The 47th General Session of
the Japanese Society for Dental Materials and Devices(JSDMD)

Div. of Dent. Biomater. Sci., Dept. of Restorative Sci. Meikai Univ. Sch. of Dentistry
(Place: Tower Hall Funabori -Edogawaku Sougou Kumin Hall-

Hall A
Saturday, 22 April 2006
9:25-9:30 Opening
9:30-12:00 General Presentaion(Oral)

Corrosion

A-01 Corrosion evalution of Pd-free low-gold dental alloys in a 0.9% NaCl solution by means of potentiodynamic polarization measurements.
○T.FUJITA, T.SHIRAISHI, Y.TAKUMA, E.MIURA, T.OGATA, K.HISATSUNE
Nagasaki Univ.

A-02 Effects of proteins on the structure and protectiveness of passive film formed on the Ni-Ti alloy in a simulated physiological solution.
○K.ENDO, Y.YUASA, M.IIJIMA, I.MIZOGUCHI, H.OHNO
Health Sciences Univ.of Hokkaido

A-03 Estimation of corrosion resistance in dental magnetic attachments regarding their pitting potential.
○Y.TAKADA, O.OKUNO
Tohoku Univ.

Titanium

A-04 Surface characterization of Ti-Cr castings immersed in a fluoride-containing solution.
○S.TAKEMOTO, M.HATTORI, T.NOGUCHI, M.YOSHINARI, E.KAWADA, Y.ODA
Tokyo Dental College

A-05 Formation of surface oxide layer without nickel on Ti-Ni alloy by electrolytic treatment.
○T.YONEYAMA[1,2], O.FUKUSHIMA[1], H.DOI[1], T.HANAWA[1]
[1]Tokyo Medical and Dental Univ., [2]The Univ.of Tokyo

A-06 Apatite coating on titanium using an alternate soaking process (Part 3)-Application to Ti mesh-.
○H.KONO, M.MIYAMOTO, H.SATO, D.YAMASHITA, S.BAN
Kagoshima Univ.Grad.Sch.

Dental Alloys

A-07 Microstructure of Au-Pd-Ag alloy by heat treatment in air.
○H.FUKUI[1], M.TOYAMA[1], K.FUKUNAGA[2], M.NIINOMI[3]
[1]Aichi-Gakuin Univ., [2]Japan Fine Ceramics Center, [3]Tohoku Univ.

A-08 Effect of microstructure on fretting fatigue properties of dental Ag-Pd-Cu-Au-Zn alloy.
○W.KAWAGISHI[1], M.NIINOMI[2], T.AKAHORI[1], H.FUKUI[3], H.TODA[1]
[1]Toyohashi Univ., [2]Thoku Univ., [3]Aichi-Gakuin Univ.

A-09 Chipping of all-ceramic crown or bridge restorations.

○F.TERAOKA, M.HARA, M.NAKAGAWA
Osaka Univ.

A-10 Development of the low-fusing leucite-ceramics.

○T.HOSHIKAWA, M.YAMAZOE, H.TANAKA, S.SHIMIZU, H.YAMAMOTO, T.ANRAKU
Yamamoto Precious Metal Co. Ltd

SL-01 Metallic problems of clinically used implant system.

○Han-Cheol Choe
Chosun University

Biological Reaction I

A-11 Alignment control of myoblsat in highly oriented hydrogel.

○T.MATSUMOTO, J.SASAKI, Y.HAMADA
Osaka Univ.

A-12 Initial responses to polarized hydroxyapatite in body fluid.

○H.ARAI, T.KOBAYASHI, Y.SEKIJIMA, S.NAKAMURA, K.YAMASHITA
Tokyo Medical and Dental Univ.

A-13 Proliferation and Differentiation of Osteoblast-like cells to Titanium with Various Surface Modification.

○M.MIYAMOTO, D.YAMASHITA, H.KONO, H.SATO, Y.Izumi, S.BAN
Kagoshima Univ.Grad.Sch.

