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Welcome Message

Biomaterials International 2021

Invitation

Dear Colleagues,

On behalf of the Organizing Committee, it is our great pleasure to invite you to participate in the Biomaterials International 2021, which will be held in May 30 - June 3, 2021 at Kenting, Taiwan. The Biomaterials International 2021 will take place in the Howard Beach Resort-Kenting inside the Kenting National Park. The park is well known for its tropical climate and sunshine, scenic mountain and beach, and has long been one of the most favorite resort places in Taiwan.

Following the success of previous Biomaterials International conferences, the Biomaterials International 2021 will bring together the international research communities from various scientific disciplines, including biology, physiology, materials science, physics, chemistry, engineering, and clinical science, to discuss new and exciting advances that involve biomaterials, techniques and methodologies. Apart from the usual conference activities consisting of plenary and invited lectures, general symposia and poster presentation, there will be a series of Special Symposia focusing on clinical applications of biomaterials in dental, orthopedic, cardiovascular etc. Although an intensive science and technology experience is the driving force of Biomaterials International 2021, the social and cultural part of a visit to Taiwan should not be missed. The Organizing Committee is putting in its best effort to organize this event and make it a memorable in one of the most attractive regions of Taiwan-Kenting.

We hope that you will be able to join us at the Biomaterials International 2021 and have a meaningful as well as an enjoyable time with your colleagues in the field of Biomaterials. All members of the Organizing Committee of Biomaterials International 2021 are looking forward to meeting you at the very beautiful town, Kenting of Taiwan.

Yours sincerely,

S-J. (Sean) Liu

Chairman
Chang Gung University, Taiwan

S.Y. Chen

Co-Chairman
National Chiao Tung University, Taiwan

C.S. Yeh

Co-Chairman
National Cheng Kung University, Taiwan

Conference Committee

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Co-Chairman	Chen SY, PhD (Materials Science and Engineering, National Chiao Tung University)
	Yeh CS, PhD (Chemistry, National Cheng Kung University)
Secretariat	Lee D, PhD (Mechanical Engineering, Chang Gung University)
Committee	Chau LK, PhD (Chemistry and Biochemistry, National Chung Cheng University)
	Chen CF, PhD (Applied Mechanics, National Taiwan University)
	Chen CM, MD (Orthopedic Surgery, Linkou Chang Gung Memorial Hospital)
	Chen DWC, MD/PhD (Orthopedic Surgery, Keelung Chang Gung Memorial Hospital)
	Chen YP, MD/PhD (Gynecology and Obstetrics, Keelung Chang Gung Memorial Hospital)
	Cheng FY, PhD (Chemistry, Chinese Culture University)
	Chiou SH, MD/PhD (Pharmacology, National Yang-Ming University)
	Chiu HC, PhD (Biomedical Engineering and Environmental Sciences, National Tsing Hua University)
	Chou PY, MD (Plastic Surgery, Linkou Chang Gung Memorial Hospital)
	Chou YC, MD/PhD (Orthopedic Surgery, Linkou Chang Gung Memorial Hospital)
	Hsieh MF, PhD (Biomedical Engineering, Chung Yuan Christian University)
	Hsu MY, MD (Radiology, Linkou Chang Gung Memorial Hospital)
	Hsu YH, MD/PhD (Orthopedic Surgery, Linkou Chang Gung Memorial Hospital)
	Hu SH, PhD (Biomedical Engineering and Environmental Science, National Tsing Hua University)
	Hu YC, PhD (Chemical Engineering, National Tsing Hua University)
	Kao CW, MD (Anesthesiology, Chiayi Chang Gung Memorial Hospital)
	Kau YC, MD/PhD (Anesthesiology, Linkou Chang Gung Memorial Hospital)
	Lee CH, MD/PhD (Cardiology, Linkou Chang Gung Memorial Hospital)
	Lee FY, DDS (Periodontology, Linkou Chang Gung Memorial Hospital)
	Liau I, PhD (Applied Chemistry, National Chiao Tung University)
	Lin HM, PhD (Bioscience and Biotechnology, National Taiwan Ocean University)
	Liu KS, MD/PhD (Cardiovascular Surgery, Linkou Chang Gung Memorial Hospital)
	Peng YJ, MD (Ophthalmology, Taipei Tzu Chi Hospital)
	Shen SC, MD (Anesthesiology, Linkou Chang Gung Memorial Hospital)
	Su CH, PhD (Translational Research in Biomedicine, Kaohsiung Chang Gung Memorial Hospital)
	Su WP, MD/PhD (Clinical Medicine, National Cheng Kung University)
	Tsai WB, PhD (Chemical Engineering, National Taiwan University)
	Tseng YY, MD/PhD (Neural Surgery, Taipei Medical University Hospital)

