

Invited talks			
IV-1	Stress Sensing in Polymer Nano-Composites	Prof. R.J.Young, of Manchester, U.K.	University
IV-2	Current Status and Prospect of Conducting Polymer based Soft Actuators	Prof. Keiichi Kaneto Kyushu Institute of Technology, Japan	
IV-3	Cyclodextrins in Textile Finishing: Their Mode of Action, Applications, Quantitative Analysis, Fixation, Washing Fastness and Effect on Formaldehyde Release	Prof. Attila Bereck of Wuppertal, Germany	University
IV-4	New Polymer Processing Technologies to Create Highly Functionalized Products	Prof. Tadamoto Sakai Tokyo Office of Shizuoka University, Japan	
IV-5	Structure and Property Relationships in Polymer Nanohybrids Based on Polyhedral Oligomeric Silsesquioxane	Prof. In-Joo Chin Department of Polymer Science and Engineering, Inha University, Korea	
IV-6	Tuning Hierarchical Architectures of 3D Polymeric Scaffolds for Cardiac Tissue Engineering	Prof. Enrico Traversa National Institute for Materials Science, Japan	MANA,
IV-7	Fully plastic actuators based on dispersed carbon-cantube/ionic-liquid-gel electrodes	Dr. Kinji Asaka Institute of Advanced Industrial Science and Technology, Japan	National
IV-8	Conducting polymers as simultaneous sensor-actuators; Conformational Energy	Prof. Toribio Fernandez Otero Center for Electrochemistry and Intelligent Devices, Universidad Polit�cnica de Cartagena, Spain	Center
IV-9	Silsesquioxane as Polyfunctional Nanobuilding blocks	Prof. Richard M. Laine Depts. of Materials Science and Engineering, Chemistry and Macromolecular Science and Eng. University of Michigan, USA	Depts.
IV-10	Polymer substrates for flexible electronics: achievements and challenges	Dr. Iryna Yakimets Centre, Eindhoven, Netherlands	Holst
IV-11	Applications of aerogels in life sciences	Prof. Irina Smirnova Universitaet Hamburg-Harburg, Institut fuer Thermische Verfahrenstechnik, Hamburg	Technische
IV-12	Deinking of Plastics Using Surfactant Solutions	Prof. J.F. Scamehorn School of Chemical, Biological, and Materials Engineering, University of Oklahoma, Norman, Oklahoma, USA	School

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IV-13	Biopolymeric micro/nanoparticles for drug and protein delivery	Prof. Garpmol C. Ritthidej of Pharmaceutical Sciences, Chulalongkorn University, Thailand	Faculty
IV-14	Effect of Dielectric Constant and Electric Field Strength on Dielectrophoresis Force of Acrylic Elastomers and Styrene Copolymers	Assoc. Prof. Dr. Anuvat Sirivat Petroleum and Petrochemical College, Chulalongkorn University, Bangkok, Thailand	The
IV-15	Synthesis and Applications of SBA-1 Directly from Silatrane via Sol-gel Process	Assoc. Prof. Dr. Sujitra Wongkasemjit The Petroleum and Petrochemical College, Chulalongkorn University, Bangkok, Thailand	
IV-16	Bisphenol-A Technology: A Greener and Cleaner Process Review	Dr. Thevarak Rochanapruk. Project Director – PT T Phenol Company limited, Thailand	
IV-17	Hydrogen production over Ce/Zr mixed oxide catalysts for onboard applications	Assoc. Prof. Dr. Vissanu Meeyoo Centre for Advanced Materials and Environmental Research, Mahanakorn University of Technology	
IV-18	Fabrication and Properties of Electrospun Ceramics and Carbon Nanostructures	Assoc. Prof. Dr. Santi Maensiri Integrated Nanotechnology Research Center and Department of Physics, Khon Kaen University - Thailand	
IV-19	Diamond-like Carbon Film for Biomolecular Sensors	Assoc. Prof. Dr. Vittaya Amornkitbamrung Integrated Nanotechnology Research Center, Department of Physics, Faculty of Science Khon Kaen University, Khon Kaen, Thailand	
IV-20	A Clean Technology to Produce Functionalized Low Molecular-weight Natural Rubber Latex Using Nanometric TiO ₂ Film	Assoc. Prof. Dr. Jitladda Sakdapipanich Department of Chemistry, Faculty of Science, Mahidol University, Bangkok, Thailand	
IV-21	Microstructural Design of Smart Perovskite Ferroelectric Ceramics for Electroceramic Applications	Assoc. Prof. Supon Ananta Department of Physics and Materials Science, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand	
IV-22	Novel chemical synthesis of silver nanoplates with unique optical properties	Assoc. Prof. Sanong Ekgasit Sensor Research Unit, Department of Chemistry, Faculty of Science, Chulalongkorn University, Thailand	
IV-23	From Non-Asymmetric Phosphorylation to Regioselective Phosphorylation	Dr. Srung Smannoo Thailand	Biotec, Thailand

