

**The 11th International Student Conference
on Advanced Science and Technology (ICAST) 2016 Kumamoto**
December 8 - 9, 2016
Graduate School of Science and Technology, Kumamoto University, Japan

DAY 1: December 8, 2016 (Thursday)

Opening Session, 100th Anniversary Memorial Hall

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| 8:30 – 9:20 | Registration |
| 9:30 – 9:40 | Opening Address
Kazuki Takashima (Vice-President of Kumamoto University) |
| 9:40 – 9:50 | Welcome Address
Tsuyoshi Usagawa (Dean of GSST, Kumamoto University) |
| 9:50 – 10:40 | Keynote Lecture
Norio Okada (Adviser to Institute of Disaster Area Restoration, Regrowth and Governance (IDiARRG), Kwansei Gakuin University, Professor Emeritus of Kyoto University and Visiting Professor of Kumamoto University)
“Why Disaster Risk Reduction, Why Disaster Risk Governance ?
-Lessons Learned from Eastern Japan Earthquake and Tsunami Disaster, and Kumamoto Earthquake Disaster” |
| 10:40 – 11:10 | Report on International Experiences by GSST students
Qudratullah (Doctoral student in Architectural and Civil Engineering)
“A Part of My Life as International Student in Kumamoto University”
Yusuke Nagai (Master student in Civil and Environmental Engineering)
“Studying Abroad Experience in Taiwan as Tobitate! Young Ambassador Program” |
| 11:10 – 11:20 | Introduction of Kumamoto/ Kumamoto University |
| 11:20 | Photo Session |

Oral Sessions

13:00 -15:00	Session I (Room A) 1-1, 1-2, 2-1, 2-2, 2-4, 2-5, 2-6, 2-7
	Session II (Room B) 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9
	Session III (Room C) 7-1, 7-2, 7-3, 7-4, 7-5, 7-6, 7-7, 7-8, 7-9, 7-10
	Session IV (Room D) 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7, 9-8, 9-9, 9-10
15:00 – 15:30	Coffee Break
15:30 – 17:00	Session V (Room A) 15-1, 14-1, 14-3, 14-4, 14-5, 14-6, 14-2
	Session VI (Room B) 10-1, 10-2, 10-3, 10-4, 10-5, 10-6
	Session VII (Room C) 11-1, 11-2, 11-3, 11-4
	Session VIII (Room D) 9-11, 9-12, 9-13, 9-14, 9-15, 9-16, 9-21

18:15 – 20:00	Student Exchange Party (100th Anniversary Memorial Hall)
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DAY 2: December 9, 2016 (Friday)

9:00 – 9:30 Registration, 100th Anniversary Memorial Hall *Only for those who haven't registered on DAY 1

Oral Sessions

9:30 – 10:50	Session IX (Room A) 16-1, 16-2, 16-3, 16-4, 16-5, 16-6, 16-7
	Session X (Room B) 5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 5-7
	Session XI (Room C) 4-2, 4-3, 8-1, 8-2, 8-3
	Session XII (Room D) 6-1, 6-2, 6-3, 6-4, 6-5
10:50 – 11:00	Coffee Break
11:00 – 12:00	Session XIII (Room A) 13-1, 13-2, 13-3
	Session XIV (Room B) 5-8, 5-9, 5-10, 5-11, 5-12
	Session XV (Room C) 12-1, 12-2, 12-3
	Session XVI (Room D) 6-6, 6-7, 6-8, 6-9, 6-10

Poster Sessions (100th Anniversary Memorial Hall)

13:30 – 14:30	Odd number poster presentation
14:30 – 15:30	Even number poster presentation
15:30	Closing ceremony and Students Awards

Room A: Room 203, 2nd floor, Mechanical System Engineering, Materials Science and Engineering
[Kurokami South C3]

Room B: Room 309, 3rd floor Mechanical System Engineering, Materials Science and Engineering
[Kurokami South C3]

Room C: Meeting Room 204, 2nd floor, Computer Science and Electrical Engineering
[Kurokami South W2]

Room D: Lecture Room, 1st floor, Academic Commons Kurokami Bldg. 1
[Kurokami South W3]

