



The 8th International Conference on Nanostructures, Nanomaterials and Nanoengineering 2019 ICNNN 2019

2019 The 4th International Conference on Materials
Technology and Applications
ICMTA 2019

Kyoto, Japan

October 11-14, 2019





Venue: TKP Garden City Kyoto | TKP ガーデンシティ京都

Address: Japan, 〒600-8216 Kyoto, Shimogyō-ku, Higashishiokōjichō 〒600-8216 京都府京都市下京区烏丸通七条下ル東塩小路町 721-1 京都タワーホテル



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We are pleased to welcome you to 2019 The 8th International Conference on Nanostructures, Nanomaterials and Nanoengineering(ICNNN 2019), With workshop 2019 The 4th International Conference on Materials Technology and Applications(ICMTA 2019), which will take place in Kyoto, Japan during October 11-14, 2019.

After several rounds of review procedure, the program committee accepted those papers to be published in conference proceedings. We wish to express our sincere appreciation to all the individuals who have contributed to ICNNN 2019 with workshop ICMTA 2019 conference in various ways. Special thanks are extended to our colleagues in the program committee for their thorough review of all the submissions, which is vital to the success of the conference, and also to the members in the organizing committee and the volunteers who had dedicated their time and efforts in planning, promoting, organizing and helping the conference.

This conference program is highlighted by three keynote speakers: Prof. Gong Hao, National University of Singapore, Singapore; Prof. Umemura Kazuo, Tokyo University of Science, Japan; Prof. Mikio Ito, Osaka University, Japan; A plenary speaker: Prof. Yoshihiko Uematsu, Gifu University, Japan, and an invited speaker: Prof. Xiaoqiang Cui, Jilin University, China.

One best presentation will be selected from each session, evaluated from: originality; applicability; technical Merit; qualities of PPT; English. The best one will be announced at the dinner banquet, and awarded the certificate over the dinner banquet.

Let me, on behalf of the conference committee; cordially invite you to this outstanding conference. We look forward to receiving your paper in either research or development of acquired knowledge in order to disseminate to the wider audience. Join us at this event to see other excellent researchers share their work.

Kyoto is one of the country's ten largest cities with a population of 1.5 million people and a modern face. Countless temples, shrines and other historically priceless structures survive in the city today. It is great place for conference. Hope you could enjoy the conference and have an unforgettable experience in Kyoto!

Prof. Kazuo. Umemura & Prof. Hao Gong Conference Chair Kyoto, Japan



#### **Conference Chairs**



#### **Program Chairs**

Yoshihiko Uematsu, Gifu University, Japan Indriana Kartini, Universitas Gadjah Mada, Indonesia

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Radiah Mohamad, Universiti Tun Hussein Onn Malaysia, Malaysia

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Siti Nazahiyah Rahmat, Universiti Tun Hussein Onn Malaysia, Malaysia

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Han Hsiang Huang, National Chiayi University, Taiwan



Norazwani Muhammad Zain, Universiti Kuala Lumpur Malaysia France Institute, Malaysia

Sukangkana Talangkun, Khon Kaen University, Thailand

Andri Kusbiantoro, Universiti Malaysia Pahang, Malaysia

Jiong-Shiun Hsu, National Formosa University, Taiwan

Yu-Cheng Liu, Feng Chia University, Taiwan

Chao-Cheng Chang, National Kaohsiung University of Science and Technology, Taiwan

Ernie Suzana Ali, University Sains Islam Malaysia, Malaysia

Shyh Ming Kuo, I-shou university, Taiwan

Mauricio Carmona, Universidad del Norte, Colombia

Azrina Abd Aziz, Universiti Malaysia Pahang, Malaysia

Okan Sirin, Qatar University, Qatar

Sholihun, Universitas Gadjah Mada, Indonesia

Chi-Wen Lin, National Yunlin University of Science and Technology, Taiwan

Anyaporn Boonmahitthisud, Chulalongkorn University, Thailand

Danuta Barnat-Hunek, Lublin University of Technology, Poland

Ruey-Fang Yu, National United University, Taiwan

Shun Yao, Sichuan University, China

Levitsky Semyon, Shamoon College of Engineering, Israel

Jia-Lin Tsai, National Chiao Tung University, Taiwan

Frederick Johannes Willem Jacobus (Johan) Labuschagne, University of Pretoria, South Africa

Ching An Huang, Chang Gung University, Taoyuan, Taiwan

Kowit Piyamongkala, King Mongkut's University of Technology North Bangkok, Thailand

Jung-San Chen, National Cheng Kung University, Taiwan

Y. Morris Wang, Lawrence Livermore National Laboratory, USA

Ming-Show Wong, National Dong Hwa University, Taiwan

Yu-Cheng Kan, Chaoyang University of Technology, Taiwan

Abdul Maleque, CEng, MIMechE (UK), UK

Nattakan Soykeabkaew, Mae Fah Luang University, Thailand

Yun Sun, Chinese Aacademy of Sciences, China

Omid Reza Baghchesaraei, Western Sydney University, Australia

Gobinda Gopal Khan, Tripura University (A Central University), India



### **Local Information**

#### **Conference Venue**



TKP GardenCity Kyoto | TKP ガーデンシティ京都

https://www.kashikaigishitsu.net/facilitys/gc-kyoto/

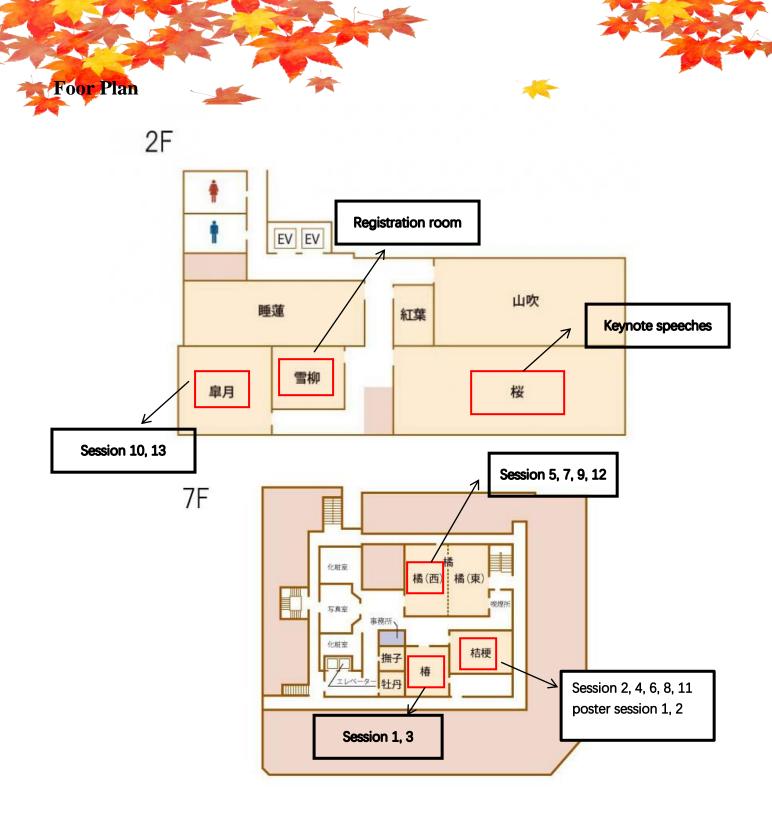
Address: Japan, <del>→</del>600-8216 Kyoto, Shimogyō-ku, Higashishiokōjichō

〒600-8216, 京都府京都市下京区烏丸通七条下ル東塩小路町 721-1 京都タワーホテル

#### How to get there?



JR 山陰本線 京都駅 徒歩 2 分 | 2 minutes walk from JR San-in Main Line Kyoto Station JR 東海道新幹線 京都駅 徒歩 2 分 | 2 minutes walk from JR Tokaido Shinkansen Kyoto Station JR 奈良線 京都駅 徒歩 2 分 | 2 minutes walk from JR Nara Line Kyoto Station JR 東海道本線 京都駅 徒歩 2 分 | 2 minutes walk from JR Tokaido Main Line Kyoto Station JR 湖西線 京都駅 徒歩 2 分 | 2 minutes walk from JR Kosei Line Kyoto Station 近鉄京都線 京都駅 徒歩 2 分 | 2 minutes walk from Kintetsu Kyoto Line Kyoto Station 京都市営地下鉄 烏丸線 京都駅 徒歩 2 分 | 2 minutes walk from Kyoto Municipal Subway Karasuma Line Kyoto Station



Time

UTC/GMT +9

#### Weather

The Weather Situation of Kyoto in October

Average daily minimum temperature

Average daily highest temperature

21°C

29°C





The Currency is JPY here. You can exchange foreign currency at the airport, or exchange at the bank, Money exchanger.

