ABC2011

The 11th Asian BioCeramics Symposium

in conjunction with

The 15th Symposium on Ceramics in Medicine, Biology and Biomimetics

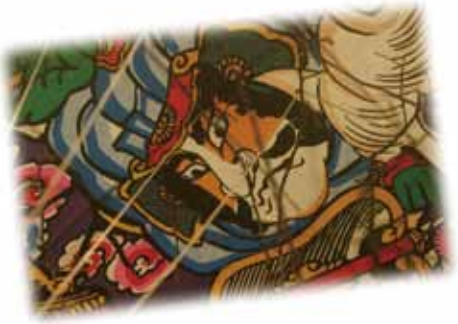
and

The 22nd Symposium on Apatite

November 30 - December 2, 2011

National Institute for Materials Science (NIMS)
1-2-1 Sengen, Tsukuba, JAPAN

Program

Representative Chair : Masanori Kikuchi (NIMS)

Co-organized by

- National Institute of Advanced Industrial Science and Technology (AIST)
- Division of Ceramics in Medicine,Biology and Biomimetics,The Ceramic Society of Japan
- Japanese Association of Apatite Science

Welcome

Dear Participants:

It is our great pleasure to welcome you to the joint symposium of the 11th Asian BioCeramics Symposium (ABC2011), the 15th Symposium on Ceramics in Medicine, Biology and Biomimetics, and the 22nd Symposium on Apatite held in Tsukuba, Japan from November 30 to December 2, 2011. In fact, we express deep gratitude all of you to come and join the symposium, because many people outside Japan consider that incident occurred in the atomic power plant in Fukushima has not been under control, even most Japanese specialists confirmed it is completely under control, and some of international scientific symposia had been cancelled in these nine months.

The Asian BioCeramics Symposium is held annually in Asia, gathering front-line researchers, scientists, engineers, manufactures, dentists and surgeons from Asian countries. The symposium was first organized in 2001 to encourage young Asian researchers interested in bioceramics and related fields. When the ABC held in Japan, local organizing committee make it in conjunction with the Symposium on Ceramics in Medicine, Biology and Biomimetics, which is held in Japan annually to encourage graduate and undergraduate students in Japan. During the first decade of the Asian BioCeramics Symposium history, the scope of the symposium has widely spread and impregnated. The next decade starting from the ABC2011 would encourage further evolution and revolution of the symposium.

The last few years, the unprecedented financial crisis struck many countries in the world, and research budgets were largely cut back in most Asian countries. In this circumstance, budgets for the regenerative medicine, mainly for iPS cell researches, are still reserved generously as well as these for sustainable society studies. Bioceramics, of course, are one class of the most promising materials controlling cell functions for regenerative medicine; thus, we have to focus on basic and application researches of bioceramics for medical use.

The Symposium on Apatite started in 1985 in Tokyo as a melting pot for basic and applied researches, not only for medical and dental fields but also for applied chemistry. In fact, apatite and related calcium phosphates have an application potential for building sustainable society through their unique crystal structures and surface characteristics.

The organizing committees of the symposia hope that participants expand their knowledge and establish close relation with researchers in the different research fields as well as the same research field.

Even bioceramics are first defined as ceramics for implant use, current definition of bioceramics may include the “ceramics for bio-related fields”. In this novel definition, bioceramic researches would be required to explore new boundaries; such as, bio-energy and waste treatment and would be one of very evolution and revolution of bioceramics.

Tsukuba is the first science city established in Japan to accumulate public research institutes and research facilities of private companies in one place to develop science and technology of Japan. It is located at 50 km northeast from Tokyo, capital of Japan, and 40 km northwest from Narita, main international airport of east area of Japan. Climate of the conference season is cold (mean daytime temperature is approximately 10 °C) but expected no snowfalls. From Tsukuba, you can directly reach famous Asakusa and Akihabara areas by using Tsukuba Express (TX) train.

National Institute for Materials Science is Japanese leading materials institute, established on April 1st, 2001 by merger of National Research Institute for Metals and National Institute of Research in Inorganic Materials. We are very proud to host the 11th Asian BioCeramics Symposium, the 15th Symposium on Ceramics in Medicine, Biology and Biomimetics and the 22nd Symposium on Apatite.

We thank you again to come and join the joint symposium on bioceramics and related fields.