Research Sessions:

- | | |
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| <ol style="list-style-type: none"> 1. Mathematics 2. Physics 3. Chemistry 4. Earth and Environments 5. Biological Sciences 6. Applied Chemistry and Biochemistry 7. Materials Science and Engineering | <ol style="list-style-type: none"> 8. Mechanical System Engineering 9. Computer Science and Electrical Engineering 10. Civil and Environmental Engineering 11. Architecture 12. Multidisciplinary |
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General Sessions:

13. Energy
14. Environment
15. Natural Disasters
16. Challenges of the Society in Science and Technology

DAY 3: December 10, 2016 Saturday: Trip to Mt. Aso (pre-registration required)

List of Papers in Oral Sessions

December 8, Thursday

Session I: Room A (13:00 -15:00)

Research Session on Mathematics/ Physics

-
- 1-1 **Partial functional linear models with ARCH errors**
Yafei Wang, Beijing University of Technology
-
- 1-2 **Asymptotic limits of radiation fluid dynamics model and relevant issues**
Xiao Chen, Beijing University of Technology
-
- 2-1 **The Utilization of Magnetic Material Based Iron Rust Waste on Corrosion Mechanism as Radar Absorber Material**
Muhammad Faisol Alwi, Institut Teknologi Sepuluh Nopember
-
- 2-2 **The correlation of focusing characteristics of binary phase subwavelength Fresnel zone plate and illuminating direction of incident beam**
An. Hongchang, Kumamoto University
-
- 2-4 **The contribution of Active Galactic Nuclei to Cosmic Reionization**
Shintaro Yoshiura, Kumamoto University
-
- 2-5 **First-principles molecular dynamics study of photo dynamics in dye-sensitized TiO₂**
Hiroyuki Kumazoe, Kumamoto University
-
- 2-6 **Gravitational waves and the new detection method : Statistic of the distribution of pulsar spin-down rates**
Naoyuki Yonemaru, Kumamoto University
-
- 2-7 **Stable Si-based Pentagonal Monolayers: High Carrier Mobilities and Applications in Photocatalytic Water Splitting**
Li Xinru, Shandong University
-

Session II: Room B (13:00 -15:00)

Research Session on Chemistry

-
- 3-1 **Luminescent Acetate-bridged Binuclear Zn(II)-Ln(III) Complexes with a Series of Lanthanide(III) Ions of Nd^{III}, Sm^{III}, Eu^{III}, Gd^{III}, Tb^{III}, Dy^{III}, Ho^{III}, and Er^{III}**
Hiroki Okabe, Kumamoto University
-
- 3-2 **Carbon sphere oxide with thermal stable high proton conductivity**
Md. Saidul Islam, Kumamoto University
-
- 3-3 **Syntheses, 1D structure via anion-imidazole hydrogen bonds, and SCO properties of [FeIII(Him)₂(4-MeOhapen)]Y (Y = BF₄⁻, PF₆⁻, AsF₆⁻, SbF₆⁻, CF₃SO₃⁻)**
Kyohei Miyano, Kumamoto University
-
- 3-4 **Investigation of relationship between the spin states and a proton relaxation time using metal complex nanoparticles**
Asami Tsukiashi, Kumamoto University
-

3-5	High dielectric constant of two dimensional TiO₂ and Ca₂Nb₃O₁₀ nanosheet composites with graphene oxide and reduced graphene oxide <i>Rabin Nurun Nahar, Kumamoto University</i>
3-6	Construction of metal oxide type of K₂La_{2-x}BaxTi_{3-x}NbxO₁₀ as pseudo BaTiO₃ <i>Yuta Shudo, Kumamoto University</i>
3-7	Development of New Synthetic Method of Benzocarbazole Derivatives by Mn-Mediated Radical Coupling Reaction <i>Chiaki Akazaki, Kumamoto University</i>
3-8	Reaction of 2-Pentene-1,4-dione with Indole and the Related Reaction <i>Shun Kawabata, Kumamoto University</i>
3-9	Synthesis, Structure, and Opto-electronic Properties of Regioisomeric Pyrene-Thienoacenes <i>Zhang Shiqian, Shandong University</i>