Conference Committee

Committee

Wan D, PhD (Biomedical Engineering, National Tsing Hua University)

Wang LF, PhD (Medicinal and Applied Chemistry, Kaohsiung Medical University)

Weng CJ, MD (Orthopedic Surgery, Linkou Chang Gung Memorial Hospital)

Wong TW, MD/PhD (Dermatology, National Cheng Kung University)

Wu PC, PhD (Biomedical Engineering, National Cheng Kung University)

Yu YH, MD/PhD (Orthopedic Surgery, Linkou Chang Gung Memorial Hospital)

Symposia

General symposia

G1. Biodegradable materials and devices

G2. Metallic biomaterials

G3. Ceramic biomaterials

G4. Smart materials

G5. Synthesis and fabrication of biomaterials and devices

G6. Regenerative medicine and tissue engineering

G7. Interactions of biomaterials and cells

G8. Nanoscale biomaterials

G9. Delivery of drug, gene, vaccine, and active biomolecules

G10. Functionalization and bioactivity

Special symposia

S1. Nanomedicines

S2. Dental materials

S3. Orthopedic biomaterials

S4. Stents and stents applications

S5. Ophthalmic biomaterials

S6. Neural applications

S7. Other techniques and applications

Plenary Speakers

Bradley M, PhD
University of Edinburgh

Polymer chemistry - on and inside cells

Ishida Y, PhD
RIKEN Center for Emergent Matter Science

Bioinspired soft materials with anisotropic structures

Mou CY, PhD
National Taiwan University

Mesoporous silica nanoparticles for cancer therapy

Webster T, PhD
Northeastern University

Goodbye hospitals and hello implantable nanosensors

Invited Speakers

Chou YC, MD/PhD	Linkou Chang Gung Memorial Hospital	Fabrication of a 3D printed elastic scaffold for ruptured tendon repair
Ding SJ, PhD	Chung Shan Medical University	Calcium silicate-based biomaterials
Hanawa T, PhD	Tokyo Medical and Dental University	MRI-compatible alloy and biofunctionalization of metals
Huang CJ, PhD	National Central University	Anti-clogging hemofiltration device for mass collection of circulating tumor cells by ligand-free size selection
Huang YT, PhD	Chung Yuan Christian University	Evaluation of antibacterial effect and mechanism of antimicrobial peptides
Ito T, PhD	The University of Tokyo	Biomaterials to prevent postoperative peritoneal adhesion: injectable, sprayable, and sheet hydrogels
Katayama Y, PhD	Kyushu University	Nano-particular systems for immune-regulation as a therapeutics of chronic inflammatory diseases
Kawasaki H, PhD	Kansai University	Gold and silver nanoclusters for biomedical applications
Lai J, PhD	University of Washington	Stimuli-responsive polymeric biomaterials for enabling clinical diagnostics and bioprocessing
Liu GS, PhD	University of Tasmania	Ophthalmic drug delivery - application of nanoparticulate systems
Matsusaki M, PhD	Osaka University	Development of 3D-organoids by nano-/micro-biomaterials for drug assay
Morelli S, PhD	National Research Council of Italy	Advanced membrane systems for neuronal tissue engineering application
Sosnik A, PhD	Technion-Israel Institute of Technology	Surface-modified polymeric nanoparticles to target the brain
Tseng YY, MD/PhD	Taipei Medical University	Multi-drug embedded hybrid structured nanofibers promote alkylating agent activity in malignant gliomas
Wang W, PhD	The University of Hong Kong	Long-wavelength light-responsive nanoparticles for targeted drug delivery

Conference Information

Conference venue	Howard Beach Resort, Kenting, Taiwan	
Registration service	Sunday, May 30	14:00-17:30
	Monday, May 31	08:00-17:00
	Tuesday, June 1	08:00-17:00
	Wednesday, June 2	08:00-11:30
Conference badge	Please ensure to wear your badge at all times to enter the meeting rooms. There may also be coupons placed in your badge to exchange for additional purchase.	
Welcome reception	Date	Sunday, May 30
	Time	15:00-18:00
	Location	Conference Hall A
Conference Banquet	Date	Tuesday, June 1
	Time	18:30-21:00
	Location	Caesar Park Hotel

Oral Presentation Schedule

Presentation Type	Total Time	Presentation Time	Q&A
Plenary Talk	40 min.	35 min.	5 min.
Invited Talk	25 min.	20 min.	5 min.
Oral Presentation	15 min.	12 min.	3 min.