Biological Reaction II

A-14 Preparation of porous carbonate apatite for growth factor carrier II.Osteoclast activity on CAP plates in cell cultures.

○K.KANAYAMA, M.KITAGO, M.SHIRAKI, T.SHIBUTANI, Y.DOI
Asahi Univ.

A-15 Effects of plasticizer on polylactic acid.

○M.HARA, H.KOBASHI, Y.TAUCHI, F.TERAOKA
Osaka Univ

A-16 *In vitro* embryotoxicity of experimental Ag-In and Ag-Pd-Au-Cu-In alloys by embryonic stem cell test.

○K.IMAI[1], S.GOTO[2], H.OGURA[2], M.NAKAMURA[1]
[1]Osaka Dental Univ., [2]The Nippon Dental Univ.at Niigata

Clinical Applications

A-17 Simulation of the signal magnetic field disturbance due to the eddy current caused by metal prostheses in MR imaging.

○T.TANIYAMA[1,3], T.SOHMURA[1], M.AOKI[2], E.SUGIYAMA[2], T.ETOH[3]
[1]Osaka Univ., [2]NEOMAX Co.Ltd, [3]Osaka Dental Univ.

A-18 Analysis of internal and external forces of a human mandible invested by strength of materials: analysis of a mandibular model with anterior zone oblique to frontal plane.

○M.KUSANO, T.KIRITA
Nara Medical Univ.

9:40-16:00 General Presentation(Poster)
Award challenge posters(No.P-01- No.P-07)

P-01 Influence of sintered anatase titanium dioxide to mouse fibroblast cells.

○Y.TAKEI, T.ASAI, T.HAYASHI, T.KAWAI
Aichi-Gakuin Univ.

P-02 Development of strontium-containing apatite cement.

○E.FUJIHARA, M.KON, K.ASAOKA
Tokushima Univ.

P-03 Improvement of esthetic quality of cast clasp by coating tooth colored resin.

○T.KADO, Y.IDA, M.KAKIZAKI, K.ENDO, H.OHNO
Health Sciences Univ.of Hokkaido

P-04 Effects of phosphoryl-oligosaccharide calcium on apatite formation ability of titanium surface Part 1 *in vitro* evaluation.

○D.YAMASHITA, M.MIYAMOTO, H.KONO, H.SATO, Y.IZUMI, S.BAN
Kagoshima Univ.Grad.Sch.

P-05 Biofunctionalization of metals with immobilization of amine-terminated poly ethylene glycol).

○Y.TANAKA, H.DOI, E.KOBAYASHI, H.SAKAMOTO, T.YONEYAMA, T.HANAWA
Tokyo Medical and Dental Univ.

P-06 Fabrication and estimation of biomimetic scaffold combining octacalcium phosphate with collagen.

○Y.HONDA, S.KAMAKURA, O.SUZUKI
Tohoku Univ.

P-07 Creation of titanium-segmentated polyurethane composite through 3-(Trimethoxysilyl) propylmethacrylate for biomaterial use.

○H.SAKAMOTO[1], H.DOI[1], E.KOBAYASHI[1], Y.TANAKA[1], T.YONEYAMA[1,2], T.HANAWA[1]
[1]Tokyo Medical and Dental Univ., [2]The Univ.of Tokyo

10:00-16:00 General Presentation (Poster)

Adhesive

P-08 Adhesive durability between facing resins and dental alloy.

○T.KOJIMA, H.HIROSE, M.KAKETANI, T.NAKANO, M.YUI, J.HAYASHI, Y.SHIINA, S.SAKAGUCHI, M.NISHIYAMA
Nihon Univ.

P-09 Analysis of the microstructure and mechanical property of collagen affected by dental monomers using atomic force microscopy.

○T.NEZU, M.TAIRA, K.SASAKI, S.SAITO, Y.ARAKI
Iwate Medical Univ.