Functionalized Rubber	
O-FR-1	Preparation and Properties of Natural Rubber - Cellulose Microfibril Nanocomposite Films Manisara Phiriyawirut, Natnapa Chotirat, Sirikul Phromsiri and Ingorn Lohapaisarn
O-FR-2	Surface Modification of Silica Nanoparticles for Reinforcement of Epoxidized Natural Rubber Methakarn Jarnthong, Zheng Peng, Charoen Nakason, Natinee Lopattananon
O-FR-3	Control of Mechanical Properties and Permeability of Electrospun Natural Rubber with Different Composite Systems Sarawuth Sithornkul, Poonsub Threepopnatkul
O-FR-4	In Situ Silica Filled Styrene grafted Natural Rubber by the Sol-Gel Process Torpong Sittiphan, Pattarapan Prasassarakich and Sirilux Poompradub
O-FR-5	Graft Copolymerization of Methyl Methacrylate onto Natural Rubber by Microwave Irradiation S. Piyaauksornsak, B. Paosawatanyong, N. Hinchiranan
O-FR-6	Curing Characteristic and Mechanical Properties of Epoxidized Natural Rubber/Chloroprene Blends Chanchai Thongpin, Piyaporn Niltui, Piyapong Sornwaneenawakhun, Tossaporn Maneeprom, Saovaros Malithong and E. Wimalmala
O-FR-7	The Modification of Asphalt Emulsion using Pre-vulcanized Natural Rubber Latex for Highway Application Saovaros Malitong, Chanchai Thongpin

Functionalized Polymers		
O-FP-1	Modification of Surface Properties of Polymers by Extremely High Fluxes of Neutral Oxygen Atoms	M.Mozetic
O-FP-2	Thermal, Electrical and Dielectric Studies on Ferroelectric Potassium Nitrate (KNO ₃): Polyvinylidene fluoride (PVDF) Composite Films	Navneet Dabra, Jasbir S. Hundal
O-FP-3	Effect of Compatibilizer on Mechanical Thermal and Morphology of HDPE/TiO ₂ Nanocomposites	N. Wiriyankul, S. Wacharawichanant
O-FP-4	Studies on PEMA Based Solid Polymer Electrolytes	S.N. Amir, N.S. Mohamed, R.H.Y. Subban
O-FP-5	Effect of 3-Aminopropyltrimethoxysilane-g-Rice Husk Silica on Flame Retardant of ABS/Organomontmorillonite Nanocomposites	S. Boonkrai, D. Aht-Ong
O-FP-6	Effect of Co-monomer Content on Rheological and Thermal Properties of Sawdust/ABS Composites	P. Threepopnattkul, W. Teppinta, N. Sombatsompop
O-FP-7	Nd:YAG laser perforation of plastic films for enhanced breathability	Charinee Winotapun, Noppadon Kerdonfag z
O-FP-9	Preparation and Characterizations of Electrospun Lactide-based Polymeric Nanofibers	C. Thammawong, A. Petchsuk, M. Opaprakasi, N. Chanunpanich, P. Tangboriboonrat and P. Opaprakasi
O-FP-10	Synthesis and Characterizations of PLLA/PEG Block Copolymers	Thai Hien Nguyen, Atisa Petchsuk, Pramuan Tangboriboonrat, Mantana Opaprakasi, Alice Sharp, Pakorn Opaprakasi
O-FP-11	The Effect of Glass Fiber Aspect Ratio on Mechanical and Thermal Properties of PU/GF Foam Composites	Bongkot Hararak, Natcha Prakymoramas, Wutipong Rungseesantivanon and Dunrong Thamumjitr
O-FP-12	Effect of ethylene vinyl acetate on the rheological and mechanical behavior of low-density polyethylene -based greenhouse film	Chuanchom aumnate, Chaiwut Gamonpilas, Jittiporn Kruenate
O-FP-13	Alteration of Thermal Characteristics of Polymer for the Purpose of Creating a Two-stage Shape Memory Polymer	Hirohisa Tamagawa
O-FP-14	Dry Sliding Wear Characteristics of Sugarcane Bagasse Polymer Cement Composites	M.J. Ghazali, C.J. Kee, C.H. Azhari, J.A Ghani
O-FP-15	Nanoindentation of Polydimethylsiloxane (PDMS) films: Effect of degree of crosslinking	R. Thonggoom, N. Pancharoentavon
Functionalized Textiles		
O-FT-1	Morphology and Structure of Modified Oil Palm Empty Fruit Bunch Cellulose Fibre	Sirisat Ouajai, Peerachai Ruangwilairat, Kitti Ongwongsakul, Thanawadee Leejarkpai and Robert A. Shanks
Sensors and actuators		

