

Scientific program

Oral presentation (July 27)

Materials and Chemistry (Room1)

Session I (13:00 - 14:00) Chair: Sachiro KAKINOKI

- MC-O-01 13:00 Design of molecule-responsive nanomaterials having molecular
Abstract complexes as dynamic crosslinks
page 44 Akifumi KAWAMURA^{1,2}, Takashi MIYATA^{1,2}
¹ *Department of Chemistry and Materials Engineering, Kansai University*
² *The Organization for Research and Development of Innovative Science and Technology, Kansai University*
- MC-O-02 13:20 Yeast cell immobilization on porous silk fibroin/cellulose whisker
Abstract bionanocomposite for ethanol production
page 43 Ratana RUJIRAVANIT^{1,2*}, Sureerat JAMPA¹
¹ *The Petroleum and Petrochemical College, Chulalongkorn University*
² *Center of Excellence on Petrochemical and Materials Technology, Chulalongkorn University*
- MC-O-03 13:40 Development of an immune tuberculosis antibody library: Monoclonal
Abstract antibody generation for *Mycobacterium tuberculosis* α -crystalline antigen
page 51 Nurul Hamizah HAMIDON¹, Siti SURAIYA², Maria E. SARMIENTO³,
Armando ACOSTA¹, Mohd Nor NORAZMI^{1,3}, Theam Soon LIM^{1,4,5}
¹ *Institute for Research in Molecular Medicine, Universiti Sains Malaysia*
² *School of Medical Sciences, Health Campus, Universiti Sains Malaysia*
³ *School of Health Sciences, Health Campus, Universiti Sains Malaysia*
⁴ *ADAPT Research Cluster, Centre for Research Initiatives – Clinical & Health Sciences, Universiti Sains Malaysia*
⁵ *Analytical Biochemistry Research Centre, Universiti Sains Malaysia*

Session II (14:00 - 15:00) Chair: Ratana RUJIRAVANIT

- MC-O-04 14:00 Biodegradable Temperature-responsive Injectable Polymers for
Abstract Biomedical Applications
page 47 Yasuyuki YOSHIDA¹, Keisuke KAWAHARA¹, Akinori KUZUYA^{1,2},
Yuichi OHYA^{1,2}
¹ *Department of Chemistry and Materials Engineering, Kansai University*
² *The Organization for Research and Development of Innovative Science and Technology, Kansai University*

MC-O-05 14:20 Development of click induced DNA G-quadruplex reporter system for DNA sensing
Abstract
page 52
Noorsharmimi OMAR, Theam Soon LIM
Institute for Research in Molecular Medicine, Universiti Sains Malaysia

MC-O-06 14:40 Single-step peptide immobilization on biomedical materials for the enhancement of endothelial cell adhesion
Abstract
page 48
Sachiro KAKINOKI, Shihomi SUZUKI¹, Yoshiaki HIRANO¹, Tetsuji YAMAOKA²
¹ *Department of Chemistry and Materials Engineering, Kansai University*
² *Department of Biomedical Engineering, National Cerebral and Cardiovascular Center Research Institute*

Coffee break (15:00 - 15:30)

Session III (15:30 - 16:50) Chair: Akifumi KAWAMURA

MC-O-07 15:30 Synthesis and polymerization of telechelic α -helical peptide
Abstract
page 53
Shinya TAKAOKA, Yoshinori OTAKI, Yu MIYAGI, Fumio SANDA
Department of Chemistry and Materials Engineering, Kansai University

MC-O-08 15:50 Making use of what we have to make a difference: designing antibody-antigen interaction bio-based sensors.
Abstract
page 45
Theam Soon LIM, Nur Faezee ISMAIL, Soo Khim CHAN
Institute for Research in Molecular Medicine, Universiti Sains Malaysia