Poster Presentation Schedule

Date	Schedule	Time
Tuesday, June 1	Poster Setup	08:00-15:30
	Poster Session	15:45-17:45
	Poster Removal	17:45-18:00

Floor Plan

Program at a Glance

Sunday, May 30		
Time	**Venue**	**Activity**
14:00-17:30	B1 Floor	Registration
15:00-18:00	Conference Hall A	Welcome Reception

Monday, May 31	
Venue	**Conference Hall A**
08:00-08:20	Opening Ceremony
08:20-08:45	Invited Presentations
08:45-09:25	**Goodbye hospitals and hello implantable nanosensors** Webster T
09:25-10:15	Invited Presentations
10:15-10:30	**Coffee Break**
Venue	**Conference Hall A**
10:30-10:55	Invited Presentations
10:55-12:10	Oral Presentations
12:10-13:00	**Lunch Time**
Venue	**Conference Hall A**
13:00-14:15	Invited Presentations
14:15-14:55	**Polymer chemistry-on and inside cells** Bradley M
14:55-15:20	Invited Presentations
15:20-15:30	**Coffee Break**
Venue	**Conference Hall A**
15:30-18:00	Oral Presentations

Tuesday, June 1	
Venue	**Conference Hall A**
08:00-08:40	**Mesoporous silica nanoparticles for cancer therapy** Mou CY
08:40-09:20	**Bioinspired soft materials with anisotropic structures** Ishida Y
09:20-10:35	Invited Presentations
10:35-10:50	**Coffee Break**
Venue	**Conference Hall A**
10:50-12:05	Oral Presentations
12:05-13:00	**Lunch Time**
Venue	**Conference Hall A**
13:00-14:40	Invited Presentations
14:00-15:25	Oral Presentations
15:25-15:45	**Coffee Break**
Venue	**Exhibition Area**
15:45-17:45	Poster Presentations
Venue	Caesar Park Hotel
18:30-21:00	**Banquet**

Wednesday, June 2	
Venue	**Conference Hall A**
08:00-10:15	Oral Presentations
10:15-10:30	**Coffee Break**
10:30-11:30	Oral Presentations
11:30-11:45	**Closing Ceremony**
11:45-14:00	**Lunch Time**

Monday, May 31	
Venue	**Conference Hall A**
08:00-08:20	**Opening Ceremony**
Chair	**Tsai WB, PhD (National Taiwan University)**
08:20-08:45	#1053：**MRI-compatible alloy and biofunctionalization of metals** Takao Hanawa
08:45-09:25	#1204：**Goodbye hospitals and hello implantable nanosensors** Thomas J. Webster
09:25-09:50	#????：**Biomaterials to prevent postoperative peritoneal adhesion: injectable, sprayable, and sheet hydrogels** T. Ito
09:50-10:15	#1015：**Calcium silicate-based biomaterials** Shinn-Jyh Ding
10:15-10:30	**Coffee Break**
Venue	**Conference Hall A**
Chair	**Tsai TT, MD/PhD (Chang Gung Memorial Hospital)**
10:30-10:55	#1202：**Fabrication of a 3D printed elastic scaffold for ruptured tendon repair** Ying-Chao Chou
10:55-11:10	#1134：**An electrospun nerve wrap comprising bletilla striata polysaccharide with dual function for nerve regeneration and scar prevention** Shih-Heng Chen, Zhi-Yu Chen, Feng-Huei Lin
11:10-11:25	#1014：**Development a stacking pad design for enhancing the sensitivity of lateral flow immunoassay** T.T. Tsai, T.H. Huang, C.A. Chen, N. Y. Ho, C.F. Chen
11:25-11:40	#1036：**Manufacture of drug loaded polycaprolactone/hydroxylapatite nanocomposites employing solution-extrusion 3D printing technology** Pang-Yun Chou, Ying-Chao Chou, Y.H. Lai, Y.T. Lin, C.J. Lu, S.J. Liu
11:40-11:55	#1161：**Tissue engineering strategy for promoting craniofacial bone healing in osteoporosis** Y.T. Liu, J.P. Chen and C.H. Chen
11:55-12:10	#1197：**Near-Infrared fluorescent polymeric nanoparticles for surgical navigation** Tai-Wei Feng, Jui-Ting Hsiao, Ming-Fa Hsieh, Chun-Yun Yang, and Tzu-Chau Lin, Ming-Hsi Huang
12:10-13:00	**Lunch Time**