#### **Security reminder**

- Please pay attention to the **personal security**. Do not trust strangers easily and be wary of being cheated by strangers.
- The conference venue is open to public, you carry valuables requested their proper custody, due to their own inadvertent loss of custody of your own risk. We cannot be responsible for loss or damage during the conference days
- Please don't throw your name card away when you don't need it, just return it to the registration table.



#### **Oral Presentations**

- **Timing:** a maximum of 15 minutes total, including speaking time and discussion. Please make sure your presentation is well timed. Please keep in mind that the program is full and that the speaker after you would like their allocated time available to them.
- You can use CD or USB flash drive (memory stick), make sure you scanned viruses in your own computer. Each speaker is required to meet her / his session chair in the corresponding session rooms 10 minutes before the session starts and copy the slide file (PPT or PDF) to the computer.
- It is suggested that you email a copy of your presentation to your personal in box as a backup. If for some reason the files can't be accessed from your flash drive, you will be able to download them to the computer from your email.
- Please note that each session room will be equipped with a LCD projector, screen, point device, microphone, and a laptop with general presentation software such as Microsoft Power Point and Adobe Reader. Please make sure that your files are compatible and readable with our operation system by using commonly used fronts and symbols. If you plan to use your own computer, please try the connection and make sure it works before your presentation.
- Movies: If your Power Point files contain movies please make sure that they are well formatted and connected to the main files.

#### **Poster Presentations**

- Maximum poster size is 60cm\*80cm
- Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart.
- Please note that during your poster session, the author should stay by your poster paper to explain and discuss your paper with visiting delegates.

#### **Dress code**

• Please wearing formal clothes or national characteristics of clothing



Speech Title: P-type Wide Gap Semiconductors: Fabrication, Properties and Applications

Prof. Hao Gong National University of Singapore, Singapore

Dr. Hao GONG is a Full Professor of Materials Science and Engineering at National University of Singapore. He is also the coordinator of the transmission

electron microscopy laboratory at Department of Materials Science and Engineering. His research interests include transparent oxide conductors and semiconductors (n-type and p-type), energy storage materials and devices (mainly supercapacitors), energy harvest materials and devices (mainly solar cells), gas sensors, functional thin film and nano-materials, materials characterization (mainly on transmission electron microscopy and electron diffraction).

Dr. Gong received his B.S. degree in Physics at Yunnan University in 1982. He passed his M.S. courses in Yunnan University, carried out his M.S. thesis research work at Glasgow University, UK, and received M.S. degree of Electron and Ion Physics at Yunnan University in 1987. He then did his PhD at Materials Laboratory at Delft University of Technology, the Netherlands, and obtained PhD degree there in 1992. He joined National University of Singapore in 1992, and is currently full professor at Department of Materials Science and Engineering. He has published about 200 refereed papers in major international journals and a few US patents. He has delivered several invited talks at international conferences. He has been chairman or committee member of several international conferences, and editor of special issues of some journal.

**Abstract:** Transparent oxide semiconductors are of wide gap and so optically transparent. Although there is no problem to produce n-type, such as indium tin oxide (ITO), Al:ZnO and F:SnO2, it is challenging to achieve in p-type ones. For n-type transparent oxide semiconductors, electrons as charge carriers move in the conduction band (CB). The CB minimum (CBM) is largely formed by the spatially spread metal-s orbitals, resulting in a well dispersed CBM and high electron mobility. In addition, the low formation energy of native intrinsic defects induces high electron concentration and stable n-type electrical conductivity after impurity doping. On the contrary, the development of high-performance p-type transparent oxide semiconductors is very difficult, and it remains a grand challenge for researchers. This is caused by the valence band maximum (VBM) for hole transport being mainly formed by highly localized oxygen 2p orbitals, leading to high localization and low hole mobility. Moreover, the low formation energy of intrinsic donor defect and relatively high acceptor formation energy limit the number of effective hole carriers. Nevertheless, transparent semiconductor devices need to base on p-n junctions, it is very important to succeed in p-type ones. By using chemical solution method, such as dip-coating deposition or spin coating followed by sulfurization, we can achieve in p-type LnCuOS (LaCuOS, NdCuOS) films. XRD patterns reveal that, all the diffraction peaks can be matched to single phase NdCuOS, and no other phases are detected. The success in the NdCuOS phase is also confirmed by Raman spectroscopy. Moreover, we could clearly observe the existence of the preferred c-axis orientation [001] of LnCuOS. The c-axis orientation is advantageous for the electrical performance, as holes possess much larger mobility in the ab-planes for such a structure. To improve p-type conductivity, we have also deposited NdCuOS films that are doped with Mg, Ca and Sr. The reason to select these elements as p-type dopants for LnCuOS films is because they are alkaline earth (AE) elements and they can contribute hole carriers when substituting Nd in the NdCuOS crystal lattice. Half effect measurement reveals that Hall coefficients for all samples are positive, indicating their p-type conductivity. To complement Hall coefficients and further confirm the p-type conductivity, Seebeck coefficients (S) of all the thin films were determined and further verified the p-type conduction. The electronic parameters including electrical conductivity ( $\sigma$ ), hall mobility ( $\mu$ ) and hole concentration (n) of all our doped and undoped NdCuOS films measured by Hall effect system are quite encouraging. All the films demonstrated rather high hole concentration greater than 1019 cm-3. The prevention of introducing hydrogen in the films and the existence of Cu deficiency attributed to the high hole concentration as they act as acceptor-like defects. To demonstrate the great potential of our p-type NdCuOS film to be used in applications of electronic devices, a high quality transparent p-n diode ZnO:Al/NdCuOS with good rectifying properties have been fabricated and studied as well. We have also fabricated and achieved other p-type systems, such as high efficiency perovskite solar cells.

Speech Title: Nanobioconjugates of carbon nanotubes studied by nanoscopic experimental methods and finite elemental method



Prof. Umemura Kazuo
Tokyo University of Science, Japan

Dr. Kazuo Umemura is a full professor of Tokyo University of Science. His specialty is biophysics, especially, nanobioscience and nanobiotechnology. One

of his recent interests is nanoscopic research of hybrids of biomolecules and carbon nanotubes (CNTs). Unique structures and physical/chemical properties of the hybrids are promising in biological applications such as nanobiosensors and drug delivery.

Dr. Umemura received his B.S. degree in Physics from Nagoya University. His M.S. and Ph.D. degrees were given from Tokyo Institute of Technology. After working at several institutes/universities as a researcher in Japan and in China, he became a professor of Tokyo University of Science. Kagurazaka campus of Tokyo University of Science is located at the center of Tokyo, so five subway/railway lines reach in front of the campus.

**Abstract:** Nanobioconjugates of carbon nanotubes have been intensively studied for biological and medical applications. For example, single-walled carbon nanotube (SWNT) surfaces can be wrapped with DNA molecules. The conjugates are one of the hopeful candidates for drug delivery carriers. Signals of biochemical reactions such as DNA hybridization can be amplified by optical and electrical responses of SWNTs. For example, near-infrared photoluminescence and near-infrared absorbance of SWNTs are dramatically changed when biochemical reactions are occurred on SWNT surfaces.

