

Table of Contents

Preface, Committees, Sponsors and Organizers

Chapter 1: Metals, Alloys and Intermetallic Compounds

The Thermal-Aging Effect on the Microstructure Evolution and Shear Strength of the Sn-Rich Au-Sn Soldering between Al₂Cu and Si Substrate in Microelectronics P. Athichalinthorn, J. Darayen, W. Puttichaem, R. Techapiesancharoenkij and B. Lohwongwatana	3
Effect of Cooling Rate on the Microstructural and Mechanical Properties of Sn-0.3Ag-0.7Cu-0.05Ni Solder Alloy K. Inkong and P. Sungkhaphaitoon	9
Effect of Si Content on Mechanical Properties of Ti-Si-N Ternary Alloys Prepared by Spark Plasma Sintering P. Khemglad, J. Kajornchaiyakul, K. Kondoh and A. Khantachawana	14
Properties of Sintered Bronze-Graphite Containing Natural Anhydrite C. Auechalitanukul, R.C. McCuiston, B. Bunlangsup, C. Naikorn and S. Tapanau	19
Properties of Sintered Bronze-Graphite Containing Calcium Sulfate Derived from Waste Plaster Molds C. Auechalitanukul, R.C. McCuiston, B. Bunlangsup, C. Naikorn and S. Tapanau	25
The Effect of Bottom Ash Additions on the Properties of Sintered Bronze-Graphite Composites U. Pantulap, C. Auechalitanukul and R.C. McCuiston	31
Effect of Compaction Pressure and Sintering Time on the Properties of Sintered Cu-10Sn Bronze N. Nakrod, R.C. McCuiston and C. Auechalitanukul	37
Modification of Microstructure and Tensile Property of Sintered Fe-Cr-Mo-C Steel by Nickel Addition N. Tosangthum, M. Morakotjinda, R. Krataitong, P. Wila, T. Yodkaew and R. Tongsri	42
Microstructure, Hardness and Wear Properties of Sintered Fe-Mo-Si-C Steels with Spheroidal Graphite Iron/Compacted Graphite Iron-Like K. Ruangchai, A. Wiengmoon, M. Morakotjinda, R. Krataitong, D. Tanprayoon, T. Yotkaew, N. Tosangthum, U. Patakham and R. Tongsri	47
Effect of Aluminum Addition on Al_xCoFeMnNiZn Multi-Component Production A. Suksamran, N. Worauaychai, N. Tosangthum, T. Yodkaew, R. Krataitong, P. Wila and R. Tongsri	53
Mechanical Properties of As-Exposed Al-SiC_p Composite Fabricated by Powder Injection Moulding T. Patcharawit, A. Ngeekoa, W. Tongkerd, S. Takhampom, S. Lapkeaw and N. Chuankrerkkul	60

Chapter 2: Corrosion, Coatings, Surface Engineering and Heat Treatment

Hardfacing of 3.5% Chromium Cast Steel by Flux Cored Wire Arc Welding Process T. Treeparee and P. Muangjunburee	73
Effect of Impingement Angle on Erosion Resistance of HVOF Sprayed WC-10Co-4Cr Coating on CA6NM Steel A. Hamilton, A. Sharma and U. Pandel	79
Structural Characterization of Reactive DC Magnetron Co-Sputtered Nanocrystalline CrAlN Thin Film A. Khambun, A. Buranawong and N. Witit-Anun	84
Solid Particle Erosion Resistance of Thermal Sprayed Nickel Alloy Coating V. Lertvijitpun and P. Lertvijitpun	88
Sintered Metal Microstructure Influenced by Deep Rolling and Carburizing Processes S.Y. Primee	96