MC-O-09 16:10 DNA quadruplex gel: an application of synthetic DNA as bulk material
Abstract
page 41
Akinori KUZUYA, Shizuma TANAKA, Kenta WAKABAYASHI, Kazuki FUKUSHIMA, Shinsuke YUKAMI, Yuichi OHYA
Department of Chemistry and Materials Engineering, Kansai University

MC-O-10 16:30 Reprogramming microbial transglutaminase specificity for efficient protein labelling
Abstract
page 50
Soo Khim CHAN and Theam Soon LIM
Institute for Research in Molecular Medicine, Universiti Sains Malaysia

Materials and Chemistry (Room2)

Session I (13:00 - 14:00) Chair: Toru MARUYAMA

- MC-O-11 13:00 Change in incubation period of MgH₂ decomposition with Gibbs energy and temperature
Abstract
page 54 Hiroyuki T. TAKESHITA¹, Yasuhiro SAKAIDA¹, Shintaro YUI¹, Nobuhiko TAKEICHI², Ryota KONDO¹
¹ Department of Chemistry and Materials Engineering, Kansai University
² Research Institute for Electrochemical Energy, National Institute of Advanced Industrial Science and Technology
- MC-O-12 13:20 Geopolymer synthesized from industrial wastes
Abstract
page 55 S. JIEMSIRILERS¹, S. ONUTAI^{1,3}, P. THAVORNITI², T. OBAYASHI³
¹ Research Unit of Advanced Ceramics, Department of Materials Science, Faculty of Science, Chulalongkorn University
² National Metal and Materials Technology Center, Thailand
³ Department of Materials Science and Technology, Nagaoka University of Technology
- MC-O-13 13:40 Microstructure and hydrogenation process of hydrogenated magnesium
Abstract
page 56 Ryota KONDO, Hiroyuki T. TAKESHITA
Department of Chemistry and Materials Engineering, Kansai University

Session II (14:00 - 15:00) Chair: Hiroto KUDO

- MC-O-14 14:00 Synthesis and ligand exchange reaction of platinum-containing optically active conjugated polymers
Abstract
page 57 Yu MIYAGI, Fumio SANDA
Department of Chemistry and Materials Engineering, Kansai University
- MC-O-15 14:20 Synthesis and properties of cyclic phenyleneethynylene bearing optically active amide groups
Abstract
page 58 Tatsuya OGAWA, Yoshinori OTAKI, Yu MIYAGI, Fumio SANDA
Department of Chemistry and Materials Engineering, Kansai University
- MC-O-16 14:40 Synthesis of optically active conjugated polymers bearing germole/silole moieties, and control of the higher order structures
Abstract
page 59 Yuki TAKAHASHI¹, Yoshinori OTAKI¹, Yu MIYAGI¹, Masashi NAKAMURA², Joji OSHITA², Fumio SANDA¹
¹ Department of Chemistry and Materials Engineering, Kansai University
² Graduate School of Engineering, Hiroshima University

Coffee break (15:00 - 15:30)

Session III (15:30 - 16:30) Chair: Hideya KAWASAKI

- MC-O-17 15:30 Synthesis and properties of conjugated polymers bearing Schiff-base in the
Abstract main chain
page 60 Kazuki TADA, Yoshinori OTAKI, Yu MIYAGI, Fumio SANDA
Department of Chemistry and Materials Engineering, Kansai University
- MC-O-18 15:50 Polymerization of substituted acetylenes using well-defined rhodium catalyst
Abstract Ayaka NITO, Yu MIYAGI, Fumio SANDA
page 61 *Department of Chemistry and Materials Engineering, Kansai University*
- MC-O-19 16:10 Synthesis of novel optically active poly(thiophenyleneethynylene)s
Abstract Fumio SANDA, Yoshinori OTAKI, Yuki TAKAHASHI, Yu MIYAGI
page 62 *Department of Chemistry and Materials Engineering, Kansai University*