Masanori Kikuchi,
Chairperson of the 11th Asian BioCeramics Symposium
in conjunction with the 15th Symposium on Ceramics in Medicine, Biology and Biomimetics and 22nd Symposium on Apatite

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National Institute for Materials Science (NIMS)

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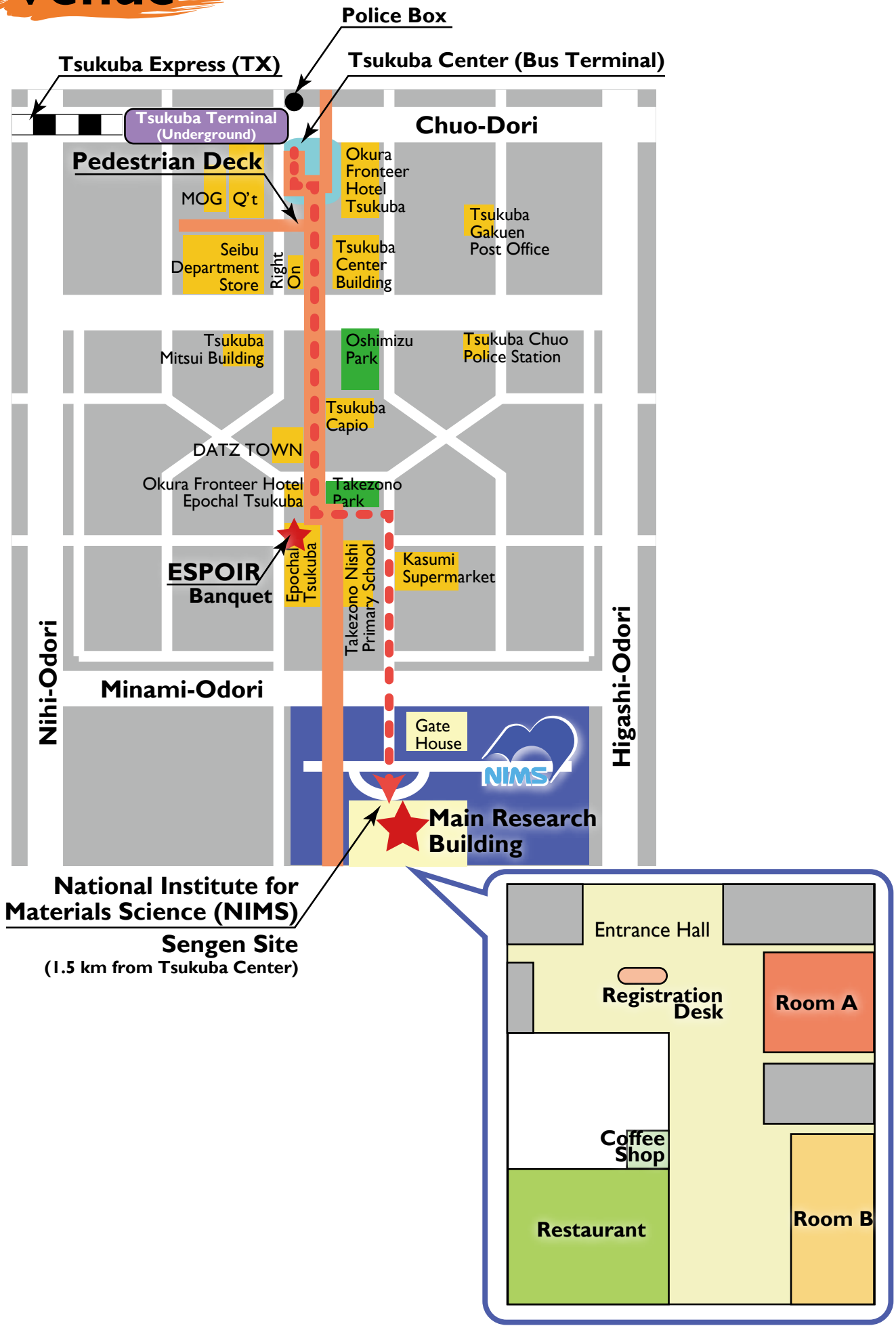
ABC2011

