

## Subject Index of Volume 160

- Acetaldehyde  
Photocatalytic degradation of gaseous acetaldehyde on TiO<sub>2</sub> with photodeposited metals and metal oxides, 93  
Photocatalysis of sprayed nitrogen-containing Fe<sub>2</sub>O<sub>3</sub>–ZnO and WO<sub>3</sub>–ZnO composite powders in gas-phase acetaldehyde decomposition, 203
- Adamantane  
TiO<sub>2</sub>-photocatalyzed oxidation of adamantane in solutions containing oxygen or hydrogen peroxide, 3
- Additive  
Influence of pyrimidine additives in electrolytic solution on dye-sensitized solar cell performance, 171
- Ag<sup>+</sup>  
In situ characterization of the Ag<sup>+</sup> ion-exchanged zeolites and their photocatalytic activity for the decomposition of N<sub>2</sub>O into N<sub>2</sub> and O<sub>2</sub> at 298 K, 43
- Alkali metal cation  
Experimental study and ab initio molecular orbital calculation on the photolysis of *n*-butyrophenone included within the alkali metal cation-exchanged ZSM-5 zeolite, 37
- Anatase  
TiO<sub>2</sub>-photocatalyzed oxidation of adamantane in solutions containing oxygen or hydrogen peroxide, 3
- APCVD technique  
Thick titanium dioxide films for semiconductor photocatalysis, 185
- Aqueous solution  
Development of a novel photocatalytic reaction system for oxidative decomposition of volatile organic compounds in water with enhanced aeration, 121
- Au(111)  
Photo-induced metal deposition onto a Au electrode in solution, 19
- 1,1'-Binaphthalene-2,2'-diol  
Photochemical hydrogen evolution from aqueous triethanolamine solutions sensitized by binaphthol-modified titanium(IV) oxide under visible-light irradiation, 61
- Butyrophenone  
Experimental study and ab initio molecular orbital calculation on the photolysis of *n*-butyrophenone included within the alkali metal cation-exchanged ZSM-5 zeolite, 37
- Cadmium sulfide  
Layer-by-layer accumulation of cadmium sulfide core—silica shell nanoparticles and size-selective photoetching to make adjustable void space between core and shell, 69
- CO<sub>2</sub> reduction  
Sonophotocatalysis of water in a CO<sub>2</sub>–Ar atmosphere, 11
- Core–shell structure  
Layer-by-layer accumulation of cadmium sulfide core—silica shell nanoparticles and size-selective photoetching to make adjustable void space between core and shell, 69
- Coupled semiconductors  
Photocatalysis of sprayed nitrogen-containing Fe<sub>2</sub>O<sub>3</sub>–ZnO and WO<sub>3</sub>–ZnO composite powders in gas-phase acetaldehyde decomposition, 203
- Cu nanoparticle  
Photo-induced metal deposition onto a Au electrode in solution, 19
- Cyanines  
Singlet oxygen generation ability of squarylium cyanine dyes, 159
- Cyclodextrin  
Controlled mass transport as a means for obtaining selective photocatalysis, 77
- Decolorization  
Photocatalytic decolorization and mineralization of malachite green in an aqueous suspension of titanium(IV) oxide nano-particles under aerated conditions: correlation between some physical properties and their photocatalytic activity, 99
- Dye-sensitized solar cell  
Influence of pyrimidine additives in electrolytic solution on dye-sensitized solar cell performance, 171
- Electrolytic solution  
Influence of pyrimidine additives in electrolytic solution on dye-sensitized solar cell performance, 171
- Electron transfer  
Participation of chromophore pairs in photoinduced intramolecular electron transfer for a naphthalimide spermine conjugate, 139
- Electrostatic interaction  
Experimental study and ab initio molecular orbital calculation on the photolysis of *n*-butyrophenone included within the alkali metal cation-exchanged ZSM-5 zeolite, 37
- Energy conversion  
Fruit extracts and ruthenium polypyridinic dyes for sensitization of TiO<sub>2</sub> in photoelectrochemical solar cells, 87
- 17β-estradiol  
Photocatalytic decomposition of estrogens in aquatic environment by reciprocating immersion of TiO<sub>2</sub>-modified polytetrafluoroethylene mesh sheets, 115
- Estron  