Corrosion Behavior of Al-Zn-In Sacrificial Anode Alloys Produced by Conventional Casting and Semi-Solid Metal Casting Processes C. Puridetvorakul, N. Poolthong and N. Tareelap	101
Development of Pitting Corrosion Monitoring Device under Sodium Chloride Droplet by Means of Wet-Dry Cyclic Method W. Banthukul, N. Sathirachinda Palsson, E. Viyanit and A. Rodchanarowan	107
Improvement of Structural, Morphological and Mechanical Properties of CrN_x Sputtered Thin Films by Vacuum Annealing Process I. Nualkham, R. Sakdanuphab and A. Sakulkalavek	113
Study of Microstructure and Corrosion Resistance of Zinc Electrodeposits before and after Black Chromating K. Saengkiattiyut, P. Rattanawaleedirojn, A. Thueploy, J. Wanichsampan and Y. Boonyongmaneerat	119
Factors Affecting on the Corrosion Resistance of Electroless Ni-Zn-P Coated Steel P. Rattanawaleedirojn, K. Saengkiattiyut, Y. Boonyongmaneerat and J. Wanichsampan	125
Effect of Post-Curing Temperature and Mechanical Surface Treatment on Shear-Bond Strength of Asbestos-Free Brake Pad D. Pupan, C. Suvanjumrat and W. Chookaew	131
Effects of Air Exposure Time and Annealing Temperature on Superhydrophobic Surface of Titanium Dioxide Films S.T. Khlayboonme and W. Thowladda	137

Chapter 3: Processing Technologies and Equipments

Meta-Heuristics for Engineering Optimisation - Applications to Metal Forming Processes N. Pholdee and S. Bureerat	145
Stk₅₀Eu P. Supachart, S. Rattanaphan, P. Soison, T. Swasdisevi and P. Wongsarivej	151
Development and Characterizations of a Projection Stereolithography P. Srisungsitthisunti and T. Kaewwichit	160
Formability Analysis of Fukui Stretch-Drawing and Square Cup Drawing Using Strain and Stress Based Forming Limit Curves S. Panich, N. Seemuang and T. Chaimongkon	167
Effect of Feed-Flow Rate in a Solid-Liquid Hydrocyclone Based on Total Solid Recovery Equation P. Soison, P. Supachart and P. Wongsarivej	173
Bending Limit Curves in Sheet Metal Bending Evaluation S. Panich	180
Fastenerless-Riveting Utilizing Friction Stir Forming for Dissimilar Materials Joining T. Ohashi, H.M. Tabatabaei and T. Nishihara	186

Chapter 4: Advanced Technologies for Materials Testing and Observation

X-Ray Diffraction Analysis of ZnO Particles Prepared by Microwave Plasma P. Chakartnarodom, N. Kongkajun and W. Prakaypan	195
Influence of Scanning Parameters on X-Ray Diffraction Peaks of Copper P. Chakartnarodom, N. Kongkajun and E.A. Laitila	202
The Investigation of Ultrasonic Energy Attenuation in AISI 316 Stainless Steel Weld Joint M. Noipitak and B. Khwansri	207
Stress Measurement in Carbon Steel by Magnetic Barkhausen Noise Technique M. Noipitak	213