Venue



ABC2011

Time Table

November 30, 2011

Time	Room A (Oral)	Room B (Poster)
9:00-16:00	Registration	
9:50-10:00	Opening Remarks	
10:00-10:30	Invite 1 I-001	
10:30-11:00	Invite 2 I-002	Poster Mounting
11:00-11:20	Coffee Break	
11:20-12:20	Biomimetic O-001 O-002 O-003	Poster Mounting
12:20-13:20	Lunch Break	
13:20-14:20		Poster Session
14:20-15:20	Cell O-004 O-005 O-006	Poster Viewing
15:20-15:40	Coffee Break	
15:40-17:00	Cell O-007 O-008 O-009 O-010	Poster Viewing

December 1, 2011

Time	Room A (Oral)	Room B (Poster)
9:00-16:00	Registration	
9:30-10:00	Invite 3 I-003	Poster Viewing
10:00-10:40	DDS O-011 O-012	
10:40-11:00	Coffee Break	
11:00-12:20	Basic 1 O-013 O-014 O-015 O-016	Poster Viewing
12:20-13:20	Lunch Break	
13:20-14:20		Poster Session
14:20-15:20	Composite O-017 O-018 O-019	Poster Viewing
15:20-15:40	Coffee Break	
15:40-17:00	Composite O-020 O-021 O-022 O-023	Poster Viewing
18:30-20:30	Banquet at Espoir	

December 2, 2011

Time	Room A (Oral)	Room B (Poster)
9:00-13:20	Registration	
9:30-10:00	Invite 4 I-004	Poster Viewing
10:00-10:40	Basic 2 O-024 O-025	
10:40-11:00	Coffee Break	
11:00-12:20	Basic 2 O-26 O-27 O-28 O-29	Poster Removal
12:20-13:40	Lunch Break	
13:40-15:00	Coating O-30 O-31 O-32 O-33	
15:00-15:20	Closing Remarks	

ABC2011

Program

Invited Lectures

I-001 NOVEL BONE GRAFT SUBSTITUTES FOR LOAD-BEARING APPLICATIONS ..... Ding Shinn-Jyh (Chung Shan Medical University)

I-002 ARTIFICIAL EXTRACELLULAR MATRIX AS AN ADVANCED STEM CELL MICROENVIRONMENT FOR REGENERATIVE MEDICINE AND TISSUE ENGINEERING -NOVEL APPROACH OF CELL COOKING PLATE- ..... Akaike Toshihiro (Tokyo Institute of Technology)

I-003 STUDY ON SILICATE BIOCERAMICS .....Chang Jiang (Shanghai Institute of Ceramics)

I-004 BIOACTIVITY STUDIES ON FINE GRAINED AZ31 MAGNESIUM ALLOY PROCESSED BY GROOVE PRESSING .....Sampath Kumar TS (Indian Institute of Technology Madras)

Oral Presentations

O-001 TRANSFORMATION MECHANISM OF OCTACALCIUM PHOSPHATE TO HYDROXYAPATITE IN WATER .....Ito Natsuko (Tohoku University)

O-002 BIOMIMETIC CALCIUM PHOSPHATE MINERALIZATION INDUCED BY SYNTHETIC PEPTIDES UNDER BODY FLUID CONDITIONS ..... Hashizume Mineo (Tokyo University of Science)

O-003 BIOMIMETIC MINERALIZATION OF CALCIUM PHOSPHATE IN A HYDROGEL; EFFECTS OF POLYMER CONCENTRATION ..... Yokoi Taishi (Nagoya University)

O-004 CO-CULTURE OF BONE MARROW CELLS AND ENDOTHELIAL CELLS BY ROTATING WALL VESSEL (RWV) BIOREACTOR..... Nishi Masanori (National Institute of Advanced Industrial Science and Technology (AIST))

O-005 THE EFFECT OF SILICON ON OSTEOBLAST-LIKE CELL BEHAVIOR ..... Shie Ming-You (Institute of Biomedical Engineering, National Cheng Kung University)

O-006 EFFECTS ON SURFACE CHARACTERISTIC AND CELL BEHAVIORS BY POLARIZED HYDROXYAPATITE. .....Andoh Hiroshi (Tokyo Medical and Dental University)

O-007 OSTEOGENIC DIFFERENTIATION OF ADIPOSE DERIVED STEM CELLS (ADSC) ENHANCED BY STRONTIUM β-TCP MICROSPHERES .....Chou Joshua (University of Technology Sydney)