Monday, May 31	
Venue	**Conference Hall A**
Chair	**Wong TW, MD/PhD (National Cheng Kung University)**
13:00-13:25	#1198：**Multi-drug embedded hybrid structured nanofibers promote alkylating agent activity in malignant gliomas** Yuan-Yun Tseng
13:25-13:50	#1201：**Development of 3D-organoids by nano-/micro-biomaterials for drug assay** Michiya Matsusaki
13:50-14:15	#1154：**Evaluation of antibacterial effect and mechanism of antimicrobial peptides** Yu-Tzu Huang, Selvaraj Rajesh Kumar, Hao-Chun Chan, Zih-Huei Jhan, Dave W. Chen, Shingjiang Jessie Lue, Kevin C.-W. Wu
14:15-14:55	#1206：**Polymer chemistry - on and inside cells** Mark Bradley
14:55-15:20	#1070：**Surface-modified polymeric nanoparticles to target the brain** Alejandro Sosnik
15:20-15:30	**Coffee Break**
Venue	**Conference Hall A**
Chair	**Hsieh MF, PhD (Chung Yuan Christian University)**
15:30-15:45	#1017：**Chitosan-dependent antibacterial activity and osteogenesis of calcium silicate hybrid cements** Chi-Nan Chang, Ming-Cheng Lin and Shinn-Jyh Ding
15:45-16:00	#1018：**Synergistic effect of methylene blue-encapsulated chitosan on photoinactivation of bacteria on titanium** Chiu-Nan Lin, Shinn-Jyh Ding and Chun-Cheng Chen
16:00-16:15	#1043：**The finite element analysis of implant abutment designs for tooth-implant supported prosthesis** Yen-Chang Huang, Shinn-Jyh Ding and Min Yan
16:15-16:30	#1073：**Functionalization of polyethyleneimine with hollow cyclotriveratrylene and its subsequent supramolecular interaction with doxorubicin** Carmine Coluccini and Hsin-Yi Tiffany Chen
16:30-16:45	#1199：**Sustained release of levobupivacaine, lidocaine, and acemetacin from electrosprayed microparticles: in vitro and in vivo studies** Jian-Ming Chen, Kuan-Chieh Liu, Wen-Ling Yeh, Jin-Chung Chen and Shih-Jung Liu

Monday, May 31	
Venue	**Conference Hall A**
16:45-17:00	#1009：**Graphene oxide nanoribbons as biosensing materials for photoelectrochemical detection of uric acid** C.L. Sun, C.H. Lin and C.H. Kuo
17:00-17:15	#1050：**Enhanced mechanical and biological performances of CaO-MgO-SiO_2 glass-ceramics via the modulation of glass and ceramic phases** Yu-Jie Wu, Kuei-Chih Feng, Chi-Yun Wang, Chi-Shun Tu, Yu-Ling Lin, Cheng-Sao Chen, Po-Liang Lai, Yu-Tzu Huang, and Pin-Yi Chen
17:15-17:30	#1193：**Preparation and characterization of titanium modified with Ca-Sr metal organic frameworks for orthopedic applications** Adhisankar Vadivelmurugan, Shiao-Wen, Tsai
17:30-17:45	#1087：**Enhancing mechanical strength and in vitro bioactivity of $CaSiO_3$ glass-ceramics added with P_2O_5 nucleation agent** G.Y. Hung, P.Y. Chen, Y.T. Huang, C.S. Chen, P.L. Lai, C.Y. Wang, Y.L. Lin, C.S. Tu and K.C. Feng
17:45-18:00	#1099：**Reduced graphene oxide covalently bound with magnetic nanoparticle and peptide ligand for dual-targeted combination cancer therapy** Banendu Sunder Dash, Yu-Jen Lu, and Jyh-Ping Chen

Tuesday, June 1	
Venue	**Conference Hall A**
Chair	**Lai PL, MD/PhD (Chang Gung Memorial Hospital)**
08:00-08:40	#1200：**Mesoporous silica nanoparticles for cancer therapy** Chung-Yuan Mou
08:40-09:20	#1185：**Bioinspired soft materials with anisotropic structures** Y. Ishida
09:20-09:45	#1027：**Anti-clogging hemofiltration device for mass collection of circulating tumor cells by ligand-free size selection** Chun-Jen Huang
09:45-10:10	#1056：**Nano-particular systems for immune-regulation as a therapeutic of chronic inflammatory diseases** Y. Katayama, S. Li, J. Li, Y. Mu, A. Kishimura, T. Mori
10:10-10:35	#1203：**Gold and silver nanoclusters for biomedical applications** H. Kawasaki, Y. Iwasaki and H. Miyaji
10:35-10:50	**Coffee Break**
Venue	**Conference Hall A**
Chair	**Wang TW, PhD (National Tsing Hua University)**
10:50-11:05	#1079：**Self-assembling peptide hydrogel with proteoglycan-assisted growth factor delivery for therapeutic angiogenesis** Tzu-Wei Wang
11:05-11:20	#1116：**TiZrNbTaFe high-entropy alloy coatings - in vivo biocompatibility evaluation** S.Y. Hou, J.W. Lee, B.S. Lou
11:20-11:35	#1117：**Alginate-catechol hydrogel for controlled drug release** Zi-Ting Feng, Wei-Bor Tsai
11:35-11:50	#1118：**Pyrogallol assisted poly-sulfobetaine gradient coating to modulate the behavior of fibroblast and osteoblast cells** P. Deval and W.B. Tsai
11:50-12:05	#1126：**Influence of change the power of the titanium target on mechanical properties of TiN films deposited by an cathode arc evaporation - high power impulse magnetron sputtering hybrid process** K.C. Lo, J.F. Tang, T.W. Liu, S.Y. Huang and C.L. Chang
12:05-13:00	**Lunch Time**

