyrylium ions: evidence for oxoniabenzvalene intermediate, 129

Oxygen

characteristics of the reaction between semiquinone radical anion of hypocrellin A and oxygen in aprotic media, 37

PbS

formation and photocatalytic properties of Q-sized nanoparticles of various transition metal sulphides in the inner cavities of lecithin vesicles modified with sodium dodecylsulphate, 205

Phenolic substances

efficient photosensitization of nanocrystalline TiO₂ films by tannins and related phenolic substances, 217

Photoacoustic spectra

aggregation of chlorophyll b in model systems, 43

- Photobleaching
 - kinetics of photobleaching of Aberchrome 540 in various solvents: solvent effects, 243
 - photodelignification of *Eucalyptus grandis* organosolv chemical pulp, 253
- Photocatalysis
 - photocatalytic degradation of trinitrotoluene and trinitrobenzene: influence of hydrogen peroxide, 231
- Photocatalysts
- on the mechanism of photocatalytic degradation of chlorinated phenols to CO_2 and HCl by polyoxometalates, 77

Photocatalytic decomposition

effect of carbonate addition on the photocatalytic decomposition of liquid water over ZrO_2 catalyst, 67

Photocatalytic degradation

- solution factors affecting the photocatalytic and photoelectrocatalytic degradation of formic acid using supported TiO₂ thin films, 221
- Photocatalytic reactors
- photocatalytic reactors. II. Quantum efficiencies allowing for scattering effects. An experimental approximation, 173
- Photochemistry
 - flash photolysis study of 2,4,6-trimethylpyrylium and 2,4,6-triphenylpyrylium ions: evidence for oxoniabenzvalene intermediate, 129
 - enhanced photoreactivity of acenaphthylene in water: a product and mechanism study, 149
- Photoconductivity
 - synthesis and photoconductivity study of VKCuPc monomer and its homopolymer, 249
- Photocrosslinking
- the photocrosslinking of styrylpyridinium salts via a [2+2]-cycloaddition reaction, 83
- Photodechlorination
- photodechlorination of octachlorodibenzo-*p*-dioxin and octachlorodibenzofuran in alkane solvents in the absence and presence of triethylamine, 27
- Photodegradation
- photocatalytic degradation of trinitrotoluene and trinitrobenzene: influence of hydrogen peroxide, 231

Photodegradation mechanism

on the mechanism of photocatalytic degradation of chlorinated phenols to CO₂ and HCl by polyoxometalates, 77

Photodimerization

enhanced photoreactivity of acenaphthylene in water: a product and mechanism study, 149

Photoelectrocatalytic degradation solution factors affecting the photocatalytic and photoelectrocatalytic degradation of formic acid using supported TiO₂ thin films, 221 Photofragment detection uV multiphoton decomposition of di-n-butyl tin diacetate: fluorescence detection of CH radicals, 89 Photoisomerization kinetics of photobleaching of Aberchrome 540 in various solvents: solvent effects, 243 Photolysis measurement of the cage effect in the photolysis of the (η^{5} - $C_5H_4(CH_2)_2N(H)C(O)(CH_2)_3CH_3)_2Mo_2(CO)_6$ complex, 101 flash photolysis study of 2,4,6-trimethylpyrylium and 2,4,6-triphenylpyrylium ions: evidence for oxoniabenzvalene intermediate, 129 photoreaction of 7-Me2-germanorbornadiene to tetraphenylnaphthalene, 157 Photooxidation enhanced photoreactivity of acenaphthylene in water: a product and mechanism study, 149 Photo-oxidation of phenols standardization protocol of process efficiencies and activation parameters in heterogeneous photocatalysis: relative photonic efficiencies ζ., 191 Photophysical properties inclusion complex of γ -cyclodextrin–C₆₀: photophysical properties in the solid state using diffuse reflectance laser flash photolysis (DRLFP). 215 Photophysics substituent effects on carbocation photophysics: 9-arylxanthyl and 9arylthioxanthyl carbocations, 7 n heteroatomic effect on the photophysics of a polyphenyl system: 2,2'-dipyridylamine, 113 Photopotential generation aggregation of chlorophyll b in model systems, 43 Photoredox photochemical properties of systems containing cytochrome c and kojic acid. 163 Photoreduction photochemical reactivity of para-aminobenzophenone in polar and non-polar solvents, 145 Photosensitization efficient photosensitization of nanocrystalline TiO₂ films by tannins and related phenolic substances, 217 Phthalocyanine polymer synthesis and photoconductivity study of VKCuPc monomer and its homopolymer, 249 Polymer film aggregation of chlorophyll b in model systems, 43 Polyoxometalates on the mechanism of photocatalytic degradation of chlorinated phenols to CO₂ and HCl by polyoxometalates, 77 Polyphenyl system n heteroatomic effect on the photophysics of a polyphenyl system: 2,2'-dipyridylamine, 113 Process efficiencies standardization protocol of process efficiencies and activation parameters in heterogeneous photocatalysis: relative photonic efficiencies $\zeta_{\rm r}, 191$ Proton transfer characteristics of the reaction between semiquinone radical anion of hypocrellin A and oxygen in aprotic media, 37 Pulp photodelignification of Eucalyptus grandis organosolv chemical pulp, 253 Pyridine ground and excited state interactions between tetrahydroharmane and pyridine, 139

Pyrylium ions

- flash photolysis study of 2,4,6-trimethylpyrylium and 2,4,6-triphenylpyrylium ions: evidence for oxoniabenzvalene intermediate, 129
- Q-sized semiconductors
 - formation and photocatalytic properties of Q-sized nanoparticles of various transition metal sulphides in the inner cavities of lecithin vesicles modified with sodium dodecylsulphate, 205
- Quantum efficiencies photocatalytic reactors. II. Quantum efficiencies allowing for scattering effects. An experimental approximation, 173

