

***The 49th General Session of
the Japanese Society for Dental Materials and Devices(JSDMD)***

*Dept. of biomaterials and bioengineering, Sch. of Dentistry, Health Sciences University of Hokkaido
(Place: [Sapporo Convention Center](#))*

**Hall A
Saturday, 12 May, 2007
9:25-9:30 Opening
9:30-12:00 General Presentation (Oral)**

[Biological Reaction I]

A-01 Bone differentiation property of osteoblast-like cells on Ti and Au

○K. Oya, H. Sakamoto, E. Kobayashi, H. Doi, T. Hanawa
Tokyo Medical and Dental Univ.

A-02 Apatite coating of collagen sponge by alternate immersion technique and its capability of osteogenic differentiation

○M. Taira, K. Sasaki, S. Saitoh, T. Nezu, Y. Araki
Iwate Medical Univ.

A-03 Application of chitosan/hydroxyapatite nanocomposites to bone regeneration

○Y. Kishiya, K. Kobayashi
Hokkaido Univ.

[Biological Reaction II]

A-04 Influence of Dextrin to osteoblast-like cells -Part 2-

○T. Asai, T. Hayashi, K. Kuroki, M. Okano, M. Tomino, M. Kabutomori, T. Kawai
Aichi-Gakuin Univ.

A-05 Alignment control of vasculature in highly oriented hydrogel

○T. Matsumoto, J. Sasaki, T. Sohmura
Osaka Univ.

A-06 Interaction between Polarized Hydroxyapatite and Peritoneal Inflammation Cells

○H. Arai, S. Nakamura, K. Yamashita
Tokyo Medical and Dental Univ.

[Biological Reaction III]

A-07 Developmental toxicity study of experimental Ag-In alloy with whole embryo culture method.

○K. Imai¹, M. Kuwagata², M. Senuma², M. Furuya², H. Takashima², S. Goto³, H. Ogura³, M. Nakamura¹

¹Osaka Dental Univ., ²Hatano Research Institute, Food and Drug Safety Center, ³The Nippon Dental Univ. at Niigata

A-08 Vinyl esters/polymer mixture system (Part 4) - Characteristic polymerization behavior of vinyl esters/PEMA pastes and their cytotoxicity -

○J. Tanaka¹, Y. Hashimoto², M. Nakamura², K. Suzuki¹
¹Okayama Univ., ²Osaka Dental Univ.

A-09 Protective effect of various antioxidants on Cu-induced oxidative stress

○H. Sakagami, K. Kishino, A. Yamazaki, T. Yamazaki, Y. Hibino, H. Sakashita, J. Shimada, H. Nakajima
Meikai Univ.

A-10 Development of antibacterial cold-curing acrylic resin

○K. Kuroki, T. Hayashi, T. Asai, T. Higa, M. Okano, Y. Uematsu, Y. Kominami, Y. Takahashi, T. Kawai,
Aichi-Gakuin Univ.

HALL A
Sunday, 13 May, 2007
9:00-11:00 General Presentation (Oral)

[Ceramics]

- A-11** Application of Rapid Prototyping technology to dentistry (Part 4) -Fabrication of ceramic restoration by RP method : Examination of the laminating and sintering conditions-
○T. Sohmura, R. Lowmunkong, M. Ishikawa, S. Kirihara, Y. Miyamoto
Osaka Univ.
- A-12** Apatite coating on zirconia using glass coating technique
○D. Yamashita, H. Sato, M. Miyamoto, M. Machigashira, Y. Izumi, S. Ban
Kagoshima Univ.
- A-13** Mechanical strength improvement of Carbonate apatite foam
○M. Maruta¹, A. Takeuchi¹, S. Matsuya², M. Nakagawa¹, S. Nakamura¹, K. Ishikawa¹
¹Kyushu Univ., ²Fukuoka Dental College
- A-14** Effects of added Tricalcium Phosphate on Basic Properties of Apatite Cement
○A. Takeuchi¹, A. Nakagawa¹, S. Matsuya², M. Nakawaga¹, K. Ishikawa¹
¹Kyushu Univ., ²Fukuoka Dental College

[Biomaterials, Investment]