P-10 Study on the demineralized zone and its microstructure in an interface between dentin and all-in-one adhesive.

○E.YOSHIDA[1], S.UNO[2], Y.NODASAKA[3], M.KOGA[3], Y.YAWAKA[3], S.HIRANO[1]
[1]Tsurumi Univ., [2]Toranomon hospital, [3]Hokkaidou Univ.

P-11 Electrodeposition of adhesive monomer on dental alloy -Durability of treated surface

Part3 Thermocycling stress-.

○M.KAKETANI, Y.FUKASE, H.HIROSE, H.KIKUCHI, M.SAITOH, H.HIRAGUCHI, M.NISHIYAMA
Nihon Univ.

P-12 Structure and character of silane coupling layer (Part 4) -The influence of water on the treatment time-.

○S.KURATA[1], S.NAKAHARA[1], K.OHASHI[1], T.NIHEI[1], T.TERANAKA[1], Y.KONDO[2], N.YOSHINO[2], K.UMEMOTO[1]
[1]Kanagawa Dental College, [2]Tokyo Univ.of Science

P-13 Water durability of resin bond to pure gold treated with various primers.

○Y.KADOMA
Tokyo Medical and Dental Univ.

P-14 A study on the morphology of root dentin Part (1) Observation of human root by SEM.

○K.NAKANO, Y.SATO, K.ANDO, A.SENDA, M.HATTORI, H.MASUDA, T.KAWAI
Aichi-gakuin Univ.

P-15 Effect of mega-filler on cavity compatibility of direct core construction with resin.

○S.HIRABAYASHI, Y.TSUBOTA, Y.NISHIMURA, T.OHNE, S.FUKUSHIMA, S.HIRANO
Tsurumi Univ.

P-16 Influence of the irradiation period of dual-cure resin cements on dentin bond strength.

○S.UEKUSA, Y.ASAKA, Y.CHIBA, A.YAMAMOTO, K.TSUBATA, H.KUROKAWA, A.RIKUTA, S.ANDO, M.MIYAZAKI
Nihon Univ.

P-17 Relationship between mechanical properties of resin-based luting cements and the bond strengths.

○A.FUJISHIMA, Y.SHIMAKURA, T.SHIMIZU, M.KUBO, T.KAWAWA, T.MIYAZAKI
Showa Univ.

P-18 Solvent effect on the hydrolytic stability of 4-MET.

○N.NISHIYAMA, K.FUJITA, T.IKEMI, K.NEMOTO
Nihon Univ.at Matsudo

P-19 The storage effect of self-etching primer on dentin bonding.

○M.ODAKI, N.NISHIYAMA, K.NEMOTO, M.AIDA
Nihon Univ.at Matsudo

P-20 Effects of heating condition after sulanization on bonding strength Part 2.Effect of heating temperature.

○K.BABASONO, N.IWASAKI, H.TAKAHASHI
Tokyo Medical and Dental Univ.

Composite resin

P-21 Effect of filler shape, particle size and filler content in composite resins on light transmittance characteristics and color.

○H.ARIKAWA, T.KANIE, K.FUJII, S.BAN
Kagoshima Univ.Grad.Sch.

P-22 Measurement of inorganic filler loading of light-cured resins.

○T.TAKAMIZAWA, M.SAITOH, K.MORI, A.IROKAWA, K.YAMAGUCHI, H.HIROSE, S.ANDO, M. NISHIYAMA, M.MIYAZAKI
Nihon Univ.

P-23 Measurement and evaluation of photo-cure type composite resin.

○A.WATANABE, M.NAGAI, K.AKIYOSHI
Tokyo Medical and Dental Univ.

P-24 Color math of bleaching shade of light-cured composite resins.

○S.ANDO[1], N.HIROHATA[1], H.INAGE[1], S.OOOKA[1], M.MIYAZAKI[2], Y.HOSOYA[2]
[1]Nihon Univ., [2]Nagasaki Univ.