Chapter 5: Polymers and Composites

Influence of Molecular Weight on the Non-Isothermal Melt Crystallization of Biodegradable Poly(D-Lactide)	
W. Limwanich, S. Phetsuk, P. Meepowpan, N. Kungwan and W. Punyodom	221
Gelatin Films and its Pregelatinized Starch Blends: Effect of Plasticizers	
S. Wannaphatchaiyong, P. Boonme and W. Pichayakorn	230
Medicated Pressure Sensitive Adhesive Patches from STR-5L Block Rubber: Effect of Preparation Process	
E. Kalkornsurapranee, R. Waiprib and W. Pichayakorn	236
Effect of Calcium Carbonate on Crystallization Behavior and Morphology of Poly(3-Hydroxybutyrate-co-3-Hydroxyvalerate)	
S. Duangphet, D. Szegda, K. Tarverdi and J. Song	242
Simulation of Irradiation-Based Processing System for Natural Rubber Vulcanization	
K. Kosaentor, E. Kongmon, C. Thongbai and S. Rimjaem	252
The Smart Blending for Multilayer Structure of PLA/EVOH	
P. Pongmuksuwan and W. Harnnarongchai	258
Morphology and Properties of Polyoxymethylene/Polypropylene/Microcrystalline Cellulose Composites	
N. Yasumlee and S. Wacharawichanant	264
Effect of Synthesized Ag Nanoparticles by Using the Different Amounts of Polyvinylpyrrolidone for Ag-Natural Rubber Hybrid Sheets and their Antibacterial Properties	
W. Prasanseang, C. Sriwong and K. Choojun	270
Physical and Mechanical Properties of Wood Plastic Composites from Teak Wood Sawdust and High Density Polyethylene (HDPE)	
D. Bootkul, T. Butkul and S. Intarasiri	277
Effect of Poly(D-Lactic Acid)-co-Polyethylene Glycol on the Crystallization of Poly(L-Lactic Acid)	
P. Kaewlamyai and A. Lertworasirikul	283
Effect of Octenyl Succinate Starch on Properties of Tapioca Thermoplastic Starch Blends	
M. Phiriyawirut, T. Duangsuwan, N. Uenghuab and C. Meena	290
Preparation of TiO₂/WO₃ Composite Nanofibers by Electrospinning	
P. Chakornpradit, M. Phiriyawirut and V. Meeyoo	296
Effect of Poly(Hexamethylene Succinamide) on Crystallization of Poly(L-Lactic Acid)	
P. Yueagyen and A. Lertworasirikul	302
Mechanical Behavior of Polystyrene-Grafted Natural Rubber/Natural Rubber Blend: Effect of Polystyrene Grafting Percentage	
T. Hongkeab and P. Dittanet	308
Degradation of Silica-Reinforced Natural Rubber by UV Radiation and Humidity in Soil	
M. Reowdecha, C. Sukthaworn, P. Dittanet, N. Moonprasith, T.N. Lampang, S. Loykulnant and P. Prapainainar	314
Degradation Test of Natural Rubber/Chitosan Composite	
C. Sukthaworn, M. Reowdecha, P. Dittanet, N. Moonprasith, T.N. Lampang, S. Loykulnant and P. Prapainainar	320
Low Haze and Antifog Performance of 2-Layer Poly(Lactic Acid) Based Films	
P. Liewchirakorn, P. Suthisamphat, W. Chinsirikul and D. Aht-Ong	326
Influence of Pyrolytic Carbon Black Prepared from Waste Tires on Mechanical Properties of Natural Rubber Vulcanizates	
S. Prasertsri and S. Srichan	332
Mechanical and Thermal Properties of PLA Melt Blended with High Molecular Weight PEG Modified with Peroxide and Organo-Clay	
C. Thongpina, C. Tippuwanan, K. Buaksuntear and T. Chuawittayawuta	337
Poly(Lactic Acid)-Polybutylene Succinate-Activated Carbon Composite Foams	
K. Ketkul, P. Threepopnatkul, D. Aussawasathien and K. Hrimchum	344