O-008 DUAL LOADING OF BIOACTIVE MOLECULES WITH CALCIUM PHOSPHATE ON TITANIUM ALLOY ..... Chen Cen (Yonsei University)

O-009 ANTIBODY IMMOBILIZED IN A DNA-APATITE COMPOSITE LAYER ENHANCES GENE TRANSFER EFFICIENCY ..... Yazaki Yushin (Waseda University)

O-010 CYTOTOXICITY AND IMMUNOREACTION OF NANOPARTICLES COATED WITH SIGNAL MOLECULE-APATITE COMPOSITE LAYER.....Wang Xiupeng (National Institute of Advanced Industrial Science and Technology)

O-011 CHITOSAN-SILICATE HYBRID CAPSULES FOR DRUG DELIVERY SYSTEMS....Shirosaki Yuki (Okayama University)

O-012 PREPARATION AND CHARACTERIZATION OF MAGNETITE FINE PARTICLES-LOADED PMMA MICROSPHERES FOR HYPERTHERMIA.....Kawai Takahiro (Yamagata University)

O-013 PREPARATION OF MICROSPHERES FOR EMBOLIC RADIOTHERAPY OF CANCER BY A SPRAY-DRYING METHOD .....Nakamura Kozue (Tohoku University)

O-014 ULTRASTRUCTURAL MORPHOLOGY OF HYDROXYAPATITE NANORODS FABRICATED BY HYDROTHERMAL METHOD ..... Selvakumar Prakash Parthiban (Nagoya University)

O-015 DEVELOPMENT OF HYDROXYAPATITE CERAMICS WITH PREFERRED ORIENTATION TO A-PLANE.... Zhuang Zhi (Department of Applied Chemistry, School of Science and Technology, Meiji University)

O-016 WET CO_2 GAS AS A CARBONATE SOURCE ON FABRICATION OF INTERCONNECTED POROUS CARBONATED HYDROXYAPATITE ..... Sunarso (Universiti Sains Malaysia)

O-017 FABRICATION OF DEXTRAN-MAGNETITE HYBRID MICROSPHERES SUITABLE FOR HYPERTHERMIA ..... Miyazaki Toshiki (Kyushu Institute of Technology)

O-018 BIOACTIVE MICROSTRUCTURE OF HUMAN TEETH DESIGNED BY A SUPERSONIC DEMINERALIZATION AND BIOMIMETIC COATING ..... Akazawa Toshiyuki (Industrial Technology Research Department, Hokkaido Research Organization)

O-019 PREPARATION OF BIOACTIVE APATITE NUCLEI-PRECIPITATED COMPOSITES BY USING SANDBLASTING PROCESS ..... Yabutsuka Takeshi (Graduate School of Energy Science, Kyoto University)

O-020 MINERALIZATION BEHAVIOR ON CHEMICALLY SYNTHESIZED COLLAGEN MODIFIED WITH POLYGLUTAMIC ACID IN SIMULATED BODY ENVIRONMENT .....Kuramoto Akimasa (Kyushu Institute of Technology)

O-021 SILICA-CROSSLINKED γ-POLY GLUTAMIC ACID / VATERITE COMPOSITES..... Obata Akiko (Graduate School of Engineering, Nagoya Institute of Technology)

O-022 CHARACTERIZATION OF OCTACALCIUM PHOSPHATE/GELATIN COMPOSITE AS A POSSIBLE BONE SUBSITUTE MATERILAL.....Suzuki Kentaro (Department of Orthopaedic Surgery, Tohoku Unversity)

O-023 THE EFFECT OF BIOLOGICAL FACTORS TO INITIAL BONE REGENERATION USING CARBONATE APATITE COMPOSITE .. Ika Dewi Ana (Dental Biomedical Sciences Department, Faculty of Dentistry, Universitas Gadjah Mada)

O-024 CHARACTERIZATION AND SEALING ABILITY OF OCP-MEDIATED CEMENT AS A ROOT CANAL FILLING MATERIAL..... Imamura Yuki (Department of Orofacial Development and Function, Tokyo Medical and Dental University)