We have studied structures and physicochemical properties of SWNT nanobioconjugates by nanoscopic experimental methods such as atomic force microscopy (AFM) and near-infrared spectroscopy. We found that antioxidant abilities of Japanese teas can be quantitatively detected by the Nanobioconjugates.

Recently, we applied finite elemental method (FEM) to estimate mechanical properties of SWNT Nanobioconjugates. Although molecular dynamics (MD) simulation is usually used to simulate structures of SWNTs, it is not easy to simulate huge nanobioconjugates which have several hundred nm sizes. FEM is widely used for calculation for industrial devices. By the FEM calculation, we could obtain mechanical properties of huge SWNT nanobioconjugates.

#### Speech Title: Sintering of electrically conductive powders by directly applied current heating



Prof. Mikio Ito
Osaka University, Japan

Dr. Mikio Ito is an associate professor in the Center for Atomic and Molecular Technologies, Graduate School of Engineering, Osaka University, Japan. He

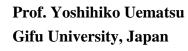
obtained his master's(1994) and Doctor's degrees(1997) in Engineering from Osaka University. His research focuses on development of materials processing, mainly powder processing, for functional materials with excellent performances, such as hard magnetic materials, thermoelectric materials etc. So far, he has produced nearly 140 publications. His resent research also focuses on SPS processing, and he is trying to clarify the effects of directly applied current sintering using SPS on densification behaviors of metal and ceramic powders.

**Abstract:** In the spark plasma sintering (SPS) process, the sample powder is conventionally packed in an electrically conductive die and punches, which are usually made of graphite. When electrically conductive metals, semiconductors and ceramics are sintered by the SPS, applied electric current is expected to flow through both of a graphite die and a powder compact during sintering. In this study, sintering of these electrically conductive powders was tried by a directly applied current sintering (a modified SPS), where an electrically insulative die was used instead of a conventional graphite die. In this modified SPS, the applied electric current is expected to flow through the powder compact entirely and sintering of a powder compact may also be possible through the Joule heating of sample powder itself. As electrical conductive powders, metallic Cu powder and semiconductive β-FeSi2 powder were sintered by the directly applied current sintering using carbon punches and an insulating quartz glass die. These powders were heated by directly applied current and their sintering behaviors were compared to those of the samples sintered by the conventional SPS (using carbon punches and a carbon die). When the metallic powder, Cu, was sintered, the densification behavior was almost the same as the case of the conventional SPS. On the other hand, in the case of FeSi2 powder, the transformation to the semiconductive β-FeSi2 phase occurred at a temperature lower than when sintered by the conventional SPS. After the transformation, the shrinkage of compact became larger and the density of a sintered body was higher as compared to those of the sample sintered by the conventional SPS. It was also found that the power consumption needed for densification in this modified SPS process was significantly lower than the conventional SPS.



## Plenary Speakers

Speech Title: Fatigue behavior of additively-manufactured (AMed) materials



Dr. Yoshihiko Uematsu graduated from Department of Mechanical Engineering, Kyoto University in 1990, and got M.E from Graduate School of

Engineering, Kyoto University in 1992. He completed his PhD work entitled "Mode I delamination of unidirectionally carbon fiber reinforced polymer matrix composite at elevated temperatures" at Kyoto University in 1995. His work was about creep-fatigue interaction effect on delamination behavior in CFRP. Then he worked as an Assistant Professor in Department of Mechanical Engineering, Osaka University. His research topics were about fatigue properties and fatigue crack propagation of structural materials. During 2001-2002, he worked as a guest researcher in Delft University of Technology, the Netherlands. In 2004, he moved to Gifu University as an Associate Professor in Department of Mechanical Engineering, and became full Professor in 2011. His paper entitled "Development of fatigue testing system for in-situ observation by an atomic force microscope and small fatigue crack growth behavior in α-brass" got the best paper award from The Japan Society of Mechanical Engineers (JSME) in 2004. The paper entitled "Evaluation of small fatigue crack initiation in Type 316 stainless steel by positron annihilation spectroscopy" also got the best paper award from Japan Society of Spring Engineers (JSSE) in 2016. His recent research interests are about fatigue fracture mechanisms in lightweight alloys, weldments, severely deformed materials, and so on. He published more than 140 papers in peer-reviewed scientific journals. He is now a director of the Society of Materials Science, Japan (JSMS), executive secretary of Japan Welding Society, Tokai branch and representative member of The Japan Society of Mechanical Engineers (JSME)

**Abstract:** Additive manufacturing (AM) is an attractive new fabrication method for mechanical components, in which near-net-shape fabrication is possible for the components with complicated shapes. To use additively-manufactured (AMed) materials for mechanical components, it is important to understand their fatigue properties. Firstly, the high strength martensitic stainless steel, type 630, was fabricated by a power-bed-fusion (PBF) type selective laser melting (SLM) method, and their fatigue properties were discussed. The microstructure of AMed type 630 contains some porosities which could be fatigue crack initiation sites. Subsequently, fatigue strengths of AMed type 630 were lower than those of conventionally-melted (CMed) type 630. However, fatigue crack growth resistance was higher in AMed type 630, due to the larger deflection of crack paths depending on the AMed microstructures. Secondly, titanium alloy, Ti-6Al-4V, was fabricated by a PBF type electron beam melting (EBM) method. In the case of Ti-6Al-4V, the fatigue strengths of AMed Ti-6Al-4V were lower than those of CMed Ti-6Al-4V, due to the presence of porosities in the microstructures, which could be the fatigue crack initiation site. Fatigue limit of AMed Ti-6Al-4V was successfully estimated based on Murakami's equation using hardness and defect size.



## Invited Speakers

Speech Title: Novel two-dimensional materials for biosensing and electrochemical catalysis



Prof. Xiaoqiang Cui Jilin University, China

Dr. Xiaoqiang Cui has achieved his PhD from Changchun Institute of Applied Chemistry, Chinese Academy of Sciences (2002) under the supervision of Academician Xiurong Yang. He subsequently joined Prof. Changming Li`s group

(2005) as a postdoctoral research fellow at Nanyang Technological University, Singapore and then worked as a research staff (2008) at National Institute of Advanced Industrial Science and Technology (AIST), Japan. Now he is a Changbai Mountain Scholars Professor and Deputy Dean at School of Materials Science and Engineering, Jilin University. His current research interests focus on the design of 2D nanomaterials for efficient electrocatalysis, photocatalysis, and beyond

**Abstract:** Two-dimensional materials are attracting dramatically increasing interest due to their unexpected physico-chemical property and broad of potential applications. We focus on the surface and interface engineering of two-dimensional materials to modify the electronic structures and in turn to enhance the catalytic performance.

We developed a surface plasmon resonance sensor based on two-dimensional nanomaterial of graphene and antimonene for the specific label-free detection of clinically relevant biomarkers such as miRNA-21 and miRNA-155. The strong interaction between target probes and 2D materials results an variation of the refractive index of graphene and antimonene, which highly enhanced the performances of SPR biosensor. First-principles energetic calculations reveal that antimonene has substantially stronger interaction with ssDNA than the graphene. The detection limit can reach 10 aM, which is 2.3–10,000 times higher than those of existing miRNA sensors.

We also report a spontaneous phase transformation of  $MoS_2$  from the 2H to the 1T phase, which is induced by the strong interactions between Ir nanoparticles, Co nanosheets, Ni nanosheets,  $Fe_2O_3$  nanoplates or Pd-Au hybrid nanosheets and  $MoS_2$ . Particularly, the Co/Ni/Fe nanoplates/ $MoS_2$  hydrides become an array of Co/Ni/Fe single atoms covalently bound onto distorted 1T  $MoS_2$  nanosheets after electrochemical leaching. These resulting metal/1T  $MoS_2$  heterostructures show outstanding catalytic activity for hydrogen evolution reaction, which is much better than that of commercial Pt/C.