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O-SE-1	Bimetallic Group 6 Tricarbonyls Triply-Bridged By Bis(phenylthio)alkane Bidentate Ligands	Khalil j. Asali
O-SE-2	Nanoelectronic biosensing	Peng Chen
O-SE-3	Performance of a micro pump driven by conducting polymer soft actuator based on polypyrrole	Masaki Fuchiwaki, Yoshitaka Naka, Kazuhiro Tanakai
O-SE-4	Applications of Non-Linear Dynamics in the Production of Functionalised and Sensing Material	Nalaka Deepal Subasinghe
O-SE-5	Property Modification of Copper Phthalocyanine Film by Nitrogen Dioxide Gas	Rawat Jaisutti, Theerasak Juagwon, Onanong Chamlek, Tanakorn Osotchan
O-SE-6	Electrochemical Synthesis of Polyaniline as Ethylene Gas Sensor	P.Pattananuwat and D. Aht-Ong
O-SE-7	All-solid-state pH Sensor Based on Conducting Polypyrrole	Wanlapa Natedungta, Walaiporn Prissanaroon-Ouajai
O-SE-8	On-Chip Platinum Micro-heater with Platinum Temperature Sensor for A Fully Integrated Disposable PCR Module	W. Sripumkhai, A. Lekwichai, W. Bunjongpru, S. Pomtheeraphat, B. Tunhoo, E. Ratanaudomphisut, T. Kamsri, C. Hruanun, A. Poyai and J. Nukeaw
O-SE-9	SnO ₂ -Based Thin Film Gas Sensors with Functionalized Surface	G. Korotcenkov, B.K. Cho, V. Tolstoy