Chapter 6: Ceramics and Functional Metal Oxides

Development of Water Assisted Solid State Reaction for the Ceramic Materials K. Toda, S.W. Kim, T. Hasegawa, M. Watanabe, T. Kaneko, A. Toda, R. Yamanashi, S. Kumagai, M. Muto, A. Itadani, M. Sato, K. Uematsu, T. Ishigaki, J. Koide, M. Toda, E. Kawakami, Y. Kudo, T. Masaki and D.H. Yoon	353
Slip Degassing to Improve the Properties of Slip Cast and Reaction Bonded Si₃N₄ K. Somton, M. Rodchom, T. Wonglom, K. Dateraksa and R.C. McCuiston	358
Fabrication of Low Cost Membrane from Anodic Aluminum Oxide P. Sumtong and A. Eiad-Ua	363
Synthesis of Nanocrystalline Cobalt Ferrite by the Sonochemical Method in Highly Basic Aqueous Solution P. Pasupong, K. Choojun, N. Vittayakorn and P. Seeharaj	368
The Effect of Zirconium Oxide on Properties and Crystallization of Soda-Lime Silicate Glass E. Meechoowas, S. Suriyoporn, U. Pantulap and K. Tapasa	374
Structure, Magnetic Property and Energy Band Gap of Fe-Doped NiO Nanoparticles Prepared by Co-Precipitation Method B. Toboonsung	379
Piezoelectric and Ferroelectric Properties of KNbO₃ Added Bi_{0.5}Na_{0.5}TiO₃ Ceramics P. Kantha, P. Raksa, M. Unruan, T. Tunkasiri, P. Jaiban and N. Pisitpipathsin	384
Chemical Composition-Microstructure-Dielectric Constant Relations of Mg-Doped Calcium Titanate Synthesized by Solid State Reaction Technique O. Jongprateep, N. Sato, J. Palomas and P. Jantaratana	390
Development of Glass-Ceramics from Soda Lime Silica Glass Waste by Direct Sintering Method for Opal Imitation D. Bootkul and S. Intarasiri	397
Effects of Aluminium Contents and Consolidation Techniques on Chemical Composition, Microstructure and Dielectric Properties of Strontium Titanate J. Palomas and O. Jongprateep	403
Influence of Temperature and Alkaline Activation for Synthesis Zeolite A from Natural Kaolin P. Thungngern, P. Amnaphiang, P. Asawaworarit, V. Goodwin, N. Chollacoop and A. Eiad-Ua	410
1-xCa_x)(Ti_{0.92}Sn_{0.08})O₃ Lead-Free Ceramics O. Wattanapradit and P. Bomlai	417

Chapter 7: Materials and Technologies for Electronics and in Energy Production

r-GO/MWCNTs Nanocomposite Film as Electrode Material for Supercapacitor S. Noothongkaew, O. Thumthan, P. Chamninok and K.S. An	425
Pre-Immobilization of Anaerobic Mixed Culture on Electrode of the Upflow Bio-Filter Circuit Microbial Fuel Cell C. Sinprasertchok, N. Chollacoop, S. Charojrochkul and K. Sombatmankhong	431
The Study of Crystallization of Polyfluorene and Fullerene Derivatives in Semiconducting Layer of Organic Solar Cells W. Koetnuyom, A. Keawprajak, K. Jiramitmongkon and U. Asawapirom	435
Two-Stage Combustion Burner Using Used Engine Oil as Fuel T. Lekpradit and A. Namkhat	442
Pelletization of Iron Oxide Based Sorbents for Hydrogen Sulfide Removal P. Janetaisong, V. Lailuck and S. Supasitmongkol	449
BaO-Al₂O₃-SiO₂-B₂O₃ Glass-Ceramic SOFCs Sealant: Effect of ZnO Additive N. Laorodphan and J. Ayawanna	455
Microwave-Assisted Preparation of Sodium Silicate as Biodiesel Catalyst from Rice Husk Ash J. Kumchompoo, W. Wongwai and R. Puntharod	461
Characterisation of NiO-YSZ Porous Anode-Support for Solid Oxide Fuel Cells Fabricated by Ceramic Injection Moulding N. Chuankrerkkul, S. Chauoon, M. Meepho and R. Pornprasertsuk	467