Photocatalytic decomposition of estrogens in aquatic environment by reciprocating immersion of TiO<sub>2</sub>-modified polytetrafluoroethylene mesh sheets, 115
- Fenitrothion insecticide  
Photocatalytic removal of the insecticide fenitrothion from water sensitized with TiO<sub>2</sub>, 195
- Fluoride  
Effects of surface fluorination of TiO<sub>2</sub> on the photocatalytic degradation of tetramethylammonium, 55
- FTIR  
Photocatalytic oxidation of toluene on irradiated TiO<sub>2</sub>: comparison of degradation performance in humidified air, in water and in water containing a zwitterionic surfactant, 105
- H<sub>2</sub> evolution  
Heteropolyacid-encapsulated TiHY zeolite as an inorganic photosynthetic reaction center mimicking the plant systems, 181

- Heterogeneous photocatalysis  
 Photocatalytic oxidation of toluene on irradiated TiO<sub>2</sub>: comparison of degradation performance in humidified air, in water and in water containing a zwitterionic surfactant, 105
- Heteropolyacid  
 Heteropolyacid-encapsulated TiHY zeolite as an inorganic photosynthetic reaction center mimicking the plant systems, 181
- Hexavalent chromium  
 Mechanism of photochemical reduction of chromium(VI) by alcohols and its environmental aspects, 163
- Hydrogen peroxide  
 TiO<sub>2</sub>-photocatalyzed oxidation of adamantane in solutions containing oxygen or hydrogen peroxide, 3
- Infrared absorption  
 Effects of accumulated electrons on the decay kinetics of photogenerated electrons in Pt/TiO<sub>2</sub> photocatalyst studied by time-resolved infrared absorption spectroscopy, 33
- Kinetics  
 Effects of accumulated electrons on the decay kinetics of photogenerated electrons in Pt/TiO<sub>2</sub> photocatalyst studied by time-resolved infrared absorption spectroscopy, 33
- Laser flash photolysis  
 Participation of chromophore pairs in photoinduced intramolecular electron transfer for a naphthalimide spermine conjugate, 139
- Layer-by-layer accumulation  
 Layer-by-layer accumulation of cadmium sulfide core—silica shell nanoparticles and size-selective photoetching to make adjustable void space between core and shell, 69
- Luminescent rigidochromism  
 Luminescent rigidochromism of *fac*-[Re(CO)<sub>3</sub>(phen)(*cis*-bpe)]<sup>+</sup> and its binuclear complex as photosensors, 27
- Mediation by aliphatic alcohols  
 Mechanism of photochemical reduction of chromium(VI) by alcohols and its environmental aspects, 163
- Metal deposition  
 Photocatalytic degradation of gaseous acetaldehyde on TiO<sub>2</sub> with photodeposited metals and metal oxides, 93
- Metal nano-dot  
 Photo-induced metal deposition onto a Au electrode in solution, 19
- Methane  
 Active sites on silica-supported zirconium oxide for photoinduced direct methane conversion and photoluminescence, 47
- Methanol  
 Effects of accumulated electrons on the decay kinetics of photogenerated electrons in Pt/TiO<sub>2</sub> photocatalyst studied by time-resolved infrared absorption spectroscopy, 33
- Mineralization  
 Photocatalytic decolorization and mineralization of malachite green in an aqueous suspension of titanium(IV) oxide nano-particles under aerated conditions: correlation between some physical properties and their photocatalytic activity, 99
- Molecular orbital calculation  
 Experimental study and ab initio molecular orbital calculation on the photolysis of *n*-butyrophenone included within the alkali metal cation-exchanged ZSM-5 zeolite, 37
- Nanocrystalline  
 Characterisation of the photocatalyst Pilkington Activ<sup>TM</sup>: a reference film photocatalyst?, 213
- Nanoparticles  
 Layer-by-layer accumulation of cadmium sulfide core—silica shell nanoparticles and size-selective photoetching to make adjustable void space between core and shell, 69
- Naphthalimide photochemistry  
 Participation of chromophore pairs in photoinduced intramolecular electron transfer for a naphthalimide spermine conjugate, 139
- Natural dyes  
 Fruit extracts and ruthenium polypyridinic dyes for sensitization of TiO<sub>2</sub> in photoelectrochemical solar cells, 87