Session III: Room C (13:00 -15:00)

Research Session on Materials Science and Engineering

7-1	Local mechanical properties in the vicinity of Σ3 symmetric tilt grain boundaries with different inclination in aluminum bicrystals <i>Yoshiyuki Tokuda, Kumamoto University</i>
7-2	Effect of pearlite ratio in steel on Fe-Al alloy layer in aluminized steel <i>Shinya Fukukura, Kumamoto University</i>
7-3	Microstructures of Chromium Modified by Iron-powder Pack Technique <i>Chiharu Santo, Kumamoto University</i>
7-4	Quantitative evaluation of microstructure based on fractal analysis towards achieving enhanced mechanical properties in Mo-Si-B-TiC alloy <i>Sojiro Uemura, Kumamoto University</i>
7-5	Bending deformation behavior of pure magnesium single crystals <i>Yuta Hirokawa, Kumamoto University</i>
7-6	Fatigue fracture behavior in pure magnesium single crystals <i>Tsunoda Seiya, Kumamoto University</i>
7-7	Influence of process parameters of ultrasonic shot peening on surface nanocrystallization and hardness of pure titanium <i>Zhu Lihua, Shandong University</i>
7-8	Controlled synthesis and growth mechanism of Bi₂O₃/YSZ solid Electrolyte materials <i>Luan Junpeng, Shandong University</i>
7-9	Magnet Strength Variation Effect on Magnetic Materials of Iron Rust Waste to Phase Quantities and Radar Wave Absorption <i>Nadhilah Savetri, Institut Teknologi Sepuluh Nopember</i>
7-10	Effect of micro/nano-textures on the tribological properties of TiAlN coatings against AISI 316 stainless steel <i>Zhang Kedong, Shandong University</i>

Session IV: Room D (13:00 -15:00)

Research Session on Computer Science and Electrical Engineering

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- 9-1 Soft Error Simulator for Analyzing MBU Pattern**
Takuya Teraoka, Kumamoto University
-
- 9-2 Separation of Metal and Plastic of Optical Disc using Pulsed Power**
Naofumi Yoshihara, Kumamoto University
-
- 9-3 Behavior of Nanosecond Pulsed Discharge in Various Coaxial Electrodes**
Koki Nakamura, Kumamoto University
-
- 9-4 Effect of Intense Nanosecond Pulsed Electric Fields on Proliferation and Fermentation Activities of Yeast**
Kyohei Matsubayashi, Kumamoto University
-
- 9-5 Study of Plasma-Assisted Combustion Technology using Nanosecond Pulsed Power**
Ryo Nakamura, Kumamoto University
-
- 9-6 Development of High Power Nanosecond Pulse Generator with Lower Impedance**
Satoru Matsumoto, Kumamoto University
-
- 9-7 Pore formation on a planar lipid bilayer membrane caused by the exposure to pulsed electric fields**
Tomohiro Nagahisa, Kumamoto University
-
- 9-8 Study of non thermal food processing by using PEF**
Ryo Matsushima, Kumamoto University
-
- 9-9 The Characteristics of Atmospheric Pressure Plasma Jet Generated by Pulse Source**
Taichi Yamaguchi, Kumamoto University
-
- 9-10 Spatial Pyramid Convolutional Neural Network for Social Event Detection in Static Image**
Reza Fuad Rachmadi, Kumamoto University
-

Session V: Room A (15:30-17:00)

General Session on Natural Disasters/ Environment

-
- 15-1 Did the Hazard Map Work In Kumamoto Earthquake? - How to Make it More Effective**
Miyu Araki, Kyushu Gakuin Highschool
-
- 14-1 Eco-Banana Bioplastic: Banana peels as alternative bioplastics to reduce the use of synthetic plastic that enviromentally friendly**
Rizki Septian Candra Kusuma, University Of Brawijaya
-
- 14-3 Water of Miracle that Mt.Aso carries**
Ryo Kikukawa, Seiseiko Highschool
-
- 14-4 The modern garbage problems**
Misaki Yoshimura, Kumamoto West Highschool
-