Session III (16:30 - 17:30) Chair: Sirithan JIEMSIRILERS

- MC-O-20 16:30 Effect of oxygen mobility on CO oxidation over highly dispersed Pt/ γ -Al₂O₃
Abstract by doping with χ -phase Al₂O₃ and Si
page 63 Piyasan PRASERTHDAM, Nutchapon CHOTIGKRAI, Yuthana HOCHIN,
Joongjai PANPRANOT
*Center of Excellence on Catalysis and Catalytic Reaction Engineering,
Department of Chemical Engineering, Faculty of Engineering,
Chulalongkorn University*
- MC-O-21 16:50 Single nanosized copper nanoparticles for printed electronics: Routes
Abstract towards achieving oxidation stability
page 64 Hideya KAWASAKI, Yuki HOKITA, Ryuichi ARAKAWA
Department of Chemistry and Materials Engineering, Kansai University
- MC-O-22 17:10 Thiolated-2-methacryloyloxyethyl phosphorylcholine protected silver nano
Abstract clusters having highly-biocompatibility and antibacterial properties
page 65 Arunee SANGSUWAN¹, Hideya KAWASAKI¹, Yoshinobu
MATSUMURA², Yasuhiko IWASAKI^{1,3}
¹ *Department of Chemistry and Materials Engineering, Kansai University*
² *Department of Life Science and Biotechnology, Kansai University*
³ *The Organization for Research and Development of Innovative Science and
Technology, Kansai University*

Life and Food Science (Room3)

Session I (13:00 - 14:00) Chair: Yauo NAGAOKA

- LF-O-01 13:00 Salt tolerance gene identification and characterization in Thai rice
Abstract Supachitra CHADCHAWAN¹, Sukhumaporn SAENG-NGAM¹, Siriporn
page 66 SRIPINYOWANICH¹, Thanikan UDOMCHALOTHORN¹, Panita CHUTIMANUKUL¹,
Noppawitchayaphong KHRUEASAN¹, Teerapong BUABOOCHA², Teerayuth
TOOJINDA³, Meechai, SIENGLIW³, Lia-jia QU⁴, Hongya GU⁴, Luca COMAI⁵
¹ CEEPP, Department of Botany, Faculty of Science, Chulalongkorn University
² Department of Biochemistry, Faculty of Science, Chulalongkorn University
³ Rice Gene Discovery Unit, BIOTEC, NSTDA, Thailand
⁴ School of Life science, Peking University, China
⁵ Department of Plant Biology and Genome Center, UC, Davis, USA
- LF-O-02 13:15 Postharvest control of 'Nam Dok Mai' mango fruit by chitosan and polyamines
Abstract Kanogwan SERAYPHEAP, Pornchan JONGSRI, Teerada WANGSOMBOONDEE,
page 67 Pranee ROJSITTHISAK, Saowarath JANTARO
*Center of Excellence in Environment and Plant Physiology, Department of Botany,
Faculty of Science, Chulalongkorn University*
- LF-O-03 13:30 Cytotoxic activity of Thai medicinal plants
Abstract Chanya CHAICHAROENPONG¹, Varinpiphob CHAYATHATPHOMMIRAT²,
page 68 Songchan PUTHONG¹, Hye Jin KO³, Min Kyoung PARK³, Yeong Shik KIM³
¹Institute of Biotechnology and Genetic Engineering, Chulalongkorn University
² Program in Biotechnology, Faculty of Science, Chulalongkorn University
³ Natural Products Research Institute, College of Pharmacy, Seoul National University
- LF-O-04 13:45 Organic rice farming and repellent activity of rice seedling
Abstract Chatchawal WONGCHAI¹, Wolfgang PFEIFFER², Anchalee CHAIDEE³, Supachitra
page 69 CHADCHAWAN³
¹ Division of Biology, School of Science, University of Phayao, THAILAND
² Division of Plant Physiology, Department of Cell Biology, Faculty of Natural Science,
University of Salzburg, AUSTRIA
³ Center of Excellence in Environment and Plant Physiology, Department of Botany,
Faculty of Science, Chulalongkorn University