Petrochemicals		
O-PC-1	Palladium Nanoparticle Hydrogen Storage and Sensor	A. Kazemzadeh, N. Jafari
O-PC-2	Comparison of TiO ₂ /RH-MCM41 and TiO ₂ /TEOS-MCM41 Hybrid Catalysts in Characteristics and Photodegradation of Tetramethylammonium	Surachai Artkla, Wonyong Choi, Jatuporn Wittayakun
O-PC-3	Photocatalytic Degradation of Geosmin by Titanium Dioxide Powder Synthesized by the Hydrothermal Route	Pusit Pookmanee, Hathaithip Ninsonti, Supaporn Sangsrichan, Wiyong Kangwansupamomkon, Sukon Phanichphant
O-PC-4	Methylene Blue Degradation over Photocatalyst Bismuth Vanadate Powder Synthesized by the Hydrothermal Method	Pusit Pookmanee, Kanlaya Pingmuang, Wiyong Kangwansupamomkon, Sukon Phanichphant
O-PC-5	Acetophenone and Benzophenone derivatives as Catalysts in Photodegradation of PE and PP Films	T. Manangan, S. Shawaphun, S. Wacharawichanant
O-PC-6	Photocatalytic Hydrogen-generation of Polyoxotungstate Nano-clusters from Biomass	K. Fukaya, A. Sriffa, A. Sootitattawatb, N. Grisdanurak
O-PC-7	Influences of Water on the hydration of Calcined Natural Calcite: Properties and Transesterification Activity Improvement	Boonyawan Yoosuk, Parncheewa Udomsap
O-PC-8	Photo-catalytic Activity of Quencher Impurity Doped ZnS Nanocrystals	Mansi Chitkara, Karamjit Singh, Tinu Bansal, I S Sandhu and H S Bhatti
O-PC-9	Titanium Dioxide Powder Prepared by a Low Temperature Hydrothermal Method	Pusit Pookmanee, Tarika Kuntatun, Wiyong Kangwansupamomkon, Sukon Phanichphant
Biopolymers and Pharmaceutical materials		
O-BP-1	Effect of Reaction Time and Reaction Temperature on pH-Sensitivity of Micro/Nano Semi-IPN Hydrogels	Aboulfazel Barati
O-BP-2	Potention of Lignin, Lignin Sulfonate and Lignin Acetate from Palm Empty Bunch as an Additive Substance in Urea Fertilizer	Lucy Arianie
O-BP-3	Viscoelastic Properties of Galactomannan Solutions	Keonakhone Khounvilay, Wancheng Sittikijyothin
O-BP-4	Anti-tumour Effect of a Chitosan Delivery System for Doxorubicin	Mei Lin Tan, Peter F.M. Choong and Crispin R. Dass
O-BP-5	Nanostructured polycaprolactone-inorganic phosphate hybrid scaffold for medical applications	Lupong Kaewsichan, Jasadee Kaewsichan, Thitima Chuchom
O-BP-6	Development of bioactive ceramics to control mite and microbial diseases in bee farms	B. Booppha, S. Eittsayeam, K. Pengpat, P. Chantawannakul
O-BP-7	Effect of pH in formation of bovine serum albumin layer on poly(styren-co-maleic acid)	Tippavan Hongkachern Verawat Champreda, Toemsak Srikhirin, Thidarat Wangkam, Tanakorn Osotchan

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O-BP-8	Ameliorating Soil Sodicity Using Calcium Salt Incorporated Hydrogels	Loo-Teck Ng and Jane Aiken
O-BP-10	Gelatin/hydroxyapatite scaffolds: Studies on adhesion, growth and differentiation of Mesenchymal stem cells	Nuttapon Vachiraroj
O-BP-11	Partial characterization of biosurfactant produced under anaerobic conditions by <i>Pseudomonas</i> sp ANBIOSURF-1	John D Albino, Indumathi M Nambi
O-BP-12	Concentration Variation in Designing Phase Composition for Medical Functional Degradability Material	A, Sofwan, F. Alqap, I. Sopyan, S.A. Zubir
O-BP-13	Synthesis and characterization of strontium substituted hydroxyapatite thin films	B. Hongthong, S.K. Hadak, S. Tungasmita
O-BP-14	Effect of Thai Silk Sericin and Its Extraction Methods on L929 Mouse Fibroblast Cell Viability	P. Thitiwuthikiat, P. Aramwit, S. Kanokpanont