P-25 Proportional limit and elastic modulus of new fiber-posts by three-point bending test.

○S.KITAMURA, Y.TSUBOTA, K.HASHIMOTO, T.ONE, N.FUKAGAWA, Y.NISHIMURA, R. NOMOTO, S.HIRANO, S.FUKUSHIMA
Tsurumi Univ.

P-26 Mechanical properties of root-post composites evaluated by diametral tensile test.

○T.KONO, S.TAKEMOTO, M.HATTORI, E.KAWADA, M.YOSHINARI, Y.ODA
Tokyo Dental College

P-27 Effects of measuring conditions on flexural properties of fiber posts.

○H.TAKAHASHI[1], N.IWASAKI[1], M.KOBAYASHI[2]
[1]Tokyo Medical and Dental Univ., [2]Chiba Institute of Technology

P-28 Development of soft magnetic resin composite material with high corrosion resistance -Effects of BPO/DMPT content on setting and flexural properties-.

○H.SOMA, Y.MIYAGAWA
Nippon Dental Univ.at Niigata

Resin

P-29 Influence of storage method on the weight change and dimensional change of tissue conditioner.

○G.HONG, H.MURATA, T.MAEDA, T.HAMADA
Hiroshima Univ.

P-30 Influence of loss of component on viscoelasticity of tissue conditioners.

○T.MAEDA, G.HONG, H, MURATA, S.SADAMORI, T.HAMADA
Hiroshima Univ.

P-31 Development of soft and flexible resin base denture for elderly persons: Mechanical properties of EHMA-MMA copolymers.

M.NAGAI, Y.KADOMA, A.WATANABE, M.ISHIWATA, ○K.TAKAKUDA
Tokyo Medical and Dental Univ.

P-32 Rates of bisphenol A yielding with hydrysis of poly (bisphenol A dimethacrylate).

○S.KASAHARA, I.HARASHIMA
Niigata Institute of Technology

P-33 Fundamental properties of a new hard resin for crown and bridge.

○A.IZUMIDA, R.MARUMORI, M.YODA, K.KIMURA
Tohoku Univ.

P-34 Stability of benzoyl peroxide in organic solvents.

○T.HONGO[1], S.HIKAGE[2], A.SATO[3]
[1]Tokyo Medical and Dental Univ., [2]Health Sciences Univ.of Hokkaido, [3]Showa Univ.

Impression materials and Ceramics

P-35 Effect of disinfection of agar/alginate combined impressions on the dimensional accuracy of stone dies.

○H.HIRAGUCHI, M.WAKASHIMA, N.HAGINO, K.YOSHIHASHI, K.SHIMOMURA, K.MIYANAGA, T.INOUE, M.NISHIYAMA

Nihon Univ.

P-36 Study on bulking agent for porcelain baking.

○S.NAKAHARA, S.KURATA, K.UMEMOTO

Kanagawa Dental College

P-37 The bond strength of various restorative resin to dental ceramics with different surface treatment.

○M.HATTA[1], A.SHINYA[1], H.GOMI[1], S.KATAGIRI[1], Y.HATANO[1], A.SHINYA[1], Y.NAKASONE[2]

[1]The Nippon Dental Univ.at Tokyo, [2]Tokyo Univ.of Science

P-38 Physical properties of recent CAD/CAM ceramics.

○N.IWASAKI, H.TAKAHASHI, R.TOKUNAGA

Tokyo Medical and Dental Univ.

P-39 Reinforcement methods of dental ceramics by dental alloy lining.

H.OGURA[1], ○K.KAKUTA[1], K.OHKUMA[1], Y.SAKAMOTO[2]

[1]The Nippon Dental Univ.at Niigata, [2]GC Co.Ltd.

P-40 Influence of several surface treatments upon fracture resistance of CAD/CAM ceramic crowns.