O-025 EFFECT OF CONCENTRATION OF INOSITOL HEXAPHOSPHATE ON MATERIAL PROPERTIES OF CHELATE-SETTING APATITE CEMENT ..... Konishi Toshiisa (Kanagawa Academy of Science and Technology (KAST))

O-026 PROPERTIES OF SURFACE ELECTRIC FIELDS DUE TO HYDROXYAPATITE BIOCERAMIC ELECTRETS .....Mukogawa Katsuyuki (Kogakuin University)

O-027 COMPARISON OF ADSORPTION BEHAVIOR OF BOVINE SERUM ALBUMIN AND OSTEOPONTIN ON HYDROXYAPATITE AND ALUMINA .....
Hayashi Jumpei (Graduate School of Biomedical Engineering, Tohoku University)

O-028 NMR CHARACTERIZATION OF STRONTIUM-SUBSTITUTED BIOACTIVE GLASSES AND THEIR CRYSTALLIZED GLASSES ..... Fujikura Kie (Nagoya Institute of Technology)

O-029 THE SULFIDE ADSORPTION ON HEAT-TREATED HYDROTALCITE.....Yokogawa Yoshiyuki (Osaka City University)

O-030 VATERITE-CONTAINING POLY(LACTIC ACID) COATING ON METALLIC MAGNESIUM..... Yamada Shinya (Nagoya Institute of Technology)

O-031 NANOFIBROUS APATITE COATING OF TITANIUM BY GREEN PROCESSING ..... Rajkamal Balu (Indian Institute of Technology Madras)

O-032 MECHANISM OF STIMULATED APATITE NUCLEATION ON TITANIA LAYER BY UV-IRRADIATION AND AUTOCLAVING..... Osaka Akiyoshi (Okayama University)

O-033 NON-ABSORBABLE GBR MEMBRANE BASED ON PET SHEET COATED WITH READILY SOLUBLE CALCIUM PHOSPHATE ..... Unuma Hidero (Yamagata University)

Poster Presentations

P-001 PREPARATION OF HOLLOW SPHERICAL TETRACALCIUM PHOSPHATE AGGLOMERATES BY SPRAY PYROLYSIS ..... Ishizuka Eriko (Sophia University)

P-002 EFFECTS OF INITIAL PH ON HYDROXYAPATITE FORMATION FROM α-TRICALCIUM PHOSPHATE UNDER HYDROTHERMAL CONDITION..... Goto Tomoyo (Graduate School of Engineering, Nagoya University)

P-003 FABRICATION OF FLUORIDATED HYDROXYAPATITE THIN FILM AND SHEET BY PULSED LASER DEPOSITION TECHNIQUE..... Hontsu Shigeki (Faculty of Biology-Oriented Science and Technology, Kinki University)

P-004 LIQUID INFILTRATION IN NANOPARTICLE-ASSEMBLED HYDROXYAPATITE..... Okada Masahiro (Osaka Dental University)

P-005 EVALUATION OF IN VITRO BIORESORBABILITY OF CHELATE SETTING CALCIUM PHOSPHATES CEMENTS ..... Manabe Hiroki (Meiji University)

P-006 PARTICULATE CHARACTERIZATION OF BONE GRANULES PULVERIZED WITH AN AUTOMATIC MILL ..... Wei Tingting (Niigata University)

P-007 PREPARATION OF TOBERMORITE CONTAINING PHOSPHATE SPECIES ..... Maeda Hirotaka (Nagoya Institute of Technology)

P-008 LOCAL ENVIRONMENT ANALAYSIS OF MN IONS IN $CATIO_3$ ..... Yamada Daisuke (Waseda University)

P-009 CELLULAR EVALUATION OF BETA-TRICALCIUM PHOSPHATES CERAMIC CO-DOPED WITH SODIUM AND MANGANESE IONS..... Hanazawa Saori (Chiba Institute of Technology)

P-010 DEFECT FORMATION MECHANISM IN NA-DOPED BETA-TRICALCIUM PHOSPHATE ..... Yamamoto Tomoyuki (Waseda University)

P-011 MECHANOCHEMICAL SYNTHESIS AND LEACH TEST OF LEAD VANADO-IODOAPATITE . Suetsugu Yasushi (National Institute for Materials Science)