Tuesday, June 1	
Venue	**Conference Hall A**
Chair	**Wu PC, PhD (National Cheng Kung University)**
13:00-13:25	#1208：**Ophthalmic drug delivery - application of nanoparticulate systems** Guei-Sheung Liu
13:25-13:50	#1205：**Long-wavelength light-responsive nanoparticles for targeted drug delivery** W. Lv, Y.F. Li, Y.M. Zhang, K.Q. Long and W.P. Wang
13:50-14:15	#1107：**Stimuli-responsive polymeric biomaterials for enabling clinical diagnostics and bioprocessing** L.N. Vojtech, B.J. Nehilla, R. Jauregui, J.J. Hill, and J.J. Lai
14:15-14:40	#1071：**Advanced membrane systems for neuronal tissue engineering application** Sabrina Morelli, Antonella Piscioneri, Enrico Drioli, Loredana De Bartolo
14:40-14:55	#1127：**Microstructure and characteristics of Zr-Cu-Ti thin film metallic glasses deposited by high power impulse magnetron sputtering** Po-Yuan Huang, Jian-Fu Tang, Bo-Ruei Lu, Zu-Hao Wang, Fu-Chi Yang and Chi-Lung Chang
14:55-15:10	#1133：**A fully biodegradable resistive random-access memory by biocellulose substrate** W.Y. Huang, Y.C. Chang, C. R. Yu, and C. Y. Wu
15:10-15:25	#1136：**Polymer-shaped memory materials used to produce a crumpled graphene structure for chemiresistive biosensors** Tai-Ze Wu, Min-Shin Huang, Chi-Hsien Huang
15:25-15:45	**Coffee Break**
Venue	**Exhibition Area**
15:45-17:45	Poster Presentations
Venue	**Caesar Park Hotel**
18:30-21:00	**Banquet**

Wednesday, June 2	
Venue	**Conference Hall A**
Chair	**Chou PY, MD (Chang Gung Memorial Hospital)**
08:00-08:15	#1140：**CVD-grown bilayer graphene for chemiresistive biosensor applications** Chen-Rong Jian, Sian-Hong Ciou, Yu-Hsiu Lin, Yi.-Ting Lin, Zhoa-Liang Xie, Chi-Hsien Huang
08:15-08:30	#1147：**Antimicrobial performance of TiOx coatings fabricated by superimposed hipims and mf system** W.T. Chen, B.S. Lou, J.W. Lee
08:30-08:45	#1148：**Bioactive corona in PEGylated nanoparticle-induced acute hypersensitivity reactions** Yunn-Hwa Ma, Sin-Ting Ngo, Yun Cheng, Si-Yi Chen, Ming-Tsung Sun
08:45-09:00	#1149：**An osmotic processor for concentrating urine markers** S.Y. Chen, Y.C. Wu, R. Lunde, J.J. Lai
09:00-09:15	#1156：**The effects of duty cycle and oxygen gas of reactive high-power impluse magnetron supptering on thermochromic properties of VO_2 films** Pi-Chun Juan, Hao-Pin Shi, Pin-Syun Jiang, Chun-Yao Tou, Chih-Yi Lin, Wen-Hao Cho, Chien-Lin Chen, and Chi-Chung Kei
09:15-09:30	#1157：**Plasma-enhanced atomic layer deposition of molybdenum oxide** Pi-Chun Juan, Hao-Pin Shi, Pin-Syun Jiang, Chun-Yao Tou, Chih-Yi Lin, Wen-Hao Cho, Chien-Lin Chen, and Chi-Chung Kei
09:30-09:45	#1160：**Dual-targeted glucose-driven nanoreactor for oxygen production and hydroxyl radicals for triple-negative breast cancer treatment** Ying Xiang Luo, Shih-Hsuan Chan, Hung-Wei Yang
09:45-10:00	#1164：**Plasma polymerisation of poly methyl methacrylate inside inner surface of silicone tube by capacitively coupled radio frequency plasma reactor** J. H. Hsieh, Himanshu Mishra, S. Y. Shen
10:00-10:15	#1165：**Dual-imaging biological silicon source prepared mesoporous silica nanoparticle for photodynamic therapy and chemotherapy** Cheng-Chang Lee, Guan-Wei Cheng, Hsiu-Mei Lin
10:15-10:30	**Coffee Break**
Venue	**Conference Hall A**
Chair	**Lee JW, PhD (Ming Chi University of Technology)**
10:30-10:45	#1172：**Natural killer cells encapsulated in an injectable immunotherapeutic gel for post-surgical glioblastoma treatment** J.W. Jhou, P. Y. Chen, C. Y. Huang, K. C. Wei and H. W. Yang