○J.KUNII, Y.SHIMAKURA, Y.HOTTA, Y.KOBAYASHI, Y.TAMAKI, T.FUJIWARA, T.KAWAWA, T. MIYAZAKI

Showa Univ.

P-41 Tensile deformation properties of carbonate apatite ceramic.

○M.ADACHI, N.WAKAMATSU, H.KAMEMIZU, M.IIJIMA, Y.DOI

Asahi Univ.

Hall A
Sunday, 23 April 2006
9:00-11:00 General Presentaion (Oral)

Implants

A-19 Enhancement of bone regeneration by the implantation of OCP-Collagen composite.

○S.KAMAKURA, Y.HONDA, T.ANADA, O.SUZUKI

Tohoku Univ.

A-20 Celler response on titanium processed by wire-type electric discharge machining.

○Y.KATAOKA, Y.SHIBATA, M.HOSAKA, Y.TODA, T.MIYAZAKI, T.KAWAWA

Showa Univ.

A-21 Biomolecular responses on super sensitive calcium phosphate nano layer.

○Y.TODA, Y.SHIBATA, Y.KATAOKA, M.HOSAKA, T.MIYAZAKI, T.KAWAWA

Showa Univ.

Adhesive

A-22 New adhesion theory-decrease of strength in adhesive resin layer-.

○K.WAKASA[1], S.UNO[2], I.HIRATA[1], M.OKAZAKI[1]

[1]Hiroshima Univ., [2]Toranomon Hospital

A-23 Effect of a phosphoric acid ester monomer on resin bonding to titanium.

○Y.YOSHIDA, Y.TSUCHIMOTO, D.FUKEGAWA, A.MINE, T.KUBOKI, K.SUZUKI
Okayama Univ.

A-24 Bonding of a newly-developed orthodontic adhesive to enamel.

○S.KITAYAMA, M.IKEDA, T.NIKAIDO, J.TAGAMI
Tokyo Medical and Dental Univ.

Composite resin

A-25 Esthetic adhesive composite restorations -Using extracted teeth-.

○T.YAMADA, S.UNO, J.SUGIZAKI, M.MORIGAMI
Toranomon Hospital

A-26 Improvement of dental resins in properties (Part 12) - Packing effect in the fluoride-releasing restorative materials based on UDMA/MAA matrix resin -.

○J.TANAKA, K.SUZUKI
Okayama Univ.

S-01 Possibility of prosthesis production by CAD/CAM..

○S.URATA
GC Corporation

S-02 Further evolution of dental CAD/CAM systems.

○T.SOHMURA
Osaka Univ.

S-03 Present status and feature of CEREC inLab 3D.

○K.TAMURA
HITEC-DENT

S-04 Checked up dental CAD/CAM system by dentist.

○K.HIKITA
Health Sciences Univ.of Hokkaido

S-05 Dental CAD/CAM, now & future.

○T.FUJIWARA
DIGITAL PROCESS Ltd

Bioceramics

A-27 Electrophoretic deposition characteristics of zirconia based nano-composite powder.

○H.NISHIDA[1], T.NAKAMURA[1], S.TAKEDA[1], T.SEKINO[1], M.NAWA[2], H.YATANI[1]
[1]Osaka Univ., [2]Matsushita Electric Works

A-28 Application of zirconia/alumina nano-composite to all ceramic crown.(Part 3) Effect of surface modification on bonding strength to adhesive resin cements.

○H.SATO[1], S.BAN[1], M.NAWA[2]
[1]Kagoshima Univ.Grad.Sch., [2]Matsushita Electric Works

A-29 Thermal decomposition of carbonate apatite.

○S.MATSUYA, M.NAKAGAWA, K.ISHIKAWA
Kyushu Univ.

Dental Cements

A-30 Properties of ZnO -containing glass ionomer cements.