Process Optimization and Characterization of YSZ Thin Film Electrolyte on Anode Substrate Prepared by Electrophoretic Deposition Technique	
M. Meepho, N. Chuankrerkkul, S. Chauoon and R. Pornprasertsuk	471
The Effect of Calcium-Based Salt on Hydrothermal Carbonization of Corncob	
P. Reangchim, K. Nakason, N. Viriya-Empikul and A. Eiad-Ua	477
Influence of Bi₂O₃ on Crystalline Phase Content and Thermal Properties of Akermanite and Diopside Based Glass-Ceramic Sealant for SOFCs	
P. Lawita, A. Theerapapvisetpong and S. Jiemsirilers	483
Synthesis of Ternary Semiconductor Silver Bismuth Telluride by Chemical Bath Deposition	
P. Termsaithong and A. Rodchanarowan	489
Zeolite Supported Bimetallic Catalyst System: The Effect of Metal Loading for Catalytic Pyrolysis of Jatrophia Residue	
V. Goodwin, P. Amnaphiang, P. Thungngern, K.K. Shin, P. Udomsap and N. Chollacoop	494
Charged Iridium(III) Complexes with Varied Side Chain Length in Organic Light Emitting Diodes	
N. Wongsang, K. Wongkhan, L. Kangkeaw, S. Sahasitthiwat and R. Jitchati	500
Effects of Buffer Layer Growth Temperature on Micro-Structures in the Cubic GaN Films Grown on GaAs (001) Substrates by MOVPE	
P. Wanarattikan, S. Sumnavadee, S. Sanorpim and K. Onabe	507
Effect of Silica Base Catalyst on Transformation of Methanol to Hydrocarbon	
S. Lao-Ubol, P. Somwongsa, P. Laoauyporn, P. Panith, S. Larpkittaworn and S.Y. Chen	512

Chapter 8: Building Materials

Investigation of Physical, Mechanical and Thermal Properties of Building Wall Materials	
J. Mahawan, S. Maneewan, T. Patanin and A. Thongtha	521
Geopolymerization as Cold-Consolidation Techniques for Hazardous and Non-Hazardous Wastes	
C. Leonelli, E. Kamseu, I. Lancellotti and L. Barbieri	527
Influence of Portland Cement on Physical, Mechanical and Thermal Properties of Cellular Lightweight Concrete	
A. Thongtha, S. Ketchaona, J. Wattana and T. Patanin	532
The Study on Physical and Thermal Properties of Geopolymer Pastes	
P. Jittabut	538
Optimum Partial Replacement of Cement by Nanosilica, Microsilica and Rice Husk Ash for Mass Production of Concrete	
W. Ouyornprasert, N. Traitruengtatsana and K. Kamollertvara	544
Effect of Calcium Carbonate on Compressive Strength and Physical Properties of Alkali-Activated Lightweight Concrete	
W. Wongkeo	550
Use of Waste Glass as a Reinforce Material in Calcined-Kaolin Based Geopolymer	
C. Siriwan, P. Phetnat, W. Chandadi and M. Srisitthigul	556
Effects of Aluminum Concentrations on Microstructure and Compressive Strength of Porous Concrete	
O. Jongprateep, N. Jaroonvechatam, S. Stienkijumpai, S. Kaewsuwan and T. Meesak	563
The Mechanical Properties Study of Waste Bakelite Aggregate Concrete	
N. Usahanunth, W. Kongsong, S. Tuprakay, S. Ruangchuay Tuprakay, S. Sinthaworn and S. Charoenrien	570

Chapter 9: Materials for Biomedical Application

<i>In Vivo</i> Testing of Sericin-Polyurethane Nanofiber Mats for Wound Healing in Rats	
P. Kampeerapappun and P. Siridamrong	581
Fluoride Recharge Ability of Resin-Based Pit and Fissure Sealant with Synthesized Mesoporous Silica Filler	
A. Surintanasarn, K. Siralermukul and N. Thamrongananskul	586