Wednesday, June 2	
Venue	**Conference Hall A**
10:45-11:00	#1176：**Biocompatibility evaluation of Ti contained diamond like carbon coatings** Yu Tung Hsiao, Li-Chun Chang, Bih-Show Lou, Jyh-Wei Lee
11:00-11:15	#1187：**Effect of molybdenum disulfide addition on corrosion and antimicrobial behaviors of plasma electrolytic oxidation coatings on AZ31B magnesium alloy** Chuan-Ming Tseng and Wei-Chieh Su
11:15-11:30	#1188：**Comparison of the biomechanical performance of the fixation bone plate with conforming or nonconforming surface** Tsung-Kuei Hung, Jui-Pin Hung
11:30-11:45	**Closing Ceremony**
11:45-14:00	**Lunch Time**

Poster Session

Tuesday, June 1

Time: 15:45-17:45
Location: Exhibition Area

Category: G1. Biodegradable materials and devices

001) #1010 **The osteogenic effects of antibacterial alginate/chitosan hydrogels with bacteriophage embedded and immobilized on the surface**
Hsin-Yi Lin, Fu-Shun Syu, Jen-Yu Liao

002) #1011 **Bacteriophage immobilization on electrospun water-soluble chitosan for bacteriostasis and nerve repair**
Hsin-Yi Lin, Ming-Tse Chiang, Xiao-Zhu Tang

003) #1060 **Solution-extrusion 3D printing of degradable polycaprolactone parts**
Jian-Ming Chen, Demei Lee, Jheng-Wei Yang, Sheng-Han Lin, Yu-Ting Lin, Shih-Jung Liu

004) #1066 **Development an intelligent hydrogel containing antibiotics (Neomycin surface/Bacitracin/Polymyxin B) to prevent wound infection**
Tzu-Lung Liao, Kuai-An Lai, Ping-Ching Wu

005) #1074 **Parameters affecting the strength of electrospun poly(D,L)-lactide-co-glycolide nanofibers diameter**
Chia-Jung Lu, Hsin-Yi Liu, Yen-Wei Liu, Shih-Jung Liu

006) #1075 **Solution and melt extrusion 3D printing of polylactide parts**
Yu-Ting Lin, Sheng-Han Lin, Tan-Yu Lee, Shih-Jung Liu

007) #1091 **Integrated 3D-printed polycaprolactone meshed tube and electrospun drug-incorporated nanofibers for therapy of tendon rupture**
Ying-Chao Chou, Demei Lee, Jui Ho, Zhe-Pei Wang, Shih-Jung Liu

008) #1121 **Nanofibrous vildagliptin-eluting stents**
Yen-Wei Liu, Chen-Hung Lee

009) #1122 **Nanofibrous ticagrelor-eluting stents**
Sin-Huei Wang, Chen-Hung Lee

010) #1142 **Electrospun polypyrrole/polyethersulfone nanofibers for adsorption of Ag ions**
Chao-Lin Chen, Hsiu-Wen Lee, Jiunn-Jong Wu

011) #1191 **Preparation of PCL foaming material by supercritical carbon dioxide foaming**
R. C. Hsu and L. W. Lee

Category: G2. Metallic biomaterials

012) #1012 **Application of copper alloy films in biomedical materials**
Chon-Hsin Lin

013) #1169 **Development of cobalt-based ODS alloys by mechanical alloying for biomedical applications**
C.L. Chen and Z.C. Lu