14-5	The Effect of Climate Change and the Countermeasure <i>Risa Mizuno, Kumamoto West Highschool</i>
14-6	Improving the environment with waste disposal <i>Amane Kawano, Shinwa Highschool</i>
14-2	Supercritical Extraction of azadirachtin and leptospermone using carbon dioxide <i>Benjamin Kueh Wei Bin, University Teknologi Petronas</i>

Session VI: Room B (15:30-17:00)

Research Session on Civil and Environmental Engineering

10-1	Surveying Earthquake Vulnerabilities of District 13 of Kabul City, Afghanistan <i>Mohsen Mohammadi, Kumamoto University</i>
10-2	Exploring public space, social space and festivals in the sustainable socio-cultural and environmental management of the waterfront in Tomitsu, Amakusa <i>Okoko Anita Nyapala, Kumamoto University</i>
10-3	Risk Analysis of Project Schedule On Makassar-Parepare Railway Construction <i>Yusman Rusyda Habibie, Institut Teknologi Sepuluh Nopember</i>
10-4	Thermal Effect to Prestressing Loss in Post Tension Concrete Structures <i>Kirati Nitichote, Kasetsart University</i>
10-5	Application of Sufficiency Economy Concept in Managing Construction SMEs in Thailand <i>Songpol Wansoongnern, Kasetsart University</i>
10-6	The Impact of Transport Network Improvement on Rural De-velopment in Kabul, Afghanistan <i>Qudratullah, Kumamoto University</i>

Session VII: Room C (15:30-17:00)

Research Session on Architecture

11-1	Viscoplastic Behavior of Cold-rolled Steel Columns at Elevated Temperatures <i>Clara Maria Alvarez González, Kumamoto University</i>
11-2	Behavior of Frame with High Strength Steel Side Column in Partially Base-isolated Steel Frame with Friction Dampers <i>Yang Dong, Kumamoto University</i>
11-3	An experiment on word intelligibility of pre-school children with different reverberation and signal-noise ratios conditions <i>Momoko Ootaku, Kumamoto University</i>
11-4	Folding as Design Method to Restore the Locality Issue in Tunjungan Historical Area <i>Muhammad Dimas Anggoro M., Institut Teknologi Sepuluh Nopember</i>

Session VIII: Room D (15:30-17:00)

Research Session on Computer Science and Electrical Engineering

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- 9-11 **Introductory Work on Section Based Page View of Web Contents: Towards The Idea of How a Page is Viewed**
Fajar Purnama, Kumamoto University
-
- 9-12 **Isolating hidden recurring patterns on unlabeled access log data in learning management systems to identify drop out risk students**
Alvin Fungai, Kumamoto University
-
- 9-13 **Observation of Pulsed Streamer Discharge for Varying Wire Electrode Diameter**
Yusei Nagata, Kumamoto University
-
- 9-14 **Broad-sense Synchronous Circuits on Partially Ordered Time**
Shunji Nishimura, Kumamoto University
-
- 9-15 **Study on Convergence Properties of Auto-Correlation Functions of Binary Sequences Generated by Post-Processing with LFSRs using Mean Square Error**
Tin Ni Ni Kyaw, Kumamoto University
-
- 9-16 **High Level Stream Processing with FPGA**
Hendarmawan, Kumamoto University
-
- 9-21 **The Relation Between Initial Ozone Concentration and Ozone Generation Characteristics Using Nanosecond Pulsed Discharge**
Ryuji Tamura, Kumamoto University
-

December 9, Friday

Session IX: Room A (9:30-10:50)