Session II (14:00 - 15:00) Chair: Sewan THEERAMUNKONG

- LF-O-05 14:00 Synthesis and biological evaluation of CNS-penetrant histone deacetylase inhibitor
Abstract Seiya HIRANAKA¹, Yasuo NAGAOKA¹, Shinichi UESATO¹, Akihiro ITO², Minoru
page 70 YOSHIDA², Takaaki SUMIYOSHI¹
¹ Department of Life Science and Biotechnology, Kansai University
² Chemical Genetics Laboratory, RIKEN

- LF-O-06 14:10 Histone deacetylase inhibitors as lipofection enhancer
Abstract Sharifah MASHI, Takaaki SUMIYOSHI, Yasuo NAGAOKA
page 71 *Department of Life Science and Biotechnology, Kansai University*
- LF-O-07 14:20 Enhanced effect of histone deacetylase inhibitors on expression of therapeutic shRNA
Abstract gene targeting proto-oncogenic factor, Cdc6
page 72 Maram NOOR, Hiroto AIHARA, Rei NISHIMURA, Mizuki KATSURAGI, Yasuo NAGAOKA
Department of Life Science and Biotechnology, Kansai University
- LF-O-08 14:30 Systematic study of α -substituent effect in oxindole cyclization reaction
Abstract Yusuke YAMAI¹, Tatsuo YAJIMA¹, Akio TANAKA², Kyoji ISHIDA¹, Shinichi
page 73 UESATO¹, Yasuo NAGAOKA¹, Takaaki SUMIYOSHI¹
¹ *Faculty of Materials, Chemistry and Bioengineering, Kansai University*
² *Organic Synthesis Research Laboratory, Sumitomo Chemical Co. Ltd*
- LF-O-09 14:40 Enantioselective synthesis of 3,3-disubstituted oxindoles using tartaric acid-derived chiral
Abstract auxiliaries
page 74 Kyoji ISHIDA, Yusuke YAMAI, Tatsuo YAJIMA, Shinichi UESATO, Yasuo NAGAOKA, Takaaki SUMIYOSHI
Faculty of Chemistry, Materials and Bioengineering, Kansai University
- LF-O-10 14:50 Control of melanogenesis in melanocytes with natural products and their synthetic
Abstract analogs
page 75 Naofumi FUKATA, Megumi KOYAMA, Tisa YONEYAMA, Sho TAKETOMI, Takaaki SUMIYOSHI, Yasuo NAGAOKA
Department of Life Science and Biotechnology, Kansai University

Coffee brake (15:00 - 15:30)

Session III (15:30 - 16:30) Chair: Supachitra CHADCHAWAN

- LF-O-11 15:30 Establishment of cell cultures for narciclasine and tazettine production and
Abstract pharmacological evaluation of *Hymenocallis littoralis* (Jacq.) Salisb
page 76 S. SREERAMANAN¹, N. ROSLI^{1,3}, M. VIKNESWARAN²
¹ *School of Biological Sciences, Universiti Sains Malaysia*
² *School of Pharmaceutical Sciences, Universiti Sains Malaysia*
³ *Department of Biology, Faculty of Applied Science, Universiti Teknologi MARA Negeri Sembilan Branch, Malaysia*
- LF-O-12 15:45 *Carice papaya* extract exhibits macrophage immunomodulatory activity
Abstract Yahya MAT-ARIP, Zatil Aqmal MOHD NOR
page 78 *School of Biological Sciences, University Sains Malaysia*

LF-O-13 16:00 Comparison between naïve and immune in tackling filarial antigens
Abstract
page 79 Anizah RAHUMATULLAH, Rahmah NOORDIN, Theam Soon LIM
Institute for Research in Molecular Medicine, Universiti Sains Malaysia

LF-O-14 16:15 Identification of novel anticancer by using combinatorial click chemistry
Abstract
page 80 Sewan THEERAMUNKONG¹, Gian Cesare TRON²
¹ *Faculty of pharmacy, Thammasat university (Rangsit Campus)*
² *Università degli Studi del Piemonte Orientale "A. Avogadro", Italy*