Semiconductor and advanced ceramic materials

O-SC-1	Inhibition of Aluminium Alloy 2024 Corrosion by 4-Amino-5-Phenyl-4H-1, 2, 4-Trizole-3-Thiol in Highly Sulphuric Acid Solution	Ahmed Y. Musa, Abu Bakar Mohamad, Abdul Amir H. Kadhum, Mohd Sobri Takriff, Abdul Razak Daud and Siti Kartom Kamarudin
O-SC-2	The Effects of Quartz Nano-particles on the Damage Monitoring of Adhesive Joint at Cryogenic Temperature	Soon Ho Yoon, Byoung Jung Kim, Kwan Ho Lee, Dai Gil Lee
O-SC-3	Growth and assessment by cathodoluminescence in the scanning electron microscope of Ga2O3 nano-waveguides	E. Nogales, B. Méndez, J. Piqueras
O-SC-4	Effective properties of electro-elastic composites with multi-coating inhomogeneities	F. Biscani, Y. Koutsawa, S. Belouettar, E. Carrera
O-SC-5	Synthesis of 8 %mol Yttria-Stabilized Zirconia Powders by Mechanochemical Processing of ZrOCl ₂ .8H ₂ O and YCl ₃ .6H ₂ O with Li ₂ CO ₃	Kanatip Kumproa, Apinon Nuntiya, Qiwu Zhang and Fumio Saito
O-SC-6	Net-grid Subwavelength Gratings as Reflectors for Designing Resonant Cavity Enhanced Photodetectors	Yisu Yang, Yongqing Huang, Hui Huang, Xiaofeng Duan, Xiaomin Ren
O-SC-7	Preparation of Nanoparticles by Laser Ablation on Copper Target in Distilled Water	Htain Lin Aye, Supab Choopun, Torranin Chairuangsrri
O-SC-8	Polarization Switching Behavior of Ferroelectric (NH ₄) _{0.39} K _{0.61} NO ₃ Films	Navneet Dabra and Jasbir Singh Hundal
O-SC-9	Characterization of Aluminium Titanium Nitride Thin Films Deposited by Reactive Magnetron Co-sputtering	Adisorn Buranawong, Surasing Chaiyakhun and Pichet Limsuwan
O-SC-10	Using Polymer Electrolyte Membranes as Media to Culture Fractals: A Simulation Study	S hahizat Amir, Nor Sabirin Mohamed and Siti Aishah Hashim Ali
O-SC-11	Effect of powder surface oxide on compressive properties of aluminium foams	Seksak Asavavisithchai
O-SC-12	Electrical property of Mn and Co Dopants on La ₃ Ni ₂ O ₇ ±δ and La ₂ 9Sr _{0.1} Ni ₂ O ₇ ±δ	W. Singkha, S. Kuharuangrong
O-SC-13	Investigation on Degradation of Methyl Parathion using Visible Light in the Presence of Cr+3 and N Doped TiO ₂	J. Senthinathan, Ligy philip
O-SC-14	Properties of La ₂ -xSr _x Mo ₂ -yWyO _{9-δ} Oxide-Ion Conductor Synthesized by Citrate Gel Method	Witoon Thepsuwan, Sutin Kuharuangrong
O-SC-15	Solubility Limit of Fe ₂ O ₃ in nano-Ce _{0.9} Gd _{0.1} O _{1.95} : Effects on Material Properties	Jivaganont W. Loyma S. Charojrochkul P. Limthongkul
O-SC-16	The Spectroscopic Analysis of Iron-Doped Soda-Lime-Silica Glass by Spectrophotometer and ESR Spectrometer	Y. Ruangthawee, T. Kitiachawal, J. Kaewkhao, K. Thamaphat and P. Limsuwan
O-SC-17	Coloration in Soda-Lime-Silicate Glass System Containing Manganese	N. Sritittipokakun, C. Kedkaew, J. Kaewkhao and P. Limsuwan