General Session on Challenges of the Society in Science and Technology

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- 16-1 **Is That a Gamble: the Development Route of Tengchong**
Chen Siyu, Kumamoto University
-
- 16-2 **Choosing strategy of bank's loan interest using game theory**
Batzolboo Batjargal, Mongolian University of Life Sciences
-
- 16-3 **Multiple Regression Analysis of Mongolian Milk And Dairy Products**
Anujin Battulga, Mongolian University of Life Science
-
- 16-4 **Parking Demand modeling and Parking Policy for metropolitan cities**
Roien Qiam, Kumamoto University
-
- 16-5 **The efforts to improve the quality of Benowo Community by means of Tempe Crispy Chips Industry using Biogas Technology**
Nadia Mumtazah, Institut Teknologi Sepuluh Nopember
-
- 16-6 **Keeping Abreast: 3D Bioprinting of Sternum (A Review Paper)**
Jomari Angel A.Jacinto, De La Salle University
-
- 16-7 **The investigation of resistance to earthquake through studying 2016 "KUMAMOTO EARTHQUAKE"**
Ryoji Toyooka, Kouta Nomiya, Kumamoto Kita Highschool
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Session X: Room B (9:30-10:50)

Research Session on Biological Sciences

5-1	Analysis of attractant of root knot nematode, <i>Meloidogyne incognita</i> <i>Morihiro Oota, Kumamoto University</i>
5-2	A novel supramolecular formulation of sorafenib for side-effects management <i>Xue Yang, University of Macau</i>
5-3	The effect of 17β-estradiol on dopaminergic neuron in zebrafish embryos exposed to glucose <i>Waldy Yudha Perdana, Kumamoto University</i>
5-4	Induction of gonadal maturation of striped catfish (<i>Pangasianodon hypophthalmus</i>) using Pregnant Mare Serum Gonadotropin hormone and antidopamine <i>Muhammad Ahya Rafiuddin, Kumamoto University</i>
5-5	Nitrate (NO₃) and nitrite (NO₂) induce nitric oxide formation in zebrafish (<i>Danio rerio</i>) larvae through oxidative stress <i>Febriyansyah Saputra, Kumamoto University</i>
5-6	Innovation Of Nursery Maggot with Technology Automatic Temperature Control to Produce High Nutrition Fish Feed <i>Rizki Septian Candra Kusuma, University Of Brawijaya</i>
5-7	Crystal Structure and Substrate Specificity of PTPN12 <i>Li Hui, Shandong University</i>

Session XI: Room C (9:30-10:50)

Research Session on Earth and Environments/ Mechanical System Engineering

4-2	Nutrient removal in constructed wetland microcosms treating high nitrate/nitrite polluted river water <i>Cheng Cheng, Shandong University</i>
4-3	Impact of organic loading on N₂O emission in aerobic granular sludge SBAR <i>Guo Ning, Shandong University</i>
8-1	A dynamic model to optimise the energy trading for enhancing economic development <i>Upasana Panigrahi, Kumamoto University</i>
8-2	Modification of Cell Culture Surface Using Gel Micromachining Technique <i>Yusuke Yamamoto, Kumamoto University</i>
8-3	Investigations of ultrasonic frequency effects on surface deformation in rotary ultrasonic roller burnishing Ti-6Al-4V <i>Zhao Jian, Shandong University</i>

Session XII: Room D (9:30-10:50)

Research Session on Applied Chemistry and Biochemistry

-
- 6-1 Graphene Oxide-Catalyzed Cellulose Depolymerization Under Microwave Irradiation**
Elaine G. Mission, Kumamoto University
-
- 6-2 Natural Malic Acid Based Low-Transition-Temperature-Water Mixture as an Eco-sustainable Green Solvent for Biomass Delignification**
Yiin Chung Loong, Universiti Teknologi PETRONAS
-
- 6-3 Preparation of Base Functionalized Graphene Oxide Catalyst for Isomerization of Glucose to fructose**
Tat Boonyakarn, Kumamoto University
-
- 6-4 Hydrothermal Carbonization of Biomass: Effect of Temperature and Time on Hydrothermal Carbon-Based Acid Catalyst**
Piyaporn Wataniyakul, Kumamoto University
-
- 6-5 Physicochemical Properties of Supramolecular Gel Functionalized by Rhenium Complexes**
Aiki Kamo, Kumamoto University
-

Session XIII: Room A (11:00-12:00)