P-012 SYNTHESIS AND CELLULAR COMPATIBILITY OF MG SUBSTITUTED HYDROXYAPATITE... Nishio Yuki (Department of Materials Science, Graduate School of Engineering, Osaka Prefecture University)

P-013 CELL MIGRATION ABILITY TEST FOR INTERNATIONAL STANDARDIZATION OF BIOACTIVE CERAMICS ..... Kikuchi Masanori (National Institute for Materials Science)

P-014 THE INITIAL ATTACHMENT OF OSTEOBLAST-LIKE CELLS ON SPUTTERED FILMS OF STRONTIUM APATITE..... Hoshino Tomohiro (Ibaraki University)

P-015 FORMATION OF APATITE LAYER ON SURFACE OF GRAPHITE SHEET IMMERSED IN CALCIUM PHOSPHATE SOLUTION BY MICROWAVE IRRADIATION..... Bamba Yuichiro (Sophia University)

P-016 THE EFFECT OF MESOPOROUS BIOACTIVE GLASS ON THE BIOLOGICAL PROPERTIES OF POLYCAPROLACTONE NANOFIBROUS MATRIX.....Hsu Fu-Yin (Institute of Bioscience and Biotechnology, National Taiwan Ocean University)

P-017 EFFECT OF MIXING CALCIUM PHOSPHATE AND THERMOSENSITIVE BIODEGRADABLE HYDROGEL AS COMPOSITE GRAFT.....
Lai Po-Liang (Department of Orthopedic Surgery, Chang Gung Memorial Hospital)

P-018 PREPARATION OF HYDROXYAPATITE/POLY(LACTIC ACID) COMPOSITE MICROSPHERES IN A W/O/W EMULSION.....Kimura Isao (Niigata University)

P-019 POLYANHYDRIDE COPOLYMER BLENDING WITH BIOCERAMIC COMPOSITE FOR BONE HEALING.....Hong Ding-Wei (Department of Chemical Engineering, National Tsing Hua University)

P-020 DEVELOPMENT OF POLY(L-LACTIC ACID) NON-WOVEN FABRICS MIXED/COATED WITH HYDROXYAPATITE NANOCRYSTALS.....
Furuzono Tsutomu (School of Biology-Oriented Science and Technology, Kinki University)

P-021 INFLUENCE OF CA^{2+} AND MG^{2+} SUPPLEMENTATION ON IN VITRO BIOLOGICAL PROPERTIES OF HYDROXYAPATITE/COLLAGEN NANOCOMPOSITE MEMBRANE.. Bodhak Subhadip (JSPS Postdoctoral Fellow, National Institute for Materials Science)

P-022 PREPARATION OF INJECTABLE ARTIFICIAL BONE CONSTITUTED OF HYDROXYAPATITE/COLLAGEN NANOCOMPOSITE .....Kochi Akinori (Graduate School of Natural Science and Technology, Okayama University)

P-023 AREA-SPECIFIC GENE TRANSFER ON A DNA-FIBRONECTIN-APATITE COMPOSITE LAYER Oyane Ayako (National Institute of Advanced Industrial Science and Technology)

P-024 PHYSICOCHEMICAL AND BIOLOGICAL PROPERTIES OF FGF-2-APATITE COMPOSITE LAYER.....Sogo Yu (National Institute of Advanced Industrial Science and Technology (AIST))

P-025 BIODISTRIBUTION AND CYTOCOMPATIBILITY OF MICRO/NANO-SIZED CERAMICS PARTICLES: AN IN VIVO AND IN VITRO INVESTIGATION ..... Abe Shigeaki (Hokkaido University)

P-026 HARD TISSUE COMPATIBILITY OF APATITE-FIBER SCAFFOLD WITH ENHANCED MECHANICAL PROPERTY USING PIG MODEL BY IMPLANTING INTO TIBIA..... Ganmoto Takuya (Meiji University)

P-027 FABRICATION AND EVALUATION OF SILICON-CONTAINING APATITE FIBER SCAFFOLDS FOR BONE TISSUE ENGINEERING ..... Kinoshita Yukari (Meiji University)

P-028 IN-VITRO REMINERALIZATION INVESTIGATION OF HUMAN ENAMEL CARIES LESIONS UNDER NEUTRAL AND ACIDIC CONDITIONS.....Xue Jing (State Key Lab of Oral Diseases, Sichuan University)