- Nitrogen-doping  
 Photocatalysis of sprayed nitrogen-containing Fe<sub>2</sub>O<sub>3</sub>-ZnO and WO<sub>3</sub>-ZnO composite powders in gas-phase acetaldehyde decomposition, 203
- NMR spectrometry  
 Photocatalytic removal of the insecticide fenitrothion from water sensitized with TiO<sub>2</sub>, 195
- N<sub>2</sub>O decomposition  
 In situ characterization of the Ag<sup>+</sup> ion-exchanged zeolites and their photocatalytic activity for the decomposition of N<sub>2</sub>O into N<sub>2</sub> and O<sub>2</sub> at 298 K, 43
- O<sub>2</sub> photosorption  
 Studying TiO<sub>2</sub> coatings on silica-covered glass by O<sub>2</sub> photosorption measurements and FTIR-ATR spectrometry. Correlation with the self-cleaning efficacy, 127
- O<sub>2</sub> production  
 Sonophotocatalysis of water in a CO<sub>2</sub>-Ar atmosphere, 11
- Oxygen-permeable membrane  
 Development of a novel photocatalytic reaction system for oxidative decomposition of volatile organic compounds in water with enhanced aeration, 121
- 1-Phenoxynaphthacenequinone  
 Synthesis and photochromism of polymer-bound phenoxyquinone derivatives, 151
- Photocatalysis  
 In situ characterization of the Ag<sup>+</sup> ion-exchanged zeolites and their photocatalytic activity for the decomposition of N<sub>2</sub>O into N<sub>2</sub> and O<sub>2</sub> at 298 K, 43  
 Active sites on silica-supported zirconium oxide for photoinduced direct methane conversion and photoluminescence, 47  
 Controlled mass transport as a means for obtaining selective photocatalysis, 77  
 Studying TiO<sub>2</sub> coatings on silica-covered glass by O<sub>2</sub> photosorption measurements and FTIR-ATR spectrometry. Correlation with the self-cleaning efficacy, 127  
 Thick titanium dioxide films for semiconductor photocatalysis, 185  
 Photocatalysis of sprayed nitrogen-containing Fe<sub>2</sub>O<sub>3</sub>-ZnO and WO<sub>3</sub>-ZnO composite powders in gas-phase acetaldehyde decomposition, 203  
 Characterisation of the photocatalyst Pilkington Activ<sup>TM</sup>: a reference film photocatalyst?, 213
- Photocatalyst  
 Effects of accumulated electrons on the decay kinetics of photogenerated electrons in Pt/TiO<sub>2</sub> photocatalyst studied by time-resolved infrared absorption spectroscopy, 33  
 Photocatalytic decolorization and mineralization of malachite green in an aqueous suspension of titanium(IV) oxide nano-particles under aerated conditions: correlation between some physical properties and their photocatalytic activity, 99  
 Photocatalytic decomposition of estrogens in aquatic environment by reciprocating immersion of TiO<sub>2</sub>-modified polytetrafluoroethylene mesh sheets, 115
- Photocatalytic degradation  
 Effects of surface fluorination of TiO<sub>2</sub> on the photocatalytic degradation of tetramethylammonium, 55  
 Photocatalytic degradation of gaseous acetaldehyde on TiO<sub>2</sub> with photodeposited metals and metal oxides, 93

- Photocatalytic oxidation  
Development of a novel photocatalytic reaction system for oxidative decomposition of volatile organic compounds in water with enhanced aeration, 121
- Photocatalytic reaction  
Photochemical hydrogen evolution from aqueous triethanolamine solutions sensitized by binaphthol-modified titanium(IV) oxide under visible-light irradiation, 61
- Photocatalytic removal  
Photocatalytic removal of the insecticide fenitrothion from water sensitized with TiO<sub>2</sub>, 195
- Photochromism  
Synthesis and photochromism of polymer-bound phenoxyquinone derivatives, 151
- Photodynamic therapy  
Singlet oxygen generation ability of squarylium cyanine dyes, 159
- Photoelectrochemical solar cell  
Fruit extracts and ruthenium polypyridinic dyes for sensitization of TiO<sub>2</sub> in photoelectrochemical solar cells, 87
- Photoetching  
Layer-by-layer accumulation of cadmium sulfide core—silica shell nanoparticles and size-selective photoetching to make adjustable void space between core and shell, 69