General Session on Energy

-
- 13-1 Development of Renewable Energy From Lignocellulose-Based Bioethanol Made From Agricultural Waste**
Himawan Auladana, University of Brawijaya
-
- 13-2 Optimizing The Utilization of Geothermal Energy in Indonesia as a Strategic Against Global Energy Crisis in The Future**
Rafi Ryanto, Institut Teknologi Sepuluh Nopember
-
- 13-3 Impact of Future Philippine Energy Scenarios on the Life Cycle Analysis of Electric Vehicle Batteries**
Jhud Mikhail Aberilla, University of the Philippines Deliman
-

Session XIV: Room B (11:00-12:00)

Research Session on Biological Sciences

-
- 5-8 Viscoelastic mechanical properties of brain tissues on the implanting trajectory of sub-thalamic nucleus**
Li Yan, Shandong University
-
- 5-9 Hepatitis B virus X protein amplifies TGF- β promotion on HCC motility through down-regulating PPM1a**
Liu Yuan, Shandong University
-
- 5-10 Reproductive strategies of *Zostera marina* L. in Shuangdao Bay**
Zhang Fei, Shandong University,
-

-
- 5-11 Nutrient dynamic mechanism to maintain *Enteromorpha prolifera* green tide under nutrients heterogeneity**

Chai Yanchao, Shandong University,

- 5-12 Study on the Culture Conditions and Variation of Lipid Content in Microalgae, *Chlorella* sp. through Some Factors**

Myat Thu, Mandalay Technological University

Session XV: Room C (11:00-12:00)

Research Session on **Multidisciplinary**

-
- 12-1 The study of spatial distribution of the public sports venues in Hangzhou**

Zeng Huanjian, Kumamoto University

- 12-2 Inactivation of *E. coli* in Juice using Underwater Shock Wave as a Non-thermal Method for Food Preservation**

Bahareh Hosseini, Kumamoto University

- 12-3 Design and Fabrication of Low-Cost Medium Pressure Liquid Chromatography System**

Danielle B.Lapinig, Ateneo De Manila University

Session XVI: Room D (11:00-12:00)

Research Session on **Applied Chemistry and Biochemistry**

-
- 6-6 Electrochemical Hydrogen Sensor Based on Graphene Oxide**

Azumi Miyamoto, Kumamoto University

- 6-7 Preparation of lipidic carbon-silica hybrid and its characterization**

Tianhang Liu, Kumamoto University

- 6-8 The Evaluation of the Electrochemical Capacitance of Graphite Oxide Electrode**

Keisuke Awaya, Kumamoto University

- 6-9 Synthesis and characterization of magnetic material strontium hexa-ferrite particles by the sol-gel method**

Le Anh Bao Quynh, Ho Chi Minh University of Technology(HCMUT),

- 6-10 Effect of Hydrolysis Methods on Removal of Glycerides from Rice Bran Acid Oil**

Amornrat Meedam, Chulalongkorn University

List of Papers in Poster Sessions

100th Anniversary Memorial Hall

December 9, Friday

Physics	
2-8	Relating the Entropy Scaling Law for Diffusivity with the Bond Fluctuation Model of Ionic Conduction <i>Kaoru Matsunaga, Kumamoto University</i>
2-9	A Model for the Particle Size Dependence of the Ionic Conductivity <i>Kazuma Hagihara, Kumamoto University</i>
2-10	The Relationship between Thermal Property and Ionic Conductivity in Ionic Conductors <i>Kazuya Tanaka, Kumamoto University</i>
2-11	Bulk Modulus of Ionic Conductors <i>Keisuke Iikawa, Kumamoto University</i>
2-12	Analysis of Cooperativity Length in Metallic Glass Forming Systems <i>Ryota Sakamoto, Kumamoto University</i>
2-13	A Model for the Collective Motion in Polymer Electrolytes <i>Takuro Nishimuta, Kumamoto University</i>
2-14	Configuration Entropy of Disordered Systems: An Application of the Bond Strength-Coordination Number Fluctuation Model <i>Takafumi Morishita, Kumamoto University</i>
2-15	The quantum effects on atomic structures of condensed state of the rare gas based on the path-integral centroid molecular dynamics simulation <i>Yuichi Uchida, Kumamoto University</i>
Chemistry	
3-10	Circular and Chainlike Cu(II)-Gd(III) Complexes <i>Takahiro Ueno, Kumamoto University</i>
3-11	Oxidation of Methylenebis(cyclohexanedione)s in the Presence of Alkenes <i>Ayaka Chikamatsu, Kumamoto University</i>
3-12	Synthesis of Spiro Compounds Using Mn(III)-Based Oxidative Radical Cyclization <i>Suzuka Yokote, Kumamoto University</i>
3-13	Aerobic Oxidation of 2,2'-Methylenebis(cycloalkane-1,3-dione) Derivatives Using Mn(III)-Catalyst <i>Yuki Murakami, Kumamoto University</i>
3-14	Synthesis of Dihydrofuran, Lactone, Spirolactone Using Mn(III)-AcOH-HCO₂H System <i>Ryosei Wada, Kumamoto University</i>
3-15	Oxidation of Bis(cycloketamide)s with Mn(OAc)₃ and Related Reaction <i>Satomi Nishikawa, Kumamoto University</i>
3-16	Oxidative Cyclization of (Indol-3-yl)methyl 3-Oxobutanoate with Manganese(III) Acetate <i>Megumi Obata, Kumamoto University</i>