- A-15** Titanium surface modification by phosphorylated saccharide for bioactive oral implant
○T. Tanaka, Y. Yoshida, Y. Tsuchimoto, K. Suzuki, T. Kuboki
Okayama Univ.
- A-16** Effect of chemical factors on immobilization of poly(ethylene glucol) to metals
○Y. Tanaka, H. Sakamoto, H. Doi, T. Yoneyama, T. Hanawa
Tokyo Medical and Dental Univ.
- A-17** Biocompatibility of injectable bio-composite scaffold for bone tissue engineering from ceramic beads and alginate
○Y. Hashimoto¹, T. Matsuno², S. Adachi¹, K. Omata², T. Satoh², M. Nakamura¹
¹Osaka Dental Univ., ²Nihon Dental Univ.
- A-18** Addition of setting accelerators to the mixture of quick heating investment
○Y. Kominami, Y. Takahashi, H. Kawai, A. Hasegawa, T. Kawai
Aichi-Gakuin Univ.

HALL B
Saturday, 12 May, 2007
8:55-9:00 Opening
9:30-12:00 General Presentation (Oral)

[Adhesion I]

- B-01** Dentin Bonding and Bond Durability of One-bottle Adhesive Resins
○S. Fujita, M. Hashimoto, M. Kaga, Y. Yawaka
Hokkaido Univ.
- B-02** Bonding performance of newly-developed one-step adhesive systems to cavity floor dentin.
○A. Umino, T. Nikaido, W. Dinesh, J. Tagami
Tokyo Medical and Dental Univ.
- B-03** Microtensile bond strength of dentin bonding systems and resin cements to root canal dentin ;
Effects of vertical locations in a root canal
○K. Okamura¹, M. Hayashi¹, S. Imazato¹, Y. Takahashi², E. Koychev¹
¹Osaka Univ., ²Shanghai Green Clinic

[Adhesion II]

- B-04** Influence of multipul firing of IPS Empress 2 core materials on the bond strength
○U. Hata, N. Wakamatsu, O. Yamamura, Y. Doi, S. Fujiwara
Asahi Univ.
- B-05** Bonding strength of all ceramic restoration materials to resin cements

OS. Ban, H. Sato
Kagoshima Univ.

B-06 Application of new silica coating method to adhesive restoration(Part 2) -Evaluation of adhesive durability to zirconia ceramic-

OT. Tanaka¹, K. Hanaoka¹, M. Yamaguchi², T. Shindo³, T. Teranaka¹

¹Kanagawa Dental Collage, ²Yamaguchi Dental Clinic, ³Contamination Control Services

[Adhesion III, Organic]

B-07 New adhesion theory-Micromechanics of adhesive strength-

OK. Wakasa¹, S. Uno², M. Okazaki¹

¹University of Hiroshima, ²Toranomon Hospital

B-08 Modification effect of benzene group silane coupling agent contained double bond (Part5) -
Wear resistance of the experimental composites-

OT. Nihei¹, K.-H. Kunzelmann², K. Ohashi¹, Y. Kondo³, N. Yoshino³, T. Teranaka¹

¹Kanagawa Dental College, ²Dental School of LMU, ³Tokyo Univ. of Science

B-09 Effect of PMMA filler on physical properties of resin composite

OY. Kondo, M. Okuda, M. Ikeda, Y. Kadoma, J. Yamauchi, K. Okada, T. Nikaidou, J. Tagami
Tokyo Medical and Dental Univ.

B-10 Mechanical properties of root-post composites using fiber posts

OT. Kono, S. Takemoto, M. Hattori, M. Yoshinari, E. Kawada, Y. Oda
Tokyo Dental College

HALL B

Sunday, 13 May, 2007

9:00-11:00 General Presentation (Oral)

[Biological Tissue]

B-11 Trial of bone regeneration using induced bone-like tissue *in vitro*

OT. Hayashi, T. Kawai, K. Kuroki, T. Asai, M. Okano, A. Tsukawaki, K. Fujimoto
Aichi-Gakuin Univ.

B-12 XMA analysis of calcified process for reparative dentin in the human tooth

OI. Kawashima, H. Ohno, K. Endo, Y. Yamane
Health Sciences Univ. of Hokkaido

B-13 Effects of sterilization of gamma-ray irradiation on tensile strength of dentin

OH. Takahashi¹, N. Iwasaki¹, T. Tamura¹, K. Tonami¹, P. Loyaga-Rendon¹, R. Fazal¹, M.
Arksornnukit²

¹Tokyo Medical and Dental Univ., ²Chulalongkorn Univ.