Session IV (16:30 - 17:30) Chair: Kanogwan SERAYPHEAP

LF-O-15 16:30 Geographic information system application on distribution of *Baetis* spp. (Insecta:
Abstract
page 81 Ephemeroptera) larvae as potential indicator in disturbed rivers
Suhaila AB HAMID, Siti Hamidah ISMAIL
School of Biological Sciences, Universiti Sains Malaysia

LF-O-16 16:45 Application of carbon and nitrogen isotopes in analysing trophic structure of aquatic
Abstract
page 82 insects in different freshwater habitat
Amila Faqhira ZAINODIN, Suhaila AB. HAMID
School of Biological Sciences, Universiti Sains Malaysia

LF-O-17 17:00 A smart laboratory management supply chain model based on fuzzy technology
Abstract
page 83 Sung-Tsun SHIH¹, Chian-Yi CHAO², Chin-Ming HSU³
¹ *Department of Electronic Engineering, Cheng Shiu University, Taiwan*
² *Department of Electronic Engineering, Kao Yuan University, Taiwan*
³ *Department of Information Technology, Kao Yuan University, Taiwan*

LF-O-18 17:15 Bioconversion of shellfish chitin wastes for the production of bioactive compounds
Abstract
page 84 San-Lang WANG
Department of Chemistry/Life Science Development Center, Tamkang University

LF-O-19 17:30 GWAS for salt tolerance gene identification in Thai rice (*Oryza sativa* L.)
Abstract
page 185 Teerapong BUABOOCHA¹, Chakkree LEKKLAR¹, Aumnart CHINPONGPANICH¹,
Supachitra CHADCHAWAN², Monnat PONGPANICH³, Duangjai
SURIYA-ARUNROJ⁴, Luca COMAI⁵
¹ *Department of Biochemistry, Faculty of Science, Chulalongkorn University*
² *Department of Botany, Faculty of Science, Chulalongkorn University*
³ *Department of Mathematics and Computer Science, Faculty of Science, Chulalongkorn University*
⁴ *Nakhon Ratchasima Rice Research Center, Thailand*
⁵ *Department of Plant Biology and Genome Center, University of California, Davis*

Electronics and Information Technology (Room4)

Session I (13:00 - 14:00) Chair: Thanaruk THEERAMUNKONG

- EI-O-01 13:00 Graph-based web video search reranking through consistency analysis using spectral clustering
Abstract
page 85 Soh YOSHIDA, Mitsuji MUNEYASU
Department of Electrical and Electronic Engineering, Faculty of Engineering Science, Kansai University
- EI-O-02 13:20 Automated diabetic retinopathy screening system with exudate and microaneurysm detection from non-dilated diabetic retinopathy retinal images
Abstract
page 86 Akara SOPHARAK ¹, Bunyarit UYYANONVARA ²
¹*Faculty of Science and Arts, Burapha University, Chanthaburi Campus, Thailand*
²*Department of Information Technology, Sirindhorn International Institute of Technology (SIIT), Thammasat University*
- EI-O-03 13:40 Detection of carotid artery calcifications in dental panoramic radiographs for predicting risks of vascular diseases
Abstract
page 87 Mitsuji MUNEYASU
Department of Electrical and Electronic Engineering, Faculty of Engineering Science, Kansai University

Session II (14:00 - 15:00) Chair: Yoshinobu KAJIKAWA

- EI-O-04 14:00 An EM-based technique for mood classification using comment and term-mood profiles
Abstract
page 88 Thanaruk THEERAMUNKONG, Phakhawat SARAKIT
School of Information, Communication and Technology, Sirindhorn International Institute of Technology, Thammasat University
- EI-O-05 14:20 Measure the effectiveness of your six sigma implementation
Abstract
page 89 Jung-Lang CHENG
Department of Industrial Engineering and Management, Cheng Shiu University, Taiwan
- EI-O-06 14:40 Recent researches in active noise control lab at CYCU
Abstract
page 90 Cheng Yuan CHANG, Sen M. KUO
Department of Electrical Engineering, Chung Yuan Christian University, Taiwan