- Photo-induced deposition  
Photo-induced metal deposition onto a Au electrode in solution, 19
- Photoinduced direct methane conversion  
Active sites on silica-supported zirconium oxide for photoinduced direct methane conversion and photoluminescence, 47
- Photoinduced electron transfer (PET)  
Mechanism of photochemical reduction of chromium(VI) by alcohols and its environmental aspects, 163
- Photoisomerization  
Luminescent rigidochromism of *fac*-[Re(CO)<sub>3</sub>(phen)(*cis*-bpe)]<sup>+</sup> and its binuclear complex as photosensors, 27
- Photoluminescence  
Active sites on silica-supported zirconium oxide for photoinduced direct methane conversion and photoluminescence, 47
- Photolysis  
Experimental study and ab initio molecular orbital calculation on the photolysis of *n*-butyrophenone included within the alkali metal cation-exchanged ZSM-5 zeolite, 37
- Photooxidation  
TiO<sub>2</sub>-photocatalyzed oxidation of adamantane in solutions containing oxygen or hydrogen peroxide, 3
- Photoreduction  
Mechanism of photochemical reduction of chromium(VI) by alcohols and its environmental aspects, 163
- Photosensor  
Luminescent rigidochromism of *fac*-[Re(CO)<sub>3</sub>(phen)(*cis*-bpe)]<sup>+</sup> and its binuclear complex as photosensors, 27
- Photosynthesis  
Sonophotocatalysis of water in a CO<sub>2</sub>-Ar atmosphere, 11
- Plasmon  
Photo-induced metal deposition onto a Au electrode in solution, 19
- Polymer  
Synthesis and photochromism of polymer-bound phenoxyquinone derivatives, 151
- Pt/TiO<sub>2</sub>  
Effects of accumulated electrons on the decay kinetics of photogenerated electrons in Pt/TiO<sub>2</sub> photocatalyst studied by time-resolved infrared absorption spectroscopy, 33
- Pyrimidines  
Influence of pyrimidine additives in electrolytic solution on dye-sensitized solar cell performance, 171
- Radical polymerization  
Synthesis and photochromism of polymer-bound phenoxyquinone derivatives, 151
- Rhenium carbonyl complex  
Luminescent rigidochromism of *fac*-[Re(CO)<sub>3</sub>(phen)(*cis*-bpe)]<sup>+</sup> and its binuclear complex as photosensors, 27
- Rutile  
TiO<sub>2</sub>-photocatalyzed oxidation of adamantane in solutions containing oxygen or hydrogen peroxide, 3
- Semiconductor  
Characterisation of the photocatalyst Pilkington Activ™: a reference film photocatalyst?, 213
- Sensitization  
Photochemical hydrogen evolution from aqueous triethanolamine solutions sensitized by binaphthol-modified titanium(IV) oxide under visible-light irradiation, 61
- Sequestering agent  
Photocatalytic oxidation of toluene on irradiated TiO<sub>2</sub>: comparison of degradation performance in humidified air, in water and in water containing a zwitterionic surfactant, 105
- Silica-supported zirconium oxide  
Active sites on silica-supported zirconium oxide for photoinduced direct methane conversion and photoluminescence, 47
- Singlet oxygen  
Singlet oxygen generation ability of squarylium cyanine dyes, 159
- Sol-gel film  
Thick titanium dioxide films for semiconductor photocatalysis, 185
- Sonophotocatalysis  
Sonophotocatalysis of water in a CO<sub>2</sub>-Ar atmosphere, 11
- Spermine conjugate  
Participation of chromophore pairs in photoinduced intramolecular electron transfer for a naphthalimide spermine conjugate, 139
- Spray pyrolysis  
Photocatalysis of sprayed nitrogen-containing Fe<sub>2</sub>O<sub>3</sub>-ZnO and WO<sub>3</sub>-ZnO composite powders in gas-phase acetaldehyde decomposition, 203
- Squarylium cyanine dyes  
Singlet oxygen generation ability of squarylium cyanine dyes, 159
- STM  
Photo-induced metal deposition onto a Au electrode in solution, 19
- Supported photocatalysts  
Development of a novel photocatalytic reaction system for oxidative decomposition of volatile organic compounds in water with enhanced aeration, 121
- Surface complex  
Photochemical hydrogen evolution from aqueous triethanolamine solutions sensitized by binaphthol-modified titanium(IV) oxide under visible-light irradiation, 61