B-14 A Study on Bleaching with Photocatalyst Part1(TiO₂ bleaching liquid without Hydrogen peroxide)

OT. Nonami¹, M. Narukawa², H. Yamagami², T. Kitou²
¹Chukyo Univ., ²Soiree.Co.

[Measurement, Corrosion]

B-15 3-D Morphological Measurements of Dental Casts with Occlusal Relationship using a Micro-Focus X-ray CT

OM. Kamegawa^{1,2}, M. Nakamura^{1,3}, K. Kitahara⁴, S. Tsutsumi¹

¹Kyoto Univ., ²Shimadzu Corp., ³Kanagawa Dental College, ⁴Ichiyoshi Dental Care Clinic

B-16 Development of novel reconstruction algorithm to reduce artifact in X-ray CT imaging of head and neck region

OY. Hirogaki, T. Sohmura
Osaka Univ.

B-17 Application of Haptic Device to Dentistry (Part 14) Support for implant surgery Development of a new surgical guide to support final implant insertion and its accuracy examination of insertion

O.T. Ohtani¹, N. Kusumoto¹, K. Wakabayashi¹, S. Yamada¹, T. Nakamura¹, M. Morishima², Y. Kumazawa¹, H. Yatani¹, T. Soumura¹,
¹Osaka Univ., ²BioNIC

B-18 Rest potentials of Ti-Ag alloys

OM. Takahashi, Y. Takada, M. Kikuchi, O. Okuno
Tohoku Univ.

HALL D

Saturday, 12 May, 2007

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

13:50-14:50 Discussion

(P-001~P-014 Award Challenge Posters)

P-001 Relation between phase transformation and flexural strength of zirconia

OH. Sato¹, D. Yamashita², S. Ban¹
Kagoshima Univ.

P-002 Effect of hydroxyl groups and UV-irradiation on bonding strength between titanium and segmented polyurethane through 3-(trimethoxysilyl) propyl methacrylate

OH. Sakamoto, H. Doi, Y. Tanaka, T. Yoneyama, T. Hanawa
Tokyo Medical and Dental Univ.

P-003 Surface Analysis of Plasma Based Fluorine and Silver Dual Ion-Implanted Titanium

OY. Shinonaga, K. Arita
Tokushima Univ.

P-004 Fabrication and characterization of Ce-TZP/Al₂O₃ nanocomposite powder for EPD

OH. Nishida¹, T. Nakamura¹, T. Sekino¹, Y. Mutobe¹, M. Nawa², H. Yatani¹
¹Osaka Univ., ²Matsushita Electric works

P-005 Basic properties of porous titanium by mold-less forming and sintering process

OY. Naito, K. Hamada, T. Ichikawa, K. Asaoka
Tokushima Univ.

P-006 Improving the Matrix of Conventional Glass Ionomer Cement Adding Hydroxyapatite

OA. Kimura, K. Arita
Tokushima Univ.

P-007 Effect of UV irradiation on bonding of experimental composite resin

OP. Loyaga-Rendon¹, H. Takahashi¹, N. Iwasaki¹, R. Fazal¹, A. Fujishima², H. Hirose³
¹Tokyo Medical and Dental Univ., ²Showa Univ., ³Nihon Univ.

P-008 Experimental study of bone formation using carbonate apatite collagen sponges with different carbonate ions

OA. Matsuura, T. Kubo, K. Doi, I. Hirata, M. Okazaki, Y. Akagawa
Hiroshima Univ.

P-009 Development of scaffold composed of multi walled carbon nanotubes coated on collagen for cell culture

OM. Terada¹, M. Uo¹, Y. Kuboki¹, Y. Kitagawa², F. Watari¹
¹Hokkaido Univ., ²Koken Bioscience Institute

P-010 Bone reproduction by S100A4 inhibition on human mesenchymal stem cells part4 protein expression of bone formation marker using siSTABLE[®]

OS. Adachi, Y. Hashimoto, M. Nakamura
Osaka Dental Univ.