# Conference Agenda Day C Friday October 11th 2019 12F 雪柳 (Yukiya

Whole Day < Friday, October 11 <sup>th</sup> , 2019>   2F 雪柳 (Yukiyanagi)				
Registration & Materials Collection 10:00-17:			10:00-17:00	
Morni	Morning < Saturday, October 12 <sup>th</sup> , 2019>   2F 桜 (Sakura)			
	Welcome Address and Opening Remarks Prof. Hao Gong, National University of Singapore, Singapore  9:00-9:05			
	Chairm	an: Prof. Hao Gong		
Keynote Speech I		Prof. Umemura Kazuo University of Science, Japan	9:05-9:50	
Keynote Speech II	O	Prof. Mikio Ito saka University, Japan	9:50-10:35	
	Coffee Break &	& Group Photo	10:35-11:00	
	Chairma	n: Prof. Umemura Kazuo		
Keynote Speech I	Prof. Hao Gong National University of Singapore, Singapore		11:00-11:45	
Plenary Speech II	Prof. Yoshihiko Uematsu Gifu University, Japan		11:45-12:15	
Invited Speech I	Prof. Xiaoqiang Cui  Jilin University, China		12:15-12:35	
Lunch			12:35-13:30	
	Afternoon < Sa	turday, October 12 <sup>th</sup> , 2019>		
7F 椿(Tsub	aki)	7F 桔梗(Kikyo)		
Oral Session 1 Biomedical Materials		Oral Session 2  Material Chemistry	13:30-15:30	
	Coffee	Break	15:30-15:45	
Oral Session 3 Metal Material		Oral Session 4  Electronic Materials and Sensors	15:45-18:15	
Free Time				
	Whole Day < Su	ınday, October 13 <sup>th</sup> , 2019>		
7F 橘(西)(Tachib	ana •West)	7F 桔梗(Kikyo)		
Oral Sessi		Oral Session 6	09:00-10:1:	
Nanostructures		Material Science and Engineering	10.15 10.20	
Coffee Break 10:15-10:30				

Oral Session 7		C	Oral Session 8	10:30-12:00
Nanomedicine		Nanocomposites		10.30-12.00
	Lui	ıch		12:00-13:00
7F 橘(西) (Tachibana •West)	2F 皐月	∃(Satsuki)	7F 桔梗(Kikyo)	
Oral Session 9	Oral Session 10		Oral Session 11	
Carbon Nanotube and	Nano Pi	hotoelectric	Macromolecular Material	13:00-15:30
Graphene	Materials	and Devices	Macromolecular Malerial	
	Coffee	Break		15:30-15:45
Oral Session 12  Nanomaterials and Cell  Applications	Functional	Session 13 and Structural aterials	Poster Session 1 Nanomedicine and Nanoelectronics Poster Session 2 Nanotechnology and Materials Science	15:45-18:15
	Dinner@ 2F 睡蓮(Suiren)			18:15-19:30
Whole Day < Monday, October 14 <sup>th</sup> , 2019>				
Optional One Day Visit			09:00-17:00	



## **Oral Presentation**

Time: 13:30-15:30 (12th, October, 2019)

Venue: 7F 桔梗 (Kikyo)

**Session 1—Biomedical Materials** 

Session Chair: Prof. Kazuo Umemura

Note: \* The certification of Oral Presentations will be awarded after each presentation

\* Best presenter will be awarded at the dinner banquet

* Session	n Photo will be taken at the end of the session
	Encapsulation of Turmeric Crude Extracted in Chitosan Hydrogel Beads for Antimicrobial
	in Animal Health Care Applications
T176	
13:30-13:45	Asst. Prof. Samitthichai Seeyangnok, Parisa Sae-Khow, Siriporn Pranee, Kanyavee
	Wootitunthipong
	King Mongkut's University of Technology North Bangkok, Thailand
	Thermal-Tolerable and Loadable Poly(ionic liquid) Hydrogels for Biomedical Applications
T189-A	
13:45-14:00	Mr. Po Hsin Wang, Chen Hsueh Lin, Ten Chin Wen
	National Cheng Kung University, Taiwan
	Potential of carboxymethylcellulose grafted polyethylene glycol as scaffolds for skin tissue
	engineering
T155-A	
14:00-14:15	Ms. Nuraina Anisa Dahlan, Yau Yan Lim, Pooria Pakhbaskh, Sin-Yeang Teow, Dan Kai,
	Pushpamalar Janarthanan
	Monash University Malaysia, Malaysia
	Preparation of Crude Turmeric Extract Loaded Poly(acrylamide-co-acrylic acid)
T177	Microspheres for Drug Release System
14:15-14:30	
	Ms. Mananya Puanglamjeak, Siriporn Pranee, Samitthichai Seeyangnok
	King Mongkut's University of Technology North Bangkok, Thailand
	A Simple Synthesis of Silver Nanoparticles on cellulose filter paper for Antimicrobial
T174	Applications
14:30-14:45	
	Windri Handayani, Arie Liestiarini, Yasman, <b>Dr. Cuk Imawan</b>
	Universitas Indonesia, Indonesia
	In situ mineralization of hydroxyapatite porous surface via layer by layer coating of chitin

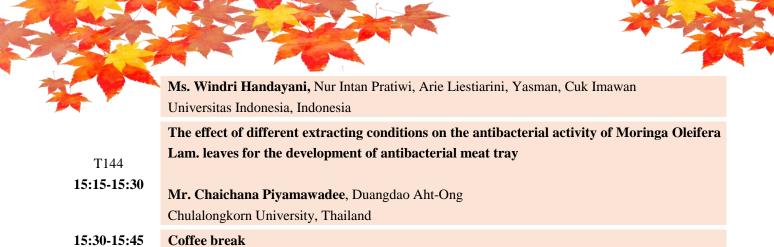
T190-A

14:45-15:00 Mr. Chen-Hsueh Lin, Po-Hsin Wang, Ten-Chin Wen

and chitosan

National Cheng Kung University, Taiwan

The Detection of Cu2+ Ions Using Paper-Based Silver Nanoparticles as a Colorimetry Indicator





Time: 13:30-15:30 (12th, October, 2019)

Venue: 7F 椿 (Tsubaki)

**Session 2—Material Chemistry** 

**Session Chair:** 

Note: \* The certification of Oral Presentations will be awarded after each presentation

\* Best presenter will be awarded at the dinner banquet

\* Session Photo will be taken at the end of the session

Session	I note will be taken at the end of the session
	Pilot Scale Continuous Adsorption of Soluble Oil Wastewater by Modified Sugarcane
T2011	Bagasse with Al2(SO4)3 as Adsorbent
T2011	
13:30-13:45	Toungrat Janpattanapong, Assoc. Prof. Kowit Piyamongkala, Von Louie R Manguiam
	King Mongkut's University of Technology North Bangkok, Thailand
	Reusable And Removable Pmpd/PVA Membrane For Effective Cr(VI) Adsorption And
	Reduction
T2029-A	Actuction
13:45-14:00	Dr. Chuai Han Changlang liang
	Dr. Shuai Han, Changlong Jiang
	University of Science and Technology of China, China
	Bifunctional 3DOM Cerium Doped LaCoO <sub>3</sub> Catalyst for Oxygen Evolution Reaction and
T136-A	Oxygen Reduction Reaction
14:00-14:15	
	Mr. Sukit Boonlha, Pongkarn Chakthranont, Sutasinee Kityakarn
	Kasetsart University, Thailand
	Non-noble Metal Carbon-based Catalysts derived from MOFs and their Applications
T196-A	
14:15-14:30	Dr. Chen Chen, Wei Liang, Yan Zhou, Jun Zhang
	China University of Petroleum (East China), China
	Modification and Scale-up Process of Citrogypsum to a-Calcium Sulfate
	1 00 1
T170	Mr. Thanakit Sirimahasal, Yutthana Kalhong, Siriporn Pranee, Lida Simasatitkul,
14:30-14:45	Samitthichai Seeyangnok
	King Mongkut's University of Technology North Bangkok, Thailand
	Photocatalytic Degradation of Methylene Blue Using Zinc Oxide/Styrene Butadiene Rubber
T1202	Photocatalyst
14:45-15:00	D. D. Nanden, N. J. elect. D. Warnet, W.J. Namarani, M.Z. Califair, Z. A. M. Lakala
	Dr. R. Nordin, N. Latiff, R. Yusof, W.I. Nawawi, M.Z. Salihin, Z.A.M. Ishak
	Universiti Teknologi MARA Perlis Branch, Malaysia
	Water Oxidation Reaction Catalyzed by Novel Cobalt Phosphate
T2014-A	
15:00-15:15	Ms. Eunji Pyo, Ki-Young Kwon
	Gyeongsang National University, South Korea
T11002	Calculation of Activation Energy of Commercial grade H2O2 from DSC for Using