- Surface speciation  
Effects of surface fluorination of TiO<sub>2</sub> on the photocatalytic degradation of tetramethylammonium, 55
- Surface-diffusion  
Controlled mass transport as a means for obtaining selective photocatalysis, 77
- Tetramethylammonium  
Effects of surface fluorination of TiO<sub>2</sub> on the photocatalytic degradation of tetramethylammonium, 55
- Thermocatalyst  
Photocatalytic degradation of gaseous acetaldehyde on TiO<sub>2</sub> with photodeposited metals and metal oxides, 93
- TiHY zeolite  
Heteropolyacid-encapsulated TiHY zeolite as an inorganic photosynthetic reaction center mimicking the plant systems, 181

- TiO<sub>2</sub>
- TiO<sub>2</sub>-photocatalyzed oxidation of adamantane in solutions containing oxygen or hydrogen peroxide, 3
  - Sonophotocatalysis of water in a CO<sub>2</sub>-Ar atmosphere, 11
  - Effects of surface fluorination of TiO<sub>2</sub> on the photocatalytic degradation of tetramethylammonium, 55
  - Photocatalytic degradation of gaseous acetaldehyde on TiO<sub>2</sub> with photodeposited metals and metal oxides, 93
  - Photocatalytic oxidation of toluene on irradiated TiO<sub>2</sub>: comparison of degradation performance in humidified air, in water and in water containing a zwitterionic surfactant, 105
  - Photocatalytic removal of the insecticide fenitrothion from water sensitized with TiO<sub>2</sub>, 195
- TiO<sub>2</sub> sensitization
- Fruit extracts and ruthenium polypyridinic dyes for sensitization of TiO<sub>2</sub> in photoelectrochemical solar cells, 87
- Titanium dioxide
- Controlled mass transport as a means for obtaining selective photocatalysis, 77
  - Photocatalytic decomposition of estrogens in aquatic environment by reciprocating immersion of TiO<sub>2</sub>-modified polytetrafluoroethylene mesh sheets, 115
  - Thick titanium dioxide films for semiconductor photocatalysis, 185
  - Characterisation of the photocatalyst Pilkington Activ™: a reference film photocatalyst?, 213
- Titanium(IV) oxide
- Photochemical hydrogen evolution from aqueous triethanolamine solutions sensitized by binaphthol-modified titanium(IV) oxide under visible-light irradiation, 61
  - Photocatalytic decolorization and mineralization of malachite green in an aqueous suspension of titanium(IV) oxide nano-particles under aerated conditions: correlation between some physical properties and their photocatalytic activity, 99
  - Development of a novel photocatalytic reaction system for oxidative decomposition of volatile organic compounds in water with enhanced aeration, 121
- Toluene degradation
- Photocatalytic oxidation of toluene on irradiated TiO<sub>2</sub>: comparison of degradation performance in humidified air, in water and in water containing a zwitterionic surfactant, 105
- Visible light
- Photochemical hydrogen evolution from aqueous triethanolamine solutions sensitized by binaphthol-modified titanium(IV) oxide under visible-light irradiation, 61
- Void space
- Layer-by-layer accumulation of cadmium sulfide core—silica shell nanoparticles and size-selective photoetching to make adjustable void space between core and shell, 69
- Volatile organic compounds
- Development of a novel photocatalytic reaction system for oxidative decomposition of volatile organic compounds in water with enhanced aeration, 121
- Zeolite
- Experimental study and ab initio molecular orbital calculation on the photolysis of *n*-butyrophenone included within the alkali metal cation-exchanged ZSM-5 zeolite, 37
  - In situ characterization of the Ag<sup>+</sup> ion-exchanged zeolites and their photocatalytic activity for the decomposition of N<sub>2</sub>O into N<sub>2</sub> and O<sub>2</sub> at 298 K, 43
- Zinc oxide
- Photocatalysis of sprayed nitrogen-containing Fe<sub>2</sub>O<sub>3</sub>-ZnO and WO<sub>3</sub>-ZnO composite powders in gas-phase acetaldehyde decomposition, 203
- Z-scheme
- Heteropolyacid-encapsulated TiHY zeolite as an inorganic photosynthetic reaction center mimicking the plant systems, 181