○M.KON, K.HAMADA, F.KAWANO, K.YOKOYAMA, E.FUJIHARA, K.ASAOKA
Tokushima Univ.

A-31 Development of temporary luting agent -(3) The bond strength of luting cements after the removal of a temporary luting agent-.

○H.OKADA, Y.ISHIDA, H.NOGUCHI, I.RYUKATA, K.NAGAYAMA
Ohu Univ.

Machine and Technology 1

A-32 Three dimensional stress analysis of ADS implant and role of cancellous bone.

○K.SHINODA[1], Y.TAKI[2], M.ARIMOTO[1], Y.TAKAHASHI[1], T.KAWAI[1]
[1]Aichi-Gakuin Univ., [2]Meijo Univ.

A-33 Simulation of laser welding by the finite element method Part 1 -Welding of titanium plate-.

○S.NAGASAWA, T.YOSHIDA, N.TERASHIMA, K.TAMURA, S.TAIRA, T.NIINO, M.ITO
Matsumoto Dental Univ.

Machine and Technology 2

A-34 An evaluation of new bone formation by three-dimensional X-ray micro focus CT. 11.Mechanical simulation and evaluation for the condition of implantation.

○Y.FUKASE, M.SASAO, M.KAKETANI, T.KANEDA, M.SAIGO, T.KUROTANI, K.MIYAZAKI, M.NISHIYAMA
Nihon Univ.

A-35 Surface modification of dental alloy by electron-beam irradiation (Part5)-Effect on the crystalline structure of Au-Ag-Pd alloy.

○J.TOKUNAGA[1], T.KOJIMA[1], T.SOHMURA[1], Y.NOMURA[2], S.KINUTA[1], K.WAKABAYASHI[1], Y.MUTOBE[1], T.NAKAMURA[1], H.YATANI[1]
[1]Osaka Univ., [2]Wada Precision Dental Laboratories Co.Ltd

10:00-15:00 General Presentation (Poster)

Dental Cements

P-42 Characteristics of experimental temporary cement.

○Y.NAGASAWA, A.YAMAZAKI, M.HONDA, J.OMATSU, Y.HASEGAWA, A.HARASHIMA, Y. TAKAHASHI, Y.HIBINO, H.NAKAJIMA
Meikai Univ.

P-43 Uptake and diffusion of water into glass ionomer cements for luting.

○A.YAMAZAKI, J.OMATSU, Y.NAGASAWA, M.HONDA, Y.HASEGAWA, A.HARASHIMA, K.KURAMOCHI, T.YAMAGA, Y.HIBINO, H.NAKAJIMA
Meikai Univ.

P-44 Influence of color of various resin cements on esthetic restorative materials.

○Y.TAKAHASHI, Y.HASEGAWA, M.HONDA, A.YAMAZAKI, Y.NAGASAWA, J.OMATSU, A. HARASHIMA, Y.HIBINO, H.NAKAJIMA
Meikai Univ.

P-45 Physical properties of glass ionomer cement: effect of filler content (Part 4).

○K.HATANAKA, M.IRIE, R.TJANDRAWINATA, K.SUZUKI

Okayama Univ.

Dental Alloys

P-46 Small fatigue crack growth behavior of 12%Au-Pd-Ag-Cu alloy in physiological salt solution.

○S.TSUSHIMA[1], I.NISHIKAWA[1], H.TAKAHASHI[2]

1>Osaka Institute of Technology, [2]Tokyo Medical and Dental Univ.

P-47 Released ions and cytotoxicity of Au-Pt based alloys containing a small amount of Zn.

○H.MATSUDA[1], K.NAKASHIMA[2], T.ANRAKU[2], T.YAMAMOTO[3]

[1]Yamamoto Precious Metal Co.Ltd, [2]Kochi Univ.of Technology, [3]Kochi Univ.

P-48 The studies of metallic allergy in dental clibics. 2.The factor in elution of dental metals to human saliva.