P-011 Porous carbonate apatite for growth factor carrier

OK. Kanayama¹, H. Shimokawa², M. Kitago¹, M. Shiraki¹, T. Shibutani¹, Y. Doi¹
¹Asahi Univ., ²Tokyo Medical and Dental Univ.

P-012 Development of anaerobic culture kit for clinical dentist

OT. Ohsako, T. Sato, Y. Nakatsuka, O. Uehara, Y. Ito, F. Nakazawa

P-013 Nanoindentation study of bovine enamel contacted with hydrogen peroxide and carbamide peroxide

○T. Ushigome, S. Takemoto, M. Hattori, M. Yoshinari, E. Kawada, Y. Oda
Tokyo Dental College

P-014 Wear resistance of newly-developed resin composite

○G. Inoue, T. Nikaido, M. Miyasaka, H. Miura, J. Tagami
Tokyo Medical and Dental Univ.

[CAD/CAM]

P-015 A study of the simulation system on the crown restoration with the virtual personal teeth

○S. Nagasawa¹, T. Yoshida¹, K. Tamura¹, M. Nakajima¹, K. Yamakura¹, Y. Arai¹, M. Ito¹, T. Sohmura²

¹Matsumoto Dental Univ., ²Osaka Univ

P-016 The development of digital photograph frame which can be used for the education.

○K. Arai¹, N. Ando²

¹Meikai Univ., ²Nippon Dental Univ. at Tokyo

P-017 Evaluation of Residual stress in CAD/CAM machined all-ceramic crowns

○R. Nonogaki, M. Uno, M. Kurachi, N. Wakamatsu, Y. Doi
Asahi Univ.

P-018 Application of Haptic Device to Dentistry (Part 17) -Application of haptic force detection system between objects-

○K. Wakabayashi, S. Kinuta, T. Utaka, T. Nakamura, H. Yatani, T. Sohmura
Osaka Univ.

P-019 Digitization of dentition model - improvement of the measurement method by 3 axis control -

○Y. Hotta, J. Kunii, A. Ozawa, T. Fujiwara, H. Nakano, K. Maki, T. Miyazaki
Showa Univ.

P-020 Ceramic bridge fabricated by CAD/CAM -Influence of accuracy according to various bridge type-

○J. Kunii, Y. Hotta, A. Ozawa, A. Fujishima, T. Miyazaki, T. Fujiwara
Showa Univ.

[Laser]

P-021 CO₂ laser irradiation affects shear bond strength between zirconia and resin cement

○Y. Maruo, M. Irie, G. Nishigawa, M. Oka, S. Minagi, K. Suzuki
Okayama Univ.

P-022 Effect of pulse shapes of laser welder on deformation volume

○H. Kikuchi, T. Sato, T. Kurotani, M. Wakasima, Y. Shina, Y. Akashi
Nihon Univ.

P-023 Irradiation properties by difference in prove with a CO₂ laser

○T. Ogata¹, Y. Okamoto², S. Matsuya², S. Naruse³

¹Fukuoka College of Health Sciences, ²Fukuoka Dental College, ³Tokuriki Honten

P-024 Removal of root canal filling materials by Er:YAG laser

○H. Tachinami, T. Suzuki, T. Eguro, I. Katsuumi
The Nippon Dental Univ.

P-025 Influence of Laser Welding Condition on Deformation of Co-Cr Alloy Plate

○T. Saito, H. Murao, M. Shimakura
Ohu Univ.

P-026 Effects of absorption properties of laser on Selective removal of carious dentin using laser-dye ablation Part.1 Absorption properties of laser by experimental caries detecting dye solution

○K. Yoshikawa¹, H. Tanimoto¹, M. Shiraishi¹, M. Inoue¹, K. Yamamoto¹, K. Awazu²

¹Osaka Dental Univ., ²Osaka Univ.

P-027 Effect of the self-adhesive luting resin cement

○L. Han, A. Okamoto, M. Fukushima, T. Okiji

[Machine, Technology]

P-028 The relationship between impact strength and test method in acrylic denture

OA. Takahashi
GC Dental Products Corp.

P-029 Studies on active oxygen (super-oxide anion radical) by chemical-luminescence

OM. Taira, Y. Araki
Iwate Medical Univ.