Quenching

the quenching of short-lived S₂ states of aromatic thioketones by hydrocarbons. I. Important contributions of the transient effect from steady-state measurements, 119

Relative photonic efficiencies

standardization protocol of process efficiencies and activation parameters in heterogeneous photocatalysis: relative photonic efficiencies ζ_r , 191

Reverse micelles

charge transfer and fluorescence behaviour of hexylamine and 7,7,8,8tetracyanoquinodinethane in compartmentalized (reverse micelle and microemulsion) and non-aqueous environments, 53

Rhenium complex

photochemistry of aqueous methyltrioxorhenium(VII). Intramolecular sensitization in the 2,2'-bipyridine adduct by ligand-to-ligand charge transfer excitation, 135

Rose bengal

a new synthesis of 5-aminolevulinic acid via dye-sensitized oxygenation of N-furfurylphthalimide, 167

S2 states

the quenching of short-lived S₂ states of aromatic thioketones by hydrocarbons. I. Important contributions of the transient effect from steady-state measurements, 119

Safranine T

- the interaction of aliphatic amines with safranine T in aqueous solution, 237
- Semiquinone radical anion
 - characteristics of the reaction between semiquinone radical anion of hypocrellin A and oxygen in aprotic media, 37

Sensitization

- photochemistry of aqueous methyltrioxorhenium(VII). Intramolecular sensitization in the 2,2'-bipyridine adduct by ligand-to-ligand charge transfer excitation, 135
- Singlet oxygen
- photodelignification of *Eucalyptus grandis* organosolv chemical pulp, 253

Solid state

inclusion complex of γ -cyclodextrin–C₆₀: photophysical properties in the solid state using diffuse reflectance laser flash photolysis (DRLFP), 215

Solution factor

solution factors affecting the photocatalytic and photoelectrocatalytic degradation of formic acid using supported TiO₂ thin films, 221

Solvent

kinetics of photobleaching of Aberchrome 540 in various solvents: solvent effects, 243

Solvent effects

solvent and concentration effects on the steady state fluorescence of fluorenone, 1

photochemical reactivity of para-aminobenzophenone in polar and non-polar solvents, 145 kinetics of photobleaching of Aberchrome 540 in various solvents: solvent effects, 243 Spectral properties spectral properties and dynamics of the excited state structural relaxation of the ortho analogues of POPOP. Effective, abnormally large, Stokes shift luminophores, 15 Standardization procedure standardization protocol of process efficiencies and activation parameters in heterogeneous photocatalysis: relative photonic efficiencies ζ_r, 191 Steady state fluorescence solvent and concentration effects on the steady state fluorescence of fluorenone, l Steady-state measurements the quenching of short-lived S₂ states of aromatic thicketones by hydrocarbons. I. Important contributions of the transient effect from steady-state measurements, 119 Styrylpyridinium salts the photocrosslinking of styrylpyridinium salts via a [2+2]-cycloaddition reaction, 83 Substituent effects substituent effects on carbocation photophysics: 9-arylxanthyl and 9arylthioxanthyl carbocations, 7 Tannins efficient photosensitization of nanocrystalline TiO₂ films by tannins and related phenolic substances, 217

Tetrahydrofuran

- measurement of the cage effect in the photolysis of the (η^5 -
- $C_5H_4(CH_2)_2N(H)C(O)(CH_2)_3CH_3)_2Mo_2(CO)_6$ complex, 101 Tetrahydroharmane
 - ground and excited state interactions between tetrahydroharmane and pyridine, 139
- Thioxanthylium ions

substituent effects on carbocation photophysics: 9-arylxanthyl and 9arylthioxanthyl carbocations, 7

TiO_2 thin films

solution factors affecting the photocatalytic and photoelectrocatalytic degradation of formic acid using supported TiO₂ thin films, 221

Titanium dioxide photocatalytic reactors. II. Quantum efficiencies allowing for scattering effects. An experimental approximation, 173

photocatalytic degradation of trinitrotoluene and trinitrobenzene: influence of hydrogen peroxide, 231

Triethylamine

photodechlorination of octachlorodibenzo-p-dioxin and octachlorodibenzofuran in alkane solvents in the absence and presence of triethylamine, 27

Trinitrobenzene

photocatalytic degradation of trinitrotoluene and trinitrobenzene: influence of hydrogen peroxide, 231

Trinitrotoluene

photocatalytic degradation of trinitrotoluene and trinitrobenzene: influence of hydrogen peroxide, 231

Triplet state

decay dynamics of the triplet state of 2,6-dimethyl-4H-1-benzothiopyran-4-thione in solution, 107

Vectorial electron transfer

formation and photocatalytic properties of Q-sized nanoparticles of various transition metal sulphides in the inner cavities of lecithin vesicles modified with sodium dodecylsulphate, 205

Vinylcarbazole bonded phthalocyanine

synthesis and photoconductivity study of VKCuPc monomer and its homopolymer, 249

Xanthylium ions

substituent effects on carbocation photophysics: 9-arylxanthyl and 9arylthioxanthyl carbocations, 7 ZnS

formation and photocatalytic properties of Q-sized nanoparticles of various transition metal sulphides in the inner cavities of lecithin vesicles modified with sodium dodecylsulphate, 205 ZrO₂ catalyst

effect of carbonate addition on the photocatalytic decomposition of liquid water over ZrO₂ catalyst, 67