○H.OSHIMA[1], K.ENDO[2], Y.TAKADA[3], M.NAKAGAWA[4], E.KAWADA[5], H.TAKAHASHI[6], M.NISHIYAMA[7], S.YAMANAKA[7], M.NAKAMURA[1]

[1]Osaka Dental Univ., [2]Health Sciences Univ.of Hokkaido, [3]Tohoku Univ., [4]Kyushu Univ., [5]Tokyo Dental College, [6]Tokyo Medical and Dental Univ., [7]Nihon Univ.

P-49 Spectrophotometric colorimetry of Pd-free low-gold dental alloys.

○T.SHIRAISHI, Y.TAKUMA, E.MIURA, T.FUJITA, K.HISATSUNE

Nagasaki Univ.

P-50 Development of Pd-Ag-Au-Cu alloys for metal-ceramics with ultra low fusion ceramic.

○S.GOTO, A.NAKAI, Y.MIYAGAWA, H.OGURA

The Nippon Dental Univ. at Niigata

Titanium

P-51 Released ions of Ti-Ag alloys in lactic acid solution.

○M.TAKAHASHI, Y.TAKADA, M.KIKUCHI, O.OKUNO

Tohoku Univ.

P-52 Titanium casting using magnesia-based gypsum-bonded investment Part 3.Properties of castings obtained from different casting systems.

○R.FAZAL[1], Y.TAMAKI[2], H.TAKAHASHI[1], N.IWASAKI[1], T.MIYAZAKI[2]

[1]Tokyo Medical and Dental Univ., [2]Showa Univ.

P-53 Evaluation of corrosion resistance by anodic polarization test of Ti-40Zr alloy.

○H.DOI[1], T.YONEYAMA[1,2], Y.TANAKA[1], H.SAKAMOTO[1], O.FUKUSHIMA[1], E.KOBAYASHI[1], T.HANAWA[1]

[1]Tokyo Medical and Dental Univ., [2]The Univ. of Tokyo

P-54 Hydrogen absorption of titanium alloys during long-term immersion in neutral fluoride solution.

○K.YOKOYAMA, K.ASAOKA (Tokushima Univ.

P-55 Biomaterial properties of surface carbide titanium.

○Y.ZHU, W.WAN, M.UO, T.AKASAKA, T.SUGAWARA, A.YOKOYAMA, F.WATARI

Hokkaido Univ.

P-56 Machinability of experimental Ti-Ag alloys.

○M.KIKUCHI, M.TAKAHASHI, O.OKUNO

Tohoku Univ.

P-57 Surface modification of titanium by casting method.

○Y.TAMAKI, Y.KATAOKA, Y.HOTTA, Y.AIDA, J.KUNII, T.MIYAZAKI
Showa Univ.

Implants

P-58 Effects of surface roughness of titanium on initial cell adhesion.

○S.KAKEHI, S.TAKEDA, M.NAKAMURA
Osaka Dental Univ.

P-59 Nano-scale interaction analysis at titanium-phospho-amino acid derivative interfaces.

○I.HIRATA[1], K.HIASA[1], Y.ABE[1], Y.YOSHIDA,[2] K.SUZUKI[2], Y.AKAGAWA[1], M.OKAZAKI[1]
[1]Hiroshima Univ., [2]Okayama Univ.

P-60 Cemical deposition of carbonate apatite coatings on SAM-Ti substrate II. Ca and P distribution in coating films.

○Y.YAMAGUCHI, H.KAMEMIZU, M.ADACHI, S.SAKU, H.KOTAKE, T.KAJIMOTO, K.YAMAMOTO, Y.DOI
Asahi Univ.

Cell

P-61 Elemental analysis of culture medium and macrophage RAW264 phagocytizing Ti ions by PIXE method.

○M.TAIRA[1], K.SASAKI[1], S.SAITOH[1], T.NEZU[1], Y.ARAKI[1], T.NARUSHIMA[2]
[1]Iwate Medical Univ., [2]Tohoku Univ.