014)	#1170	**Study on corrosion resistance of 3D-printed porous Ti-Nb-Zr-Sn alloy scaffolds immobilized with type I collagen in simulated inflammatory conditions** J.Y. Wen and H.H. Huang
015)	#1179	**Synthesis and characterization of biocompatible tizr-base bulk metallic glass foam using different space holders for bio-implant applications** P.H. Tsai, Y.C. Liao, S. M. Song, P. S. Chen, V. T. Nguyen, P. C. Wong and J.S.C. Jang
Category: G3. Ceramic biomaterials		
016)	#1097	**The synthesis of the hydrogelator based on glycolipid** Jyun-Ting Li and Yow-Fu Tsai
017)	#1098	**The low-molecular weight hydrogel based on glycolipid hydrogelator** Jyun-Ting Li, Ching-Huei Ye, and Yow-Fu Tsai
018)	#1130	**Studies on the development of the pH responsive low-molecular-mass sugar-based gelators: synthesis of afa-(P-((N-octadecanoyl-histidyl)amino)-phenyl) D-mannopyranoside and its derivative** Yu-Fa Wu; Rui-An Guo; Yu-Chen Tai; Yow-Fu Tsai
Category: G4. Smart materials		
019)	#1030	**Correlation between urinary nitrite and sepsis detection** Shih-Jie Chou, Su WL, Chun-Ming Chang, Nai-Yuan Chiang and Rui-Cian Weng
020)	#1057	**Raman enancing chip with bionic nepenthes structure applied in biomedical detection** Yen-Ting Lin ,Ting-Yu Liu
021)	#1058	**Surface modification of PET non-woven by O_2 plasma/UV photo-grafting of PEG/p(AAm-co-AAc) hydrogel and Immobilization of chinese herb extracts** Qing-Xiu Shi, Shu-Chuan Liao
022)	#1068	**Surface modified of silicone rubber for improved biocompatibility and antifouling properties by atmospheric pressure plasma-induced zwitterion hydrogel graft polymerization** Jhong-Kun Siao, Shu-Chuan Liao
023)	#1069	**Anti-biofilm coatings: O_2 plasma-induced graft polymerization of poly(acrylic acid)-chitosan hydrogel on 3D printed polymer surfaces** Yu-De Wu, Shu-Chuan Liao
024)	#1082	**Silver nanoisland arrays deposited on back barrier layers of AAO substrates for SERS biodection** Ting-Yin Chien, Ting-Yu Liu
025)	#1084	**Gold nanoparticles embedded on mesoporous-silica for SERS-based detection of biomolecules** Hsuan-Ting Lin, Ting-Yu Liu, Yuh-Lin Wang
026)	#1114	**Duel controlled photocrosslinkable and photodegradable gelatin hydrogel** Lo-Yuan Liu, Ying-Chieh Chen
027)	#1125	**Sers detection of biomolecules by silver-mesoporous silica modified graphene nanosheets** Ting-Yu Liu, Hsuan-Ting Lin, Guang-Zhi Peng

028)	#1145	**Magnetic nanoparticles coated with factor XIII aptamer-gold nanoparticles for thrombus targeting** Yu-Sheng Jhou, Chih-Ching Huang and Yunn-Hwa Ma
Category: G6. Regenerative medicine and tissue engineering		
029)	#1138	**Applications of decellularized extracellular matrix in cartilage tissue engineering** Wen-Hsuan Chou, Wei-Bor Tsai
Category: G7. Interactions of biomaterials and cells		
030)	#1115	**Extracellular lactate accumulation promotes nucleus pulposus degeneration under hypoxia in 3D multilayered intervertebral disc degeneration model** Chi-Yun Wang, Po-Liang Lai, Ming-Kai Hsieh, Yu-Jung Hu, Arindam Bit
031)	#1129	**Antibacterial efficacy of poly (hexamethylene biguanide) fixed on chitosan/dye modified nanofiber membrane** Jin-Chiou Liao, Fan-Xuan Xu, Juan-Chin Tsai, YU-Kaung Chang
032)	#1132	**Antibacterial efficacy of chitosan- and poly(hexamethylene biguanide)-immobilized nanofiber membrane** Ting-Chia Liao, Shun-Chi Chen, Yu-Kaung Chang
033)	#1144	**Antibacterial efficacy of quaternized chitosan/poly (vinyl alcohol) nanofiber membrane crosslinked with blocked diisocyanate** Guo-Kai Xu, Zheng-Yu Wu, Jeng-Ywan Shih, Yu-Kaung Chang
034)	#1194	**A multiple surface treatment enhancing osteogenesis and inhibiting osteoclastogenesis** C.F. Liu, Y.Y. Cheng, J.Y. Chen and H.H. Huang
Category: G8. Nanoscale biomaterials		
035)	#1013	**Fluorescent double-stranded DNA-templated copper nanoprobes for rapid diagnosis of tuberculosis** C.A. Chen, T.T. Tsai, N.Y. Ho, and C.F. Chen
036)	#1019	**Antibacterial and osteogenic activities of calcium silicate nanoparticles** Yun-Ru Huang, Chun-Cheng Chen and Shinn-Jyh Ding
037)	#1105	**Amino-graphene based nanocomposites coating for anti-bacterial and easy-cleaning applications** Kuo-Sung Sun, Yao-Sheng Cheng and Ting-Yu Liu
Category: G9. Delivery of drug, gene, vaccine, and active biomolecules		
038)	#1090	**Self-crosslinked hyaluronic acid conjugated calcium phosphate hybrid nanoparticle for sirna delivery** W.T. Kuo, S.F. Zhou, H.C. Wu
039)	#1151	**Drug delivery system with dual imaging and dual response control drug release functions for chemo-photodynamic synergistic therapy** Yu-Ya Huang, Zui-Harng Lee, Zhi-Yuan Wu, Min-Hsuan Tsou, Hsiu-Mei Lin
040)	#1166	**Fucoidan acts as an anticancer drug, gatekeeper and target loaded in/ modified on a rice husks prepared dual-imaging mesoporous silica nanoparticles** Zui-Harng Lee, Meng-Feng Lee, Hsiu-Mei Lin
041)	#1175	**Sting activator cdG-loaded mesoporous silica nanoparticles for enhanced tumor immunotherapy** L. Xu, Y.P. Chen, S.H. Wu and C.Y. Mou