3-17	Synthesis of 4,9-Dihydropyrano[3,4-b]indol-1(3H)-one via Manganese(III)-Based Oxidative Radical Coupling Reaction <i>Takeshi Inoue, Kumamoto University</i>
3-18	Preparation of polybutadiene/inorganic particles core-shell microspheres and their characterization <i>Yangwon Kang, Kumamoto University</i>
3-19	Sunlight-Induced Cross-Linked Luminescent Films based on Polysiloxanes and D-limonene via Thiol-Ene "Click" Chemistry <i>Zuo Yujing, Shandong University</i>
Biological Sciences	
5-14	Root-knot Nematodes (RNK) Hijack Auxin-signaling Modules to Activate Procambial Stem Cells <i>Reira Suzuki, Kumamoto University</i>
5-15	Functional Analysis of CLE16 and CLE17 in Arabidopsis <i>Chie Shimaoka, Kumamoto University</i>
5-16	Optimum bearing surface in artificial joint <i>Toshiki Moriyama, Kumamoto University</i>
5-17	Relationship between Intracellular Calcium Signaling Response and Compressive Stress in Osteoblast cells <i>Tairo Yokokura, Kumamoto University</i>
5-18	Evaluation of cellular differentiation using Micro-well array with convertible surface <i>Koki Yamasaki, Kumamoto University</i>
5-19	Geometrical parameters to represent bio-inspired surface <i>Shin Sakuraba, Kumamoto University</i>
5-20	A Newly Record Species of <i>Maianthemum</i> in China <i>Xue Yuanyuan, Shandong University,</i>
5-21	Studies of Marine Bacterial Diversities in Weihai Coastal Area and Taxonomic Analysis of Three Novel Bacteria <i>Xu Zhenxing, Shandong University,</i>
5-22	Influence of Surface Characteristics of Solid Biomaterials on Cellular Adhesion Behavior <i>Masaki Kounoura, Kumamoto University</i>
Applied Chemistry and Biochemistry	
6-11	Solvent-free microwave extraction as applied to recovery of polyphenols from citrus peel <i>Saya Yamafuku, Kumamoto University</i>
6-12	Catalytic Performance of Graphene Oxide Under Microwave Irradiation in Biofuel Synthesis <i>Yoshifumi Sumigawa, Kumamoto University</i>
6-13	Synthesis and Characterization of Necklace Shape POSS-DMS Copolymers <i>Naohiro Katsuta, Kumamoto University</i>