**Evaluation Thermal Hazard** 

15:15-15:30



Ms. Suranee Anothairungrat, Kowit Piyamongkala

King Mongkut's University of Technology North Bangkok, Thailand

15:30-15:45

Coffee break



Time: 15:45-18:00 (12th, October, 2019)

Venue: 7F 桔梗 (Kikyo) Session 3—Metal Material

Session Chair: Prof. Diego Ferreño

Note: \* The certification of Oral Presentations will be awarded after each presentation

\* Best presenter will be awarded at the dinner banquet

* Session	Photo will be taken at the end of the session
T105	Rapid Dissolution of Secondary Phase in Cold-Rolling Al-Cu-Mg Alloy by Electropulsing Treatment
15:45-16:00	Mr. Weining Shi, Haifei Zhou, Xinfang Zhang University of Science and Technology Beijing, China
T124	Experimental study on friction characteristics of micro-arc oxidation modified layer on titanium alloy surface
16:00-16:15	Lao Xingsheng , <b>Prof. Zhao Xufeng</b> , Liu Yong , Dai Chunhui, Lyu Weijian Wuhan 2nd Ship Design and Research Institute, China
	Optimization of the Fabrication of Cold Drawn Steel Wire Through Classification and Clustering Machine Learning Algorithms
T127-A 16:15-16:30	Ms. Estela Ruiz, Miguel Cuartas, Prof. Diego Ferreño, Laura Romero, Prof. José Antonio Casado, Valent n Arroyo, Federico Guti érrez-Solana University of Cantabria, Spain
T11005-A <b>16:30-16:45</b>	Low Cycle Fatigue Properties of AZ 61 Magnesium alloy with different surface roughness and after Cu-, Ni-B/Cu electroplating  Mr. Wei Chih Huang, Ching An Huang, Shu Yi Chen, Shu Wei Yang, Yoshihiko Uematsu
	Chang Gung University, Taiwan  Obtaining a single texture in plastic deformation process of Al-Zn-Mg alloys via low-density
T106-A <b>16:45-17:00</b>	pulse current  Dr. Hexiong Zhang, Xinfang Zhang
	University of Science and Technology Beijing, China  Comparison of microwave roasting and conventional muffle roasting on treating the

T1302-A

17:00-17:15 Dr. Aijun Teng.

vanadium slag

**Dr. Aijun Teng,** Xiangxin Xue Northeastern University, China

Fabrication of electroplated Ni-B-diamond milling tools with high milling ability on an AISI

T11006-A **440 stainless steel rod 17:15-17:30** 

Ms. Hsin Yu Huang, Ching An Huang, Chung Juei Lee, Hsuan Wang



Chang Gung University, Taiwan

Improved applications of metal foams in simulating blast loadings

T169-A

17:30-17:45 Dr. Lang Li, Prof. Qian-Cheng Zhang, Tian Jian Lu

Xi'an Jiaotong University, China

Very high-cycle fatigue (VHCF) fracture behavior of Mg alloy (AZ31) after  $\hbox{\it Cu}$  and

**Cr-C/Cu electroplating** 

T11008-A 17:45-18:00

Mr. Shu Wei Yang , Ching An Huang Yu Hu Yeh, Hans-Juergen Christ

Chang Gung University, Taiwan

Free Time



Time: 15:45-18:15 (12th, October, 2019)

Venue: 7F 椿 (Tsubaki)

**Session 4—Electronic Materials and Sensors** 

**Session Chair:** 

Note: \* The certification of Oral Presentations will be awarded after each presentation

\* Best presenter will be awarded at the dinner banquet

\* Session Photo will be taken at the end of the session

A Concentration Cell On-a-Chip Imitated Mercurial Thermometer Structure for Point-of-Care Testing Psychological Stress

T2020-A

Testing I sychological Sitess

15:45-16:00

**Dr. Mi Sun** and Hong Liu Southeast University, China

 $\label{lem:metal-organic} \textbf{Metal-Organic Framework Template Derived Core-Shell CoSe2@Ni(OH)_2\ Arrays\ for }$ 

**Energy Storage** 

T139-A

16:00-16:15 Dr. Yulu Zhu

Zhejiang University, China

Integrating photonic crystal with ExoI&D-Chip for efficient Isolation and High-sensitive

**Detection of Exosome** 

T126-A

16:15-16:30

**Dr. Xing Dong,** Hong Liu Southeast University, China

Nitrogen-containing porous carbon/a-MnO2 nanowires composite electrode towards

supercapacitor applications

T2031-A

16:30-16:45

Dr. Xingling Yu, Shudong Zhang

University of Science and Technology of China, China

Water splitting based nonenzymatic wearable glucose sensor for perspiration analysis

T2019-A

16:45-17:00

Mr. Xiaofei Zhu, Hong Liu

Southeast University, China

A Colorimetric Paper Sensor for Visual Detection of Mercury Ions Constructed With

**Dual-Emission Carbon Dots** 

T2030-A

17:00-17:15

Dr. Fan Yang, Chang Long Jiang

University of Science and Technology of China, China

Direct patterning of liquid metal using magnetic field for flexible electronics

T125-A

17:15-17:30

Mr. Biao Ma, Hong Liu

Southeast University, China



T140-A

17:30-17:45

3D Network Structure of Highly Cross-Linked TiO2-C@Polyaniline Core-Shell Nanowire Arrays for Hybrid Supercapasitor

Dr. Qianqian Wang

Zhejiang University, China

Enhanced generation of charge-dependent second-order sideband and high-sensitivity charge sensors in a gain-cavity-assisted optomechanical system

T2054-A

17:45-18:00

Dr. Li Ling, Yang Wen-Xing

Southeast University, China

A Preliminary Study on the Effect of Pandanus Amaryllifolius Extract as Green Stabilizer to the Growth of Nanostructured ZnO

T2091

18:00-18:15

Mrs. Rabiatuladawiyah Md Akhir, Siti Zulaikha Umbaidilah, Nurul Afaah Abdullah, Mohamad

Rusop Mahmood, Zuraida Khusaimi Universiti Teknologi MARA, Malaysia

Free Time



Ms. Bianca Gevers, Sajid Naseem, Andreas Leuteritz, Prof. Frederick Johannes Willem Jacobus Labuschagne University of Pretoria, South Africa Long-period and High-stability Three-dimensional Surfaceenhanced Raman Scattering **Hotspot Matrix** 10:00-10:15 Dr. Meihong Ge, Liangbao Yang

> University of Science and Technology of China, China Coffee Break

T2038-A

10:15-10:30





**Session Chair:** 

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\* Session Photo will be taken at the end of the session