P-030 Adsorption measurement of an antibacterial protein to dental-related substrates by QCM-D method

OT. Nezu, Y. Araki
Iwate Medical Univ.

P-031 A new sample support for bio-section analysis by means of electron probe microanalyser

OK. Watanabe, M. Kobayashi
Niigata Univ.

P-032 Evaluation of impact absorption using free falling object

OR. Fazal¹, H. Takahashi¹, N. Iwasaki¹, P. Loyaga-Rendon¹, J. Tanaka²
¹Tokyo Medical and Dental Univ., ²Okayama Univ.

P-033 The relation between the strength and the structure of the prosthetic-implant - A study by the finite-element method-

OK. Hayano, S. Nagasawa, T. Yoshida, K. Tamura, M. Yamazoe, H. Ono, T. Niino, T. Onisawa, K. Mori, M. Ito
Matsumoto Dental Univ.

P-034 Accuracy of microscopic measuring method of impression pressure

OG. Nishigawa, Y. Maruo, M. Oka, S. Minagi, M. Irie, K. Suzuki
Okayama Univ.

P-035 FEM Stress Analysis of 3D Tooth Model Directly Constructed from CT Images

OA. Hasegawa¹, D. Yokoyama¹, A. Shinya¹, H. Gomi¹, A. Sinya¹, Y. Nakasone², Y. Ide¹
¹The Nippon Dental Univ., ²Tokyo Univ. of Science

P-036 Surface modification of dental alloy by electron-beam irradiation (Part7)-change of corrosion resistance by irradiation-

OJ. Tokunaga¹, T. Kojima¹, Y. Nomura², S. Kinuta¹, K. Wakabayashi¹, Y. Mutobe¹, T. Nakamura¹, H. Yatani¹, T. Soumura¹
¹Osaka Univ., ²Wada Precision Dental Laboratories Co.Ltd

[Titanium]

P-037 Corrosion resistance of titanium in hydrogen peroxide-containing solutions - Behavior in acidic -

OS. Takemoto, M. Hattori, T. Noguchi, M. Matsumoto, M. Yoshinari, E. Kawada, Y. Oda
Tokyo Dental College

P-038 Effects of potential on hydrogen absorption of titanium in neutral sodium fluoride solutions

OK. Yokoyama, K. Asaoka
Tokushima Univ.

P-039 Anodic oxidation of Ni-Ti orthodontic wire in NaOH solution

OK. Homma, K. Watanabe, S. Okawa, M. Kanatani, O. Miyakawa
Niigata Univ.

P-040 Laser sintering of titanium powder

OR. Ootani, N. Wakamatu, Y. Doi, M. Miyao
Asahi Univ.

P-041 Corrosion Behavior of Ti and Ti Alloy in Fluoride Solutions

OH. Kamezawa, K. Endo, H. Ohno, M. Ochi
Health Sciences Univ. of Hokkaido

P-042 Anti-bacterial effect of titanium casting

○Y. Tamaki, Y. Kataoka, K. Sugiyama, Z. Zhang, Y. Aida, H.-C. Cho, T. Miyazaki
Showa Univ.

P-043 Electrochemical properties of pure titanium and titanium alloys by various electrolytic solutions

○T. Yoshida, H. Aoki

The Nippon Dental Univ. at Tokyo

P-044 TEM observation of Ti-6Al-7Nb/Pd₄₀Cu₃₀Ni₁₀P₂₀ metallic glass brazing joint

○E. Miura-Fujiwara¹, H. Kato², G. E. Ice³, T. Shiraishi¹, A. Inoue², K. Hisatsune¹
¹Nagasaki Univ., ²IMR, Tohoku Univ., ³Oak Ridge National Laboratory

[Dental Alloys]

P-045 The studies of allergic reaction in dental clinics. 3. The factor in elution of dental metals for dental examinations.

○H. Oshima¹, K. Endo², Y. Takada³, M. Nakagawa⁴, E. Kawada⁵, H. Takahashi⁶, M. Nakamura¹
¹Osaka Dental Univ., ²Health Science Univ. of Hokkaido, ³Tohoku Univ., ⁴Kyushu Univ., ⁵Tokyo Dental College, ⁶Tokyo Medical and Dental Univ.