6-14	Self-assembled nanotubular aggregates induced hydrogelation by crosslinking of hydrophilic polymer with terminal alkyl chains <i>Fataha Nur Robel, Kumamoto University</i>
6-15	Development of PEDOT thin films using sulfated cellulose <i>Ryota Sumi, Kumamoto University</i>
6-16	Fabrication of gas sensing films using p-type Cu₂O/CuO semiconductor nanocrystals <i>Kazuki Mikami, Kumamoto University</i>
6-17	Photoreduction of polyoxometalates by a Ru complex photosensitizer for photoenergy storage <i>Kenta Tsuchibashi, Kumamoto University</i>
6-18	Preparation of polymer microspheres with dimple surface using supercritical carbon dioxide <i>Yoshimi Takeda, Kumamoto University</i>
6-19	Effect of hydrothermal processing on ginseng extract <i>Jebin Ryu, Seoul National University</i>
Materials Science and Engineering	
7-11	Stress change tests for identification of high-temperature deformation mechanism in ferromagnetic iron-cobalt alloys <i>Kohdai Nagata, Kumamoto University</i>
7-12	The influence of the grain boundary segregation of sulfur on the local plastic deformation near the grain boundaries in nickel <i>Shunji Takata, Kumamoto University</i>
7-13	Grain boundary engineering of ferritic-martensitic steel T91 for enhancement of creep strength <i>Yuu Ishigaki, Kumamoto University</i>
7-14	Carbonitriding of titanium powder by heating under mixtures of iron, graphite and alumina powders <i>Kaede Mizuno, Kumamoto University</i>
7-15	Deformation behavior of pure magnesium single crystals in pure shear test <i>Yuta Koyanagi, Kumamoto University</i>
7-16	Influence of yttrium addition on plastic deformation of magnesium <i>Hiroaki Rikihisa, Kumamoto University</i>
7-17	[0001] axis tension-compression fatigue test of magnesium single crystals <i>Akinobu Nakamura, Kumamoto University</i>
7-18	Activation stresses for slip systems of pure magnesium single crystals in pure shear tests <i>Kazutaka Fukuda, Kumamoto University</i>
7-19	Synthesis of CNTs on Carbon Fibers Surface by Chemical Vapor Deposition: Effect of Temperature and Carbon Source <i>Saida Mayela García Montes, Universidad Autonoma de Nuevo Leon</i>
Mechanical System Engineering	
8-4	Water sealing system based on lubricating mechanism of natural joint <i>Takuro Honda, Kumamoto University</i>

8-5	Optimization for Mold Face by using Micro Wet Blasting <i>Takuma Hiraki, Kumamoto University</i>
8-6	Bio-inspired Surface Fabricated on Artificial Material by Using Micro Wet Blasting Technique <i>Takashi Baba, Kumamoto University</i>
8-7	Bio-inspired shaft seal for Machine Tool <i>Takashi Uchida, Kumamoto University</i>
Computer Science and Electrical Engineering	
9-17	Ca response in HeLa cells induced by non-thermal Intense electrical pulse <i>Yulan Li, Kumamoto University</i>
9-18	Research on Immediate Response of Mammalian Cells to Applied Pulsed High Electric Field <i>Hironori Uchinohae, Kumamoto University</i>
9-19	Effect of intense nanosecond pulsed electric field on proteins <i>Takuma Terahira, Kumamoto University</i>
9-20	Binary Search Path of Vocabulary Tree Based Finger Vein Image Retrieval <i>Wang Kuikui, Shandong University</i>
Civil and Environmental Engineering	
10-7	Exploring Spatiotemporal Characteristics of PM2.5 Distribution with GIS: A Case Study of Hangzhou <i>Liu Hang, Kumamoto University</i>
Architecture	
11-5	Development of Decision Support System for Design of H-Shaped Steel Column Joint and Beam Joint in Education for Novices <i>Hikaru Shirasaka, Kumamoto University</i>
11-6	Dynamic Behavior of Multi-span Steel Frame with Passive Friction Damper at Column Base <i>Takuya Nishimura, Kumamoto University</i>
11-7	A Basic Study on Seismic Design Method of Steel Moment Frame Incorporating a Stick Damper Mechanism <i>Satoshi Kikugawa, Kumamoto University</i>
11-8	Dynamic Uplifting and Sliding Behaviors of Base-isolated Steel Frame with Passive Friction Damper under Earthquake <i>Kouki Iwamoto, Kumamoto University</i>
Multidisciplinary	
12-4	QM/MM Study on Enantioselectivity of Haloalkane Dehalogenase LinB Towards the Degradation of 1,2-Dichloropropane <i>Tang Xiaowen, Shandong University</i>