Comparison of the Release of <i>Aloe vera</i> Extracts from Poly(Vinyl Alcohol) Electrospun Fibers and Hydrogel Films for Wound Healing Applications S. Sirima, M. Phiriyawirut and K. Suttisintong	592
Effect of Process Parameters on Biomimetic Deposition of Calcium Phosphate on 3D Printed Hydroxyapatite F. Thammarakcharoen and J. Suwanprateeb	599
A Preliminary Study of the <i>In Vitro</i> Biocompatibility Testing of Silk Fibroin/Alpha Tricalcium Phosphate Composite Scaffolds for Bone Tissue Engineering W. Pichaiakrit, W. Juwattanasamran and S. Kanokpanont	605
Effect of M-Type Hexaferrites on Mechanical and Magnetic Properties of Hydroxyapatite Ceramics R. Wongmaneeung	611
Synthesis and Characterization of Cerium- and Lanthanum Containing Bioactive Glass M. Ershad, V.K. Vyas, S. Prasad, A. Ali and R. Pyare	617
Effect of Solids Loadings, Sintering Temperatures and Sintering Periods on Microstructure of Hydroxyapatite O. Jongprateep, C. Nueangjumnong and J. Palomas	629
Effect of Bleaching on Color Change of Stained Resin Composites R. Raksakmanut, A. Nithipratheep, O. Weeriyanan, P. Pittayaporn, W. Komonpale, T. Techakunakorn, N. Luanprueg and J. Promserane	636
PMMA Demonstrated Higher Elastic Modulus and Nanohardness Compared with Polyamide Denture Base Materials H. Nasution and M. Arksornnukit	643
Flexural Strength and Cytotoxicity of ZCC, a Resin Modified Zinc-Calcium Liner Prototype P. Thunyakitpisal, N. Thunyakitpisal, S. Jiemsirilers and D. Pongkao Kashima	649
The Effect of Thermoforming on Tear Strength of Ethylene Vinyl Acetate Mouthguard Material in Various Thicknesses P. Srinuan, J.O. Baiyokvichit, R. Boonpeng, T. Wongwisatekit, P. Pattanasukwasan and I. Karnjanagulpan	657
The Use of Three Dimensional Printed Hydroxyapatite Granules in Alveolar Ridge Preservation P. Kijartorn, F. Thammarakcharoen, J. Suwanprateeb and B. Buranawat	663

Chapter 10: Materials and Technologies for Waste Recycling and Environmental Engineering

Preparation of Activated Carbon from Sugarcane Bagasse Waste for the Adsorption Equilibrium and Kinetics of Basic Dye T. Chaiwon, P. Jannoey and D.A.D. Channei	671
Modified Soil Compositions for Removal of Acetaminophen from Wastewater T. Koottatep, S.K. Chapagain, V.H. Nhat Phong Vo, A. Panuvatvanich, C. Polprasert and J. Iamchaturapatr	677
Determination of Tannin in Coffee Pulp Using Experimental and Theoretical Approaches W. Rakitikul	683
Exploitation of Ag₃PO₄ Impregnated Alginate Beads for the Photocatalytic Degradation of Dye Solution under Sunlight Irradiation K. Wanchai	689
Development of Specific Surface Area in Carbon Material Prepared from Cassava Tuber Char Using a Chemical Activation Assisted Sonochemical Process K. Aup-Ngoen and M. Noipitak	695
Performance Photocatalytic Degradation of Methomyl onto Composite Graphene Oxide/Bismuth Vanadate (GO/BiVO₄) Nanoparticle P. Pookmanee, P. Longchin, J. Phanmalee, W. Kangwansupamonkon and S. Phanichphant	701
The Photocatalytic Degradation of Methylene Blue Using Bismuth Vanadate (Bi₂VO_{5.5}) Powder J. Phanmalee, P. Intaphong, W. Kangwansupamonkon, S. Phanichphant and P. Pookmanee	707