DC3310	on Fhoto will be taken at the end of the session
	Mixed Langmuir monolayers of C18 fatty acids: Effect of degree of saturation
T2069-A	
10:30-10:45	Dr. Lai Ti Gew, Misni Misran
	Sunway University, Malaysia
	Ultra-Sensitive Point-of-Care Detection of PSA Using an Enzyme and Equipment-Free
T2040-A	Microfluidic Platform
10:45-11:00	
10.43-11.00	Prof. Ying Li, Rui Hu, Prof. Shizhen Chen, Xin Zhou, Prof. Yunhuang Yang
	Chinese Academy of Sciences, China
	Characterization of a Chromium (III) ion probe and its MOF-supported material
T183	
11:00-11:15	Dr. Yingying Guo, Lincai Peng, Long Yi, Shun Yao
	Sichuan University, China
	Morphology/size-switchable nanoassemblies modulated by tumor microenvironment and
T2006-A	near infrared light for tumor eradication and metastasis inhibition
11:15-11:30	
	Mr. Hao-Ran Jia, Ya-Xuan Zhu, Fu-Gen Wu
	Southeast University, China
	The effect of cucurbit[7]uril on the antitumor and immunomodulating properties of
	oxaliplatin and carboplatin
T2026-A	
11:30-11:45	Dr. Ekaterina Pashkina, Alina Aktanova, Irina Mirzaeva, Ekaterina Kovalenko, Nadezhda
	Knauer, Natalya Pronkina, Vladimir Kozlov
	RIFCI, Russia
	Mitochondria-targetable nanomicelles for cancer therapy by inducing mitophagy-driven
T2007-A	energy depletion
11:45-12:00	M N N M D V F G W
	Ms. Ya-Xuan Zhu, Hao-Ran Jia, Fu-Gen Wu
1.00 1.55	Southeast University, China
12:0013:00	Lunch



Time: 10:30-12:00 (13th, October, 2019)

Venue: 7F 桔梗 (Kikyo)

**Session 8—Nanocomposites** 



	Chemical stability study of graphene oxide (GO) doped nitrocellulose with different nitrogen		
T2065-A	content		
14:45-15:00	Mr. Prima Kharisma Indra Yahya, Mohammed Moniruzzaman		
	Cranfield University, United Kingdom		
	Characterizing Interfacial Thermal Conductivity in Graphene Nanocomposites		
T113			
15:00-15:15	Po-Ying Tseng, Wen-Jie Ke, <b>Prof. Jia-Lin Tsai</b>		
	National Chiao Tung University, Taiwan		
	Electronic-structures and phonon calculations of the C8CaC8 bilayergraphene: the		
T1208-A	first-principles study		
15:15-15:30			
13.13-13.30	Dr. Sholihun, Sefty Yunitasari		
	Universitas Gadjah Mada, Indonesia		
15:30-15:45	Coffee break		



Time: 13:00-15:30 (13<sup>th</sup>, October, 2019)

Session 10—Nano Photoelectric Materials and Devices

Venue: 2F 皐月 (Satsuki)







Time: 13:00-15:30 (13<sup>th</sup>, October, 2019)

Session 11—Macromolecular Material

Venue: 7F 桔梗 (Kikyo)

	Fabrication of Poly(butylene succinate) Composite Films with Silver Doped ZSM-5: Effect
	of Silver ZSM-5 on Antibacterial Activity and Biodegradable Behavior
T133	
14:45-15:00	Ms. Nissapa Wattanawong, Kanchana Chatchaipaiboon, Natchanan Sreekirin, Duangdao
	Aht-Ong
	Chulalongkorn University, Thailand
	The mechanochemical synthesis of layered double hydroxides: making use of a 1 step wet
T2028-A	mechanochemical route
15:00-15:15	
15.00-15.15	Ms. Brenda Barnard, Bianca Gevers, Frederick Johannes Willem Jacobus Labuschagne
	University of Pretoria, South Africa
	Effect of manufacture induced damage on braid architecture and fibre damage of braided
T153-A	preforms
15:15-15:30	
13.13-13.30	Mr. Bareiro Oscar, Czichos Ruben, Pickett, Anthony, Middendorf Peter, Gries Thomas
	RWTH Aachen University, Germany
15:30-15:45	Coffee break



	Fabrication of Nickel Sulfide/Graphene Nanocomposite as Anode Material for Sodium-Ion					
T2077-A	Battery and Its Electrochemical Performance					
17:30-17:45	Ms. Yeon-Ju Lee, Lim Su-Gun, Ahn Jou-Hyeon, Cho Kwon-Koo					
	Gyeongsang National University, South Korea					
	Eco-friendly Preparation of Nanofibrillated Cellulose from Water Hyacinth Using					
T142	NaOH/Urea Pretreatment					
17:45-18:00	Mr. Kraiwit Pakutsah, Duangdao Aht-Ong					
	Chulalongkorn University,Thailand					
	Nitrogen-doped Carbon in Electrochemical Reduction of Carbon Dioxide					
T2062-A						
18:00-18:15	Assoc. Prof. Jianfeng Liu, Zhenhai Zhang, Sheng Ding, Binxia Yuan					
	Shanghai University of Electric Power, China					
18:15-19:30	Dinner Banquet					



Session Chair: Dr. Y. Morris Wang

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* Session	Photo will be taken at the end of the session						
	Intelligent Superhydrophobic Surface with Self-deicing Capability						
T184-A							
15:45-16:00	Dr. Fatang Liu, Qinmin Pan						
	Northeast Petroleum University, China						
	Bioinspired Durable Superhydrophobic Surface from Hierarchically Wrinkled Nanoporous						
<b>772070</b> 4	Polymer						
T2058-A							
16:00-16:15	Dr. Han-Yu Hsueh						
	National Chung Hsing University, Taiwan						
	Synthesis of Nanoporous Material from Lignin via Carbonization assisted Acid Activation						
T2023							
12025 16:15-16:30	Ms. Nutchaporn Ngamthanacom, Napat Kaewtrakulchai, Weerawut Chaiwat, Laemthong						
10.13-10.30	Chuenchom, Masayoshi Fuji and Apiluck Eiad-Ua						
	King Mongkut's Institute of Technology, Thailand						
	Wave Attenuation Using Peridoc Membrane-ring Structures						
T1112-A							
16:30-16:45	Assoc. Prof. Jung-San Chen, De-Wei Kao						
	National Cheng Kung University, Taiwan						
	Synthesis of zeolite X from bentonite via hydrothermal method						
T2022							
16:45-17:00	Ms. Suphada Srilai, Worapak Tanwongwan, Kobchai Onpecth, Thanapat Wongkitikun, Kollayut						
	Panpiemrasda, Gasidit Panomsuwan, Apiluck Eiad-ua						
	King Mongkut's Institute of Technology, Thailand						
	3D Printing High-performance Materials						
T1307-A							
17:00-17:15	Dr. Y. Morris Wang						
	Lawrence Livermore National Laboratory, USA						
	Horse Manure Derived Nitrogen-Doped Porous Carbon via Hydrothermal Carbonization						
T2025	for Promising Applications						
17:15-17:30	Mr. Tanatorn Lianprawat, Panupong Verasarut, Napat Kaewtrakulchai, Gasidit Panomsuwan,						
17.15-17.50	Masayoshi Fuji, Apiluck Eiad-ua						
	King Mongkut's Institute of Technology, Thailand						
	Evaluation of the asphalt foaming effect induced by functional zeolite additives						
T1204-A	27 manifold of the asphalt founding effect induced by functional zeome additives						
17:30-17:45	Mr. Michał Wróbel, Agnieszka Woszuk						

Mr. Michał Wróbel, Agnieszka Woszuk





## **Poster Presentation**

Time: 15:30-16:30 (13th, October, 2019)

Venue: 7F 桔梗 (Kikyo)

**Poster Session 1—Nanomedicine and Nanoelectronics** 

**Session Chair:** 

Note: \* The certification of Oral Presentations will be awarded after each presentation