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O-SC-18	Physical Properties of Sr ₃ Fe ₂ -xCoO _{7-δ} (x = 0 – 1.0) as SOFC Anode	Palin Sittipon and Sutin Kuharungrong
O-SC-19	The Effects of Composition and Sintering Conditions on the Zirconia Toughened Alumina (ZTA) Nanocomposites	Hamid Esafahani, A. Nemati, E. Salahi
O-SC-20	Effect of Nd ³⁺ concentration on the Physical and Absorption Properties of Soda-Lime-Silicate Glasses	Parnuwat Chinalawong, Jakapong Kaewkhao and Pichet Limsuwan
O-SC-21	Photon Interactions in Borate Glass System Containing Bi ₂ O ₃ , PbO and BaO at 60 keV: Theoretical Calculation	K. Kirdsiri, S.J. Kaewkhao, W. Chewpraditkul, P. Limsuwan
O-SC-22	Gamma-rays Absorption Studies of PbO-SiO ₂ Glass System	N. Chanthima, J. Kaewkhao, W. Chewpraditkul, P. Limsuwan
O-SC-23	Effects of Sr and Ni-dopants on the structure and conductivity of Lanthanum chromite	Anuchit Ruangvittayanon and Sutin Kuharungrong
O-SC-24	Ultra-Thin Al ₂ O ₃ Formation at Room Temperature	Puenisara Limnonthakul, Artorn Pokaipisit, Pichet Limsuwan
O-SC-25	Optical and Electrical Properties of Modified Polythiophene with Tetrafluorobenzene Thin Film	Manas Sittishoktram, Udom Asawapirom, Tanakorn Osotchan
O-SC-26	Structural Studies of Lead Sodium Borate Glasses	Pruittipol Limkitjaroenporn, Jakrapong Kaewkhao, Suparat Tuscharoen, Pichet Limsuwan, Weerapong Chewpraditkul
O-SC-27	Effect of Layer Thickness on the Phosphorization of 3DP Gypsum Based Monolith	Kitiya Wasoontarat, Waraporn Suvannapruk, Jintamai Suwanprateeb
O-SC-28	Electrical Characteristics of DLC deposited by RF Inductively Coupled Plasma Process	B. Paosawatyanong, A. Muangkarn and S. Thititanan
O-SC-29	Microstructure and Mechanical Properties of Sintered Ti-Cu Alloys	Patchara Pripanapong, Tachai Luangvaranunt
O-SC-30	Properties and Photocatalysis of Nanostructured Titania Prepared by Sol-gel Method for Solar-hydrogen Production	Udom Tipparach, Pichet Limsuwan
O-SC-31	Oxygen Gas-Timing Control for variety properties of sputtered-ZnO	K. Limwichean, S. Pontheeraphat, W. Bunjongpru, P. Panprom, A. Pankiew, C. Hruanun, A. Poyai, and J. Nukeaw
O-SC-32	Application of Double Gate Ion Sensitive Field Effect Transistor for Detection of Fluid Flow Rate in Micro-channel	T. JIEMSAKUL, O. TRITHAVEESAK, W. BUNJONGPRU, C. HRUANUN, A. POYAI, J. NUKEAW
O-SC-33	CoPc/CdS hybrid photovoltaic devices	P. Keerathivakorn, B. Tunhoo, T. Thiawong and J. Nukeaw
O-SC-34	Surface Morphology and Optical Properties of Silver Thin Film Prepared by Electrostatic Spray Deposition	Y. Boonnuk, A. Chanhom, B. Tunhoo, T. Thiawong and J. Nukeaw
O-SC-35	High Refractive Index Dielectric Prepared by Electron Beam Evaporation for Photonic Crystal Optical Biosensor Application	B. Saekow, S. Pontheeraphat, S. Rahong, S. Jaruvanawat and J. Nukeaw

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O-SC-36	Nanocrystal-ZnO Thin Films Deposition by a Novel Reactive Gas-Timing RF Magnetron Sputtering Provided for UV Photodetector	P. Panprom, S. Porntheeraphat, W. Bunjongpru, T. Tiwawong, W. Yamwong, C. Hruanun, A. Poyai and J. Nukeaw
O-SC-37	Synthesis of SrTiO ₃ nanoparticles by a pH-varying sol-gel process	Niti Yongvanich, P. Visuttiptitukkul
O-SC-38	Investigation of oxygen contamination in Indium nitride thin film by X-ray absorption fine structure	K.Amnuyswat, P. Thanomngam, S.Sopitpan, A.Sungthong, S.Porntheerapat, J.Nukeaw
O-SC-39	Porous alumina through protein foaming-consolidation method:Effect of stirring time & amp; drying temperature on physical properties	Ahmad Fadli, Iis Sopyan
O-SC-40	The Optimization of TiN film deposited by DC magnetron sputtering provided for diffusion barrier	A.Pankiew, W. bunjongpru, N. Somwang, S. Porntheeraphat, S. Pratontep, S. Sophitpan, J. Nukaew, C. Hruanun, A. Poyai
O-SC-41	Charge Transfer Mechanism in Organic Memory Device	K. Onlaor, S. Khantham, B. Tunhoo, T. Thiawong and J. Nukeaw
O-SC-42	Cerium-Praseodymium Mixed Oxide Nanoparticles Directly Grown On CNTs Walls: Technological Application In Gas Sensor Devices	A. ABBASPOURRAD, R. J. KALBASI