Adsorption of Reactive Dyes Red 195, Blue 222, and Yellow 145 in Solution with Polyaniline-Chitosan Membrane Using Batch Reactor	
R. Sananmuang, W. Chuachud Chaiyasith and K. Wongjan	713
Adsorption of Reactive Dye (RB 222) in Solution onto Chitosan-Rice Husk Ash Composite Beads Cross-Linked with Glutaraldehyde	
R. Sananmuang, W. Chuachud Chaiyasith and K. Paroon	719
On the Application of Electrocoagulation/Flotation (ECF) Technique for Cationic Dye Removals Using Aluminium Electrode and Sodium Dodecyl Sulfate (SDS)	
G. Yuliani, R. Arifin and A. Setiabudi	726
Fabrication Study of Hydrophobic Polyurethane Sponge for Oil Absorption Application	
P. Prakulpawong, J. Wiriyantawong, J. Pornpoonsawat, S. Yodyingyong and D. Triampo	731
Preparation, Characterization and Photocatalytic Properties of Rubber-TiO₂-rGO Composite Sheets for Dye Decomposition in Wastewater	
W. Tejangkura, C. Sriwong and K. Choojun	738
The Effect of Carboxymethyl Cellulose from Various Agriculture Wastes on the Viscosity and Physical Properties of Low Concentration Solution of Surfactant	
T. Sritapunya, G. Sommanas and H. Surachaijarin	745
Adsorptive Properties of Fly Ash Zeolite Synthesized via Microwave and Ultrasonic Pretreatments	
A. Setiabudi, N. Nashrah, H.P. Putri and G. Yuliani	751
Using ZnO Nanorods Coated Porous Ceramic Monolith to Remove Arsenic from Groundwater	
K. Khwamsawat, J. Mahujchariyawong and S. Danwittayakul	756
Removal of Arsenic from Groundwater Using Nano-Metal Oxide Adsorbents	
P. Muensri and S. Danwittayakul	766
Synthesis of Carbon Nanoparticles from Used Motor Oil and Benzene via Solution Plasma Process	
N. Saengarunthong, P. Khongthong, G. Panomsuwan, T. Ueno, N. Saito and A. Eiad-Ua	773
Development of Oil Palm Empty Fruit Bunch Fiber Reinforced Epoxy Composites for Bumper Beam in Automobile	
S. Witayakran, W. Kongtud, J. Boonyarit, W. Smitthipong and R. Chollakup	779
Improvement of Compressive Strength of Soil by Using Jute Fiber Waste	
T. Sultana, M.B. Islam and M.W. Rahman	785
Assessment of Hydrophilic Biochar Effect on Sandy Soil Water Retention	
R. Rattanakam, P. Pituya, M. Suwan and S. Supothina	790
Photo-Oxidative Degradation Polyethylene Containing Titanium Dioxide and Poly(Ethylene Oxide)	
T. Soitong and S. Wongsanmai	796
Photocatalytic Activity of Cu-Doped Cerium Dioxide Nanoparticles	
D.A.D. Channei, P. Jannoey, A. Nakaruk and S. Phanichphant	801
Synthesis and Photocatalytic Activity of Visible-Light Responsive BiOBr/GO Composites	
T. Prasitthikun, X. Wu, T. Sato, C. Mongkolkachit and P. Sujaridworakun	807
Comparison Study of Photocatalytic Activity of Titanium-Rich Materials Derived from Natural Minerals Ores Using Acidic Leaching	
T. Kansaard, W. Phoohinkong, W. Mekprasart, S. Sanguanpak, A. Wannagon and W. Pecharapa	813
Photocatalytic Degradation Study of Titania Sol-Gel Coated on Commercial Unglazed Ceramic Tiles	
P. Sooksaen, N. Saowaros, K. Ngamkaruhasereethorn and A. Pringkasemchai	819
Photocatalytic Comparative Study of TiO₂, ZnO, Ag-G-ZnO and Ag-G-TiO₂ Nanocomposite Films	
P. Kalnaowakul, T. Phairatana and A. Rodchanarowan	825