P-62 Influence of nine metal ions on *in vitro* formation of tubule-like structures.

○K.IMAI, M.NAKAMURA
Osaka Dental Univ.

P-63 3-dimensional culture of osteoblast-like cells in oriented hydrogel.

○J.SASAKI, T.MATSUMOTO, H.EGUSA, H.YATANI
Osaka Univ.

P-64 Effect of cell contact to dental materials on the cellular function: (1) Establishment of the optimal conditions.

○T.YAMAZAKI, A.YAMAZAKI, H.SAKAGAMI, H.NAKAJIMA, J.SHIMADA
Meikai Univ.

P-65 Bone reproduction by S100A4 inhibition on human mesenchymal stem cells. Part 2 Protein expression of bone formation marker.

○S.ADACHI, Y.HASHIMOTO, M.NAKAMURA
Osaka Dental Univ.

Cell and Tissue

P-66 Bone formation induced by combined recombinant human BMP-2 and atero collagen sponge *in vivo*.

○K.YAMAJI, T.ITOTA, J.DOI, Y.TASHIRO, M.OMAE, Y.NISHITANI, M.YOSHIYAMA
Okayama Univ.

P-67 Morphology and crystal structure of the dental calculus.

○I.KAWASHIMA, H.OHNO, K.ENDO, Y.YAMANE
Health Sciences Univ.of Hokkaido

P-68 Comparison of hardness of coronal and root dentin.

○T.INOUE, M.YAMAMOTO, M.SUZUKI, T.MIYAZAKI, F.NISHIMURA
Showa Univ.

P-69 Effects of dental magnetic attachment on bone growth.

○Y.MONMA, Y.TAKADA, S.ECHIGO, O.OKUNO
Tohoku Univ.

P-70 Released ions and biocompatibility of ferritic stainless steels.

○Y.TAKADA, Y.MONMA, S.ECHIGO, O.OKUNO
Tohoku Univ.

P-71 Analysis of distribution and chemical state od selenium in the oral tissues containing dental alloy particles.

○M.UO, T.AKASAKA, F.WATARI
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Clinical Applications

P-72 Mineral and collagen derived from fish-skin supplementation improves bone metabolism in ovariectomized rats (Part II).

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P-73 Observation of the contacted tooth surface with various luting cements.

○L.HAN, A.OKAMOTO, Y.ISHIZAKI, M.FUKUSHIMA, T.OKIJI
Niigata Univ.

P-74 Trial production of expansive temporary sealing material -After sealing on core-resin of bond strength-.

○H.NOGUCHI, H.OKADA, Y.ISHIDA, I.RYUKATA, K.NAGAYAMA
Ohu Univ.

P-75 Development of a new jaw-tracking system with neural-network.Part 2.Measurements of masticatory movements.

○S.KINUTA, K.WAKABAYASHI, T.KOJIMA, T.MIZUMORI, T.SOHMURA, T.NAKAMURA, H.YATANI
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P-76 Application of haptic device to dentistry (Part 13) -Support for implant surgery: development of a new surgical guide to support final implant insertion and its accuracy examination of insertion-.

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P-77 Application of haptic device to dentistry (Part 14) -Occlusal adjustment using haptic force detection system between objects-.

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P-78 Three-dimensional evaluation method of all-ceramic crowns by microfocus radiograph CT.

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Machine and Technology

P-79 High precision and high speed 3D measurement of dental cast model.

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P-80 Adaptation of all ceramic crowns manufactured by dental CAD/CAM system.

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P-81 Evolved LED curing units.

○R.NOMOTO, S.HIRANO
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P-82 The improvement on developed water supply faucet mounting type ozone disinfection vessel.

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P-83 Transformation of 3-D printing gypsum model to HAp by treating in ammonium phosphate solution (Part 4) - Compressive strength and the effect of sintering -.

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