P-046 MRI-artifact-free alloy for biomedical application(Part 1)-candidate alloy and basic properties-

○K. Hamada, K. Asaoka

The Univ. of Tokushima

P-047 Comparison of hardness between microstructures of Ag-Pd-Au-Cu alloy using dynamic ultra-microhardness tester

○S. Saitoh¹, Y. Araki¹

Iwate Medical Univ.

P-048 The effects of alloying elements on chroma and hue of Au-Pt-based high noble dental alloys

○T. Shiraishi, Y. Takuma, T. Fujita, E. Miura, K. Hisatsune

Nagasaki Univ.

P-049 Fitness of Ni-Cr casting made with quick heating method

○M. Yan¹, S.-J. Ding¹, H. Takahashi²

¹Chung-Shan Medical Univ., ²Tokyo Medical and Dental Univ.

[Corrosion]

P-050 Ion release from dental precious alloys coupled to titanium

○M. Yamazoe¹, T. Anraku², I. Sakaiharu², T. Yoshida¹, K. Tamura¹, S. Nagasawa¹, M. Ito¹
¹Mastumoto Dental Univ., ²Yamamoto Precious Metal Co., Ltd.

P-051 Corrosion resistance of Zr-Nb binary alloy dental castings

○H. Doi¹, T. Yoneyama^{1,2}, E. Kobayashi¹, T. Hanawa¹

¹Tokyo Medical and Dental University, ²University of Tokyo

P-052 Anodic oxidation of Nb, Ta, Ti and Zr by polarity - XPS study of anodic films formed on valve metals in phosphoric acid -

○S. Okawa, K. Homma, S. Nakano, M. Kanatani, K. Watanabe, O. Miyakawa
Niigata Univ.

P-053 Corrosion resistance of precious casting alloys and magnetic stainless steels for dental magnetic attachments

○N. Takahashi, Y. Takada, O. Okuno

Tohoku Univ.

P-054 Ions released from dental gold casting alloys with a high content of precious metals

○Y. Takada, N. Takahashi, O. Okuno

Tohoku Univ.

P-055 Effects of Pd content on the corrosion resistance of ISO Type 4 gold alloy in Iodide solution

○N. Takasusuki, K. Endo, I. Kawashima, Y. Hirose, M. Ochi, H. Ohno

Health sciences Univ. of Hokkaido

P-056 The influence of the acid, alkaline and mixed waters on the dental alloys -Discoloration and weight change by pH change-

OH. Aoki, T. Yoshida

The Nippon Dental Univ. at Tokyo

P-057 Influence of surrounding conditions with four color measuring devices

OY. Ozawa, N. Hirose, T. Katayama
Meikai Univ.

[Clinical Application]

P-058 Evaluation of shade taking in natural teeth by visual color matching method

OY. Ishii, O. Kobayashi, I. Okada, A. Ishikawa
The Nippon Dental Univ.

P-059 Influence of cutting aspect on continuous use of Ni-Ti rotary instrument

OM. Maeda, T. Ozawa, Y. Ogura, Y. Yamada, H. Tachinami, I. Katsuumi
The Nippon Dental Univ.

P-060 The removal of caries dentin using stainless bar

OM. Oikawa, M. Kusunoki, K. Itoh, H. Hisamitsu
Showa Univ.

P-061 Effects of surface treatments on zirconia-porcelain bond strength

OK. Yoshida, M. Doi, M. Atsuta
Nagasaki Univ.

P-062 Measurement of shade guides using dental color analyzer

OM. Yamauchi
Asahi Univ.

P-063 Development of temporary luting agent for dental implant

OH. Okada, Y. Ishida, H. Noguchi, I. Ryukata, K. Nagayama
Ohu Univ.

P-064 Surface modification of methacrylate resin through electron beam irradiation - elution test of residual monomer and surface analysis-

OS. Ishikawa¹, A. Nomura², K. Ito², Y. Sano², S. Okawa³, M. Kanatani³
¹Toushinyoko Co Ltd, ²Meirin College, ³Niigata Univ.

P-065 A Study on Bleaching with Photocatalyst Part2(LED light system)

OM. Narukawa¹, T. Nonami², H. Yamagami¹, T. Kitou¹
¹Soiree.Co., ²Chukyo Univ.