Coffee brake (15:00 - 15:30)

Session III (15:30 - 16:30) Chair: Cheng-Yuan CHANG

- EI-O-07 15:30 A hardware-accelerated infrastructure for flexible sketch-based network traffic monitoring
Abstract Yu-Kuen LAI
page 91 *Computer Network and Systems Research Laboratory, Department of Electrical Engineering, Chung Yuan Christian University, Taiwan*
- EI-O-08 15:50 Distributed optimization technique for network design
Abstract Kouji HIRATA
page 92 *Department of Electrical and Electronic Engineering, Faculty of Engineering Science, Kansai University*
- EI-O-09 16:10 Recent researches in computer and network security at the network and system lab CYCU
Abstract Hsiao-Rong TYAN
page 93 *Department of Information and Computer Engineering, Chung Yuan Christian University, Taiwan*

Session IV (16:30 - 17:30) Chair: Shingo SATO

- EI-O-10 16:30 Photovoltaic burp charge system on energy-saving configuration by smart charge management
Abstract Guan-Chyun HSIEH, Hung-I Hsieh, Cheng-Yuan TSAI
page 94 *Department of Electrical Engineering, Chung Yuan Christian University, Taiwan*
- EI-O-11 16:50 Development of calculation method about power transfer efficiency for inductive power transfer systems in case of tens of kilohertz
Abstract Daigo YONEZU, Hiroki FUCHIWAKI and Hiroyuki MORIMOTO
page 95 *Department of Electrical and Electronic Engineering, Faculty of Engineering Science, Kansai University*
- EI-O-12 17:10 Solution-processed graphene for optoelectronic device applications
Abstract Wei-Chen TU, Chang-Wen FANG, Jhe-Rong WU, Wen-Chieh LEE
page 96 *Department of Electronic Engineering, Chung Yuan Christian University, Taiwan*

Civil Engineering (Room5)

Session I (13:00 - 14:00) Chair: Keiichi KITAZUME

- CE-O-01 13:00 Effects of combining silane and silicate type surface penetrant on deterioration
Abstract control in concrete
page 97 Hiroaki TSURUTA
Department of Civil, Environmental and Applied System Engineering, Faculty of Environmental and Urban Engineering, Kansai University
- CE-O-02 13:20 Damage evaluation of reinforced concrete columns subjected to reversed cyclic
Abstract loading
page 98 Naoshi UEDA
Department of Civil, Environmental and Applied System Engineering, Faculty of Environmental and Urban Engineering, Kansai University
- CE-O-03 13:40 Study on countermeasure of shield tunnel difficult cases
Abstract Wu-Te KO¹, An-Chi CHENG²
page 99 ¹*Department of Civil Engineering & Geomatics, Cheng Shiu University, Taiwan*
²*Department of Civil Engineering, National Chung Hsing University, Taiwan*

Session II (14:00 - 15:00) Chair: Wu-Te KO

- CE-O-04 14:00 Disaster risk reduction and recovery in earthquake debris and waste management
Abstract Keiichi KITAZUME
page 100 *Department of Civil, Environmental and Applied System Engineering, Faculty of Environmental and Urban Engineering, Kansai University*
- CE-O-05 14:20 Distance based toll for each route of urban expressway
Abstract Takamasa AKIYAMA, Hiroaki INOKUCHI
page 101 *Department of Civil, Environmental and Applied System Engineering, Faculty of Environmental and Urban Engineering, Kansai University*
- CE-O-06 14:40 Empirical analysis for travelling performance of ultra light vehicle
Abstract Hiroaki INOKUCHI, Takamasa AKIYAMA
page 105 *Department of Civil, Environmental and Applied System Engineering, Faculty of Environmental and Urban Engineering, Kansai University*