Category: G10. Functionalization and bioactivity		
042)	#1016	**Improving antibacterial and osteogenic activity of titanium implants with metal ion coating** Jia Jia Chung, Hsiang Kao and Shinn-Jyh Ding
043)	#1100	**Raman enhancing biosensors by laser-scribed graphene films and noble metal nanoparticle arrays** Yu-Sheng Hsiao, Wei-Lin Syu, Po-Cheng Ho , Yu-Ting Lin, Ting-Yu Liu
Category: S1. Nanomedicines		
044)	#1059	**Developed a dual-therapeutic PLGA nanocarrier carrying metformin-prednisolone to reduce pulmonary fibrosis in an inhaled dosage form** Yu-Yi Chiang, Yao-Wei Yeh, Ping-Ching Wu
045)	#1155	**Coagulation factor XIII-binding aptamers-modified gold nanoparticles for thrombus targeting** Yu-Shiuan Tzeng, Wan-Chi Pan, Cheng-Kuan Su, Chih-Ching Huang and Yunn-Hwa Ma
Category: S3. Orthopedic biomaterials		
046)	#1020	**An optimization study on mixing ratio of polymethylmethacrylate bone cement and hydroxyapatite for treatment of vertebral compression fractures** C.L. Tai, M.Y. Liu, Y.T. Chen, P.L. Lai
047)	#1139	**Nanofiber induced membrane in the masquelet procedure for therapy of segmental bone defects** Yi-Hsun Yu, Che-Kang Chen, Chao-Lin Chen, Jiunn-Jong Wu, Shih-Jung Liu
Category: S5. Ophthalmic biomaterials		
048)	#1064	**Hyaluronic acid nanoparticles with gp91 peptide loading for corneal neovascularization** Y.Y. Wu, I.C. Lin and C.L. Tseng
049)	#1096	**Tracking nanodistribution to retinal in live animal using aqueous-proof lead halide perovskite quantum-dot** Le Ngoc Hoang, Chun Che Lin, and Ching-Li Tseng
Category: S7.Other techniques and applications		
050)	#1022	**In vitro study on permeability and handling time of polymethylmethacrylate bone cement within osteoporotic bone** Mu-Yi Liu, Po-Liang Lai, Shen-Yao Chen and Ching-Lung Tai
051)	#1031	**Lumbar cage design and biomechanical analysis for patients with osteoporosis** C.L. Lin, Y.T. Chan, C.W. Tsai, N.Y. Chiang, S.J. Chou, I.H.Wang ,P.L. Lai and C.M. Chang
052)	#1046	**Analysis of the difference between human lumbar spine and lanyu pig lumbar spine for preclinical animal testing of biomedical implants** N.Y. Chiang, C.Y. Lin, C.W. Tsai, S.J. Chou, I.H. Wang, and C.M. Chang
053)	#1080	**Nanometric graphene oxide induced protein conformational changes in cancer cells observed through FTIR microspectroscopy: Effect of cytotoxicity and photon radiotherapy** Selvaraj Rajesh Kumar and Shingjiang Jessie Lue
054)	#1092	**An experimental study on biomass gasification in a bubbling fluidized bed** J.C. Tsai, L.C. Lin

055)	#1093	**A study on torrefaction of palm shell biomass** J.C. Tsai, C.J. Peng
056)	#1094	**Simulation of biomass gasification in a bubbling fluidzed bed using aspen plus** J.C. Tsai, Z.T. Peng
057)	#1101	**Antimicrobial peptide (Nisin) coating on polyetheretherketone (PEEK) and its antibacterial activities** Min Hsuan Ho, Selvaraj Rajesh Kumar, Thi Tuong Vi Truong, Shingjiang Jessie Lue
058)	#1124	**Secondary plasma and its applications in tube's inner wall activation** J. H. Hsieh, Y. J. Wei
059)	#1143	**Surface activation of polyurethane using atmospheric pressure plasma jet with varied combinations of radical densities** J. H. Hsieh, Y. W. Liu, P. W. Liu