\* Best presenter will be awarded at the dinner banquet

	best presenter win be awarded at the diffiler banquet							
	* Session	Photo will be taken at the end of the session						
		The Antibacterial Effect of the novel 'Mulberry surface' Characterized Micro/nano Pore and Graphene Oxide Coating to Prevent Peri-implantitis and Promote Osseointegration.						
1	T157-A							
		Heesun Kim, Min-Kyung , Hoonsung , Khurshed Alam, <b>Prof. Hyun-Pil Lim</b>						
		Chonnam National University, Korea						
		Survival of peripheral blood mononuclear cells cultured in the presence of cucurbit[n]urils						
2	T22001-A							
		Aleksandr Kozlov, <b>Dr. Ekaterina Pashkina</b> , Alina Aktanova, Aleksandr Ermakov RIFCI, Russia						
		The Effect of Titania Nanoparticles on Cisplatin Cytotoxity						
3	T2083-A	Ms. Basma Salama, Akiyoshi Taniguchi						
		Mansoura University, Egypt						
		National Institute for Materials Science (NIMS), Japan						
		In vivo angiogenic effect of ultrasound stimulation on hADSCs/HUVEC co-cultured on						
		porous collagen scaffolds						
4	T159-A							
		Guan Xuan Wu, <b>Prof. Shyh Ming Kuo</b> , Yi Jhen Wu, Ioannis Manousakas						
		I-Shou University, Kaohsiung, Taiwan						
		Effect of Soybean Oils in Eggshell Powder filled Polylactic Acid Composites on its						
_		Mechanical, Thermal and Rheological Properties						
5	T114	M. A. A. W. A. S. D. d. AN W. D. J. D. J.						
		Mr. Atiwat Wiriya-amornchai, Prathumrat Nu-Yang, Pheeraphong Bunroek King Mongkut's University of Technology North Bangkok, Thailand						
		· · · · · · · · · · · · · · · · · · ·						
		Effects of shear stress on neuroblastoma SH-SY5Y cells cultured on luffa/collagen substrates						
6	T162	Substrates						
3	1102	Dr. Yu Chiuan Wu, Chiu Yan Lee, Yen Chun Chiu, Shyh Ming Kuo						
		Hualien Armed Forces General Hospital, Taiwan						
		Photodetectors Based on Solid Alloys of Mo(X)W(1-X)Se(2y)S(2-2y)						
7	T2044-A	Mr Artur Avdizhiyan Marina Vasina Sergey Layroy						

RTU MIREA (Russian Technological University- MIREA), Russia

Mr. Artur Avdizhiyan, Marina Vasina, Sergey Lavrov

1	-	Low-Voltage, High-Performance Polymeric Field-Effect Transistors based on
T	*	Self-Assembled Monolayer-Passivated HfOx Dielectrics: Correlation between Trap
8	T156-A	Density, Carrier Mobility, and Operation Voltage
Ü	110011	
		Dr. MyeongjaeLee, Dae-Kyu Kim, Jong-Ho Choi, BongSoo Kim
		Korea University, Republic of Korea
		Liposome-encapsulated saikosaponin for repair of hepatic fibrosis in mice
9	T163-A	Ms. Chun Yin Chen, Li-Yen Shiu, Chih I Chen, Shyh Ming Kuo
		I-Shou University, Taiwan
		Terahertz emission from layered transition metal dichalcogenides WSe2, WS2, MoSe2
		and Mo0.5W0.5S2
10	T2050-A	
		Ms. Anastasia Gorbatova, Dinar Khusyainov, Arseniy Buryakov, Elena Mishina
		MIREA – Russian Technological University, Russian Federation, Russia
		Apoptotic effects of PLK-1 Inhibitor liposomes on lung adenocarcinoma cells
11	T165-A	
		Mr. Lau Nga Yin Sadonna, Chih Wen Shu, Guan Xuan Wu, Shyh Ming Kuo I-Shou University, Taiwan
		Inorganic/Organic Hybrid Light-Emitting Transistor
12	T171-A	Assoc. Prof. Jui-Fen Chang, Kun-Shao Hou
		National Central University, Taiwan
		Preparation of icariin transdermal patch for infertility application
13	T164-A	
13	1104-71	Mr. Takashi Sato, Chun Yu Chen, Lau Nga Yin Sadonna, Shyh Ming Kuo
		I-Shou University, Taiwan
		Applications of the Cholesteric Liquid Crystal (CLC) Sensor for Rapid Measurements of
1.4	T101 A	the Acetone and Toluene in the Atmosphere Environment
14	T181-A	Siang-Ying Huang, Kuan-Po Chao, <b>Prof. Ruey-Fang Yu</b>
		National United University, Taiwan
		Effect of Chemical Modification on Vertical Organic Transistor
	T150 1	
15	T172-A	Assoc. Prof. Jui-Fen Chang, Yu-Jen Lo
		National Central University, Taiwan
		Therapeutic effect of ADSCs/AML 12 liver cell spheroids in rat with liver cirrhosis
16	T166-A	
		Dr. Yu Chiuan Wu, Kuan Wei Chen, Ching Ting Wei, Shyh Ming Kuo
		I-Shou University, Taiwan  Floatusek enricel Detection of Lond Landley Methodore Phys. To good Automore Control
		Electrochemical Detection of Lead Ion Using Methylene Blue Tagged Aptamer Coated Reduced Graphene Oxide Electrode
17	T2055-A	Actuacea Graphene Osiae Electroae
		Suhwan Yu, Ms. SeungJoo Jang, Taehyun Kim

	-	Soonchunhyang University, Republic of Korea	
1	. •	A wavelength-resolved ratiometric photoelectrochemical sensor for evaluation of cellular	r
		H <sub>2</sub> S production based on in situ generated Ag <sub>2</sub> S sensitized TiO <sub>2</sub> Nanofibers	
18	T2063		
		Dr. Xiaoxue Ye, Zhihong Liu	
		Hubei University, China	
		Review and Prospect of the Influence of Laser Cladding Process Parameters on the	
		Properties of Die Cladding Layer	
19	T198		
		Mr. Bin Han, Hui Wang, Jiayi Lin, Xihao Liu	
		University of Jinan, China	
		Hyaluronic Acid-Catechol Conjugate Enhances Morphogenesis in Developing Epithelial	
		Organ	
20	T2039-A		
		Sang-Woo Lee, <b>Prof. Kyungpyo Park</b>	
		Seoul National University, South Korea	
		Research on Additive Manufacturing Technology in the Field of Mold Repair	
21	T199		
	,	Jiayi Lin, Weihua Cui, Mr. Bin Han, Hui Wang, Xihao Liu	
		University of Jinan, China	
1	6:30-16:45	Break	



7	E		*
5			
1		Slovak University of Technology in Bratislava, Slovak Republic	7
7		The production of mix asphalt with the addition of zeolites as an example of the modern	
		technology in the sustainable roads construction	
9	T1205-A		
		<b>Dr. Agnieszka Woszuk,</b> Michał Wróbel, Lidia Bandura Lublin University of Technology, Poland	
		Influence of different preparation methods of silver-modified carbon nitride on the	
		photocatalytic activity towards indigo carmine dye	
10	T2017	Dr. Ladislav Svoboda, Richard Dvorsky, Pavel Mancik, Jiri Bednar, Dalibor Matysek,	
		<b>Dr. Ladislav Svoboda</b> , Richard Dvorsky, Pavel Mancik, Jiri Bednar, Dalibor Matysek, Marketa Pomiklova	
		VSB-Technical University of Ostrava, Czech Republic	
		Label-Free Detection of Protein Kinase A Activity with C-Kemptide-AuNP/rGO-GCE by	
		Electrochemical Impedance Spectroscopy	
11	T2056-A		
		Chang-Seuk Lee, <b>Ms. Da Eun Oh</b> , Tae Hyun Kim	
		Soonchunhyang University, Republic of Korea	
		Gold nanorod arrays covered with zwitterionic copolymer as SERS substrate for the	
12	T191-A	detection of N-Nitrosodimethylamine (NDMA) and N-Nitrosodiethylamine (NDEA)	
12	1171-11	Prof. Ten-Chin Wen, Chen-Hsueh Lin, Po-Hsin Wang	
		National Cheng Kung University, Taiwan	
		Fabrication of carbon nanoparticle reinforced magnesium alloy composites using	
		magnesium chips and carbon blacks	
13	T2070-A		
		T. J. Lee, <b>Prof. W. J. Kim</b>	
		Hongik University, South Korea	
		All-solution-processable facile fabrication of low-power consumption and high-durability	
		heaters based on sequential coating of reductive nano-metallic ink and carbon nanotube solution	
14	T2068-A	Solution	
	1	Mr. Inhwan Kim, Mr. Hyunsoo Chun, Yongju Lee, Minwook Kim, Kwangjun Kim,	
		Mingyu Kim, Nayeong Lee, Hyoungseok Chae, Byeol Han, Jong G. Ok	
		Seoul National University of Science and Technology, South Korea	
		Densification modeling for hot pressing of a complex powder mixture	
15	T121-A		
		<b>Dr. Kyong Jun An</b> , Dong Sul Jeon Korea Institute of Industrial Technology, Korea	
		-	
		Patterned ZnO Nanowires Between Interdigitated Electrodes By Integrating Hydrothermal Approach with Photolithography Process	
16	T2090	Hydrodici mai Approach with a notonthography a roccos	
	1	Prof. Yaw-Jen Chang	
		Chung Yuan Christian University, Taiwan	
17	T2066-A	Decomposition of CO2 using dielectric barrier discharge on nanomaterials at	

The same of the sa	atmospheric conditions
	Assoc. Prof. Ding Honglei, Guo Detong Shanghai University of Electric Power, China
	Template-free period-tunable nanopatterning based on high-precision uniaxial piezo actuator vibration
18 T2067-A	Ms. Nayeong Lee, Mr. Hyoungseok Chae, Hyunsoo Chun, Inhwan Kim, Gyubeom Yeon, Hyunsik Choi, Jonggab Park, Seungjo Lee, Jong. G. Ok Seoul National University of Science and Technology, South Korea
10 T1100	Control and Mechanism Analysis of Serrated Chip Formation in HighSpeed Machining of Aluminum Alloy 7050-T7451
19 T1100	Mr. Qihang Shi, Zongcheng Hao, Shuai Wang, Xiuli Fu and Hui Wang University of Jinan, China
20 T201	Structural and Optical Properties of Commercial Microparticle Zinc Oxide  Dr. R. Nordin, N. Latiff, R. Yusof, W.I. Nawawi, M.Z. Salihin, Z.A.M. Ishak Universiti Teknologi MARA Perlis Branch, Malaysia
21 T1101	Study on the Influence of Anisotropy on Cutting Performance of Aviation Aluminium Alloy 7050-T7451
21 11101	Hui Wang, Ying Meng, Duoduo Li, Xiuli Fu, <b>Mr. Qihang Shi</b> University of Jinan, China
	Improved Thermoelectric Behavior of Super-Growth Carbon Nanotube Using Tetrathiafulvalene-tetracyanoquinodimethane Nanoparticles
22 T2018	<b>Dr. Shinichi Hata,</b> Takahiro Yoshizumi, Satoshi Hoshino, Mio Gotsubo, Yukihide Shiraish, Naoki Toshima
10.15 10.20	Sanyo-Onoda City University, Japan  Dinner Banquet
18:15-19:30	Dinner Banquet



L-1	Mr. Olagunju olajide Sunday Nexant Consulting Limited, Nigeria
L-2	Prof. Galinovsky Andrey Leonidovich  Bauman Moscow State Technical University, Russia
L-3	Prof. Rui Hu Chinese Academy of Sciences, China
L-4	Dr. Yuqi Yang Chinese Academy of Sciences, China
L-5	Ms. Sha Li Chinese Academy of Sciences, China
L-6	<b>Prof. Kwon-Koo Cho</b> Gyeongsang National University, South Korea
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# **One Day Visit in Kyoto**

**Date:** October 14, 2019 **Place:** Kyoto, Japan **Time:** 09:00 – 17:00



#### **Route:**

09:45	Nara	75 minutes
12:00	Uji Special Lunch	1 Hour
13:00	Uji Area	2 Hour
	Uji Green Tea Street	
	Byodoin Temple	
15:00	Suntory Yamazaki Distillery	1 Hour
17:00	Back to hotel	1 Hour

### Tips:

- ♣ This visit will charge 100 USD for each
- ♣ Or you could choose to **enjoy free time on October 14 to explore Kyoto by yourself**
- ♣ Please be there on time, or you will miss the visit and will not get any refund of the payment.
- **♣** The fees include: traveling route, lunch and traveling bus service
- The itinerary /duration to visit may change without advance notice depending on group size or unexpected local situation

#### **Service excludes:**

- Personal expenses (not mentioned above).
- All Entrance Fee

Should you have any more doubt, please contact us via <a href="mailto:icmta@sciei.us">icmta@sciei.us</a> & <a href="mailto:icmta@sciei.us"



# Attractions in one day tour

### 1. Nara Park



Nara Park (奈良公園, Nara Kōen) is a large park in central Nara. Established in 1880, it is the location of many of Nara's main attractions including Todaiji, Kasuga Taisha, Kofukuji and the Nara National Museum. It is also home to hundreds of freely roaming deer.

Considered the messengers of the gods, Nara's over 1000 deer have become a symbol of the city and have even been designated as a natural treasure. Deer crackers are for sale around the park, and some deer have learned to bow to visitors to ask to be fed. Nara's deer are surprisingly tame, although they can be aggressive if they think you will feed them, so make sure not to tease them with food.

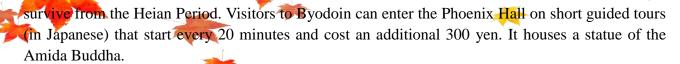
## 2. Byodoin Temple



Byodoin Temple (平等院, Byōdōin) is a striking example of Buddhist Pure Land (Jodo) architecture. Together with its garden, the temple represents the Pure Land Paradise and was influential on later temple construction. Byodoin was initially built in 998 as a countryside retreat villa for the powerful politician Fujiwara no Michinaga, not as a temple.

Michinaga's son turned Byodoin into a temple and ordered the construction of its most spectacular feature, the Phoenix Hall. Although the building was given another official name, almost immediately after its construction in 1053, it was nicknamed Hoodo ("Phoenix Hall") because of its shape and the two phoenix statues on its roof. The hall is now featured on the back of the Japanese ten yen coin.

Byodoin's buildings were repeatedly lost to fires and other calamities over the centuries, however, the Phoenix Hall was never destroyed, making it one of the few original wooden structures to



### 3. Uji Tea



Green tea is now ubiquitous in Japan, but when it first arrived from China in the 700s, the drink was unknown except to a handful of priests and noblemen. A few hundred years later during the Kamakura Period (1192-1333), green tea leaves imported from China and cultivated in Uji started becoming popular among the nobility.

Eisai, the Zen priest who imported Zen Buddhism to Japan from China, introduced the benefits of the beverage in a book and advised the Uji priests in tea plant cultivation and preparation. Tea drinking later became popular among the masses, and Uji earned a reputation for excellent tea production as one of the first places to engage in tea cultivation. Today, Uji's tea is still regarded to be of superior quality.

## 4. Suntory Yamazaki Distillery



The Suntory Yamazaki Distillery (サントリー山崎蒸留所, Santorī Yamazaki Jōryūsho) is a

whisky distillery in the Yamazaki district near Kyoto. Opened in 1923, the distillery produces Suntory's flagship line of Yamazaki single malt whiskies, which have won many international awards.

The Yamazaki Distillery is surrounded by nature and greenery in a quiet and serene district that has long been known for its quality water, a key ingredient to great tasting whisky. The entire process of whisky distillation and aging is done here. A museum and distillery tours are available to tourists; however, prior reservations are required for a visit.