HALL D

Sunday, 13 May, 2007

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

11:00-12:00 Discussion

[Cement]

P-066 Retention force of temporary cements: Retention of gold alloy to titanium alloy plate

OY. Nagasawa, Y. Hibino, Y. Hasegawa, A. Moriyama, T. Yamaga, H. Nakajima
Meikai Univ.

P-067 Effect of powder-liquid ratio on fracture toughness of resin-modified glass ionomer cements for luting

OY. Hibino, Y. Nagasawa, Y. Hasegawa, A. Moriyama, T. Yamaga, H. Nakajima
Meikai Univ.

P-068 Antimicrobial Activity of Newly Developed Root Canal Sealers Containing Titanium Oxide

OA. Nakamura, H. Wanibe, A. Iwama, N. Kitamura, N. Shibata, K. Nakata, S. Turuta, T. Kawai, H. Nakamura
Aichi-Gakuin Univ.

[Ceramics]

P-069 Development of TCP laminates and their characterization

OY. Tanimoto, N. Nishiyama
Nihon Univ. at Matsudo

P-070 Solubility of strontium-containing carbonate apatite

OE. Fujihara, F. Kawano, K. Hamada, K. Asaoka
Tokushima Univ.

P-071 Preparation and properties of carbon nanotube films

OM. Uo, S. Abe, T. Akasaka, F. Watari
Hokkaido Univ.

P-072 Mechanism of plastic deformation on carbonate apatite ceramics

OM. Adachi, T. Goto, N. Wakamastu, H. Kamemizu, M. Iijima, Y. Doi
Asahi Univ.

P-073 Application of Apatite-Collagen Complex to Endodontic Treatment

OY. Takenaka, M. Iijima, S. Kawano, Y. Akita, T. Yoshida, Y. Doi, I. Sekine
Asahi Univ.

P-074 Relationship between composition, structure and flexural behavior of OCP/apatite / type I collagen composite

OM. Iijima, N. Wakamatu, H. Kamemizu, M. Adachi, Y. Doi
Asahi Univ.

P-075 An evaluation of new bone formation by three-dimensional X-ray Micro Focus CT 15.

Improving the disintegration of bone filling cement

OY. Fukase, M. Sasao, M. Kakatani, T. Kaneda
Nihon Univ.

P-076 Effect of opalizer to thermal stability of the leucite-glass-ceramics as porcelain

OH. Tanaka, T. Hoshikawa
Yamamoto Precious Metal Co., Ltd.

P-077 Formation mechanism of leucite and sanidine in leucite-glass-ceramics as porcelain

ON. Mishima¹, T. Hoshikawa², H. Tanaka²

¹Kochi National College of Technology, ²Yamamoto Precious Metal Co., Ltd.

P-078 Bond Strength of Veneering Porcelain to Zirconia and Alumina Framework

OM. Hatta, A. Shinya, D. Yokoyama, H. Gomi, A. Shinya
The Nippon Dental Univ.

P-079 Setting and thermal expansion of phosphate-bonded investment materials

OH. Hirose¹, K. Miyanaga¹, M. Saitoh¹, J. Hayashi¹, S. Sakaguchi¹, H. Takahashi²
¹Nihon Univ., ²Tokyo Medical and Dental Univ.

P-080 Effect of Graphite additions on decomposition on a gypsum bonded investment

OA. Nakai, H. Ogura
The Nippon Dental Univ.

[Composite Resin]

P-081 A high -strength flowable composite, "Clearfil[®]Majesty[®]LV"

OY. Kuboe, S. Yamaguchi
Kuraray Medical Inc.

P-082 Fatigue resistance of glass fiber-reinforced resin composite clasps with resin coating

OF. Takita, M. Iwahori, N. Wakamatsu, Y. Doi, M. Miyao
Asahi Univ.

P-083 Effects of monomer composition and original filler content on filler loading in the resulting centrifuged composites

ON. Tanoue¹, K. Yamada², H. Koizumi², M. Atsuta¹, H. Matsumura²
¹Nagasaki Univ., ²Nihon Univ.

P-084 Fatigue strength of highly filler filled flowable composite resin

OH. Takimoto¹, I. Nishikawa¹, H. Takahashi²

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

P-085 Physical properties of an experimental magnetic resin composite material -Comparison with chemical-cured commercial composite resins-

OH. Soma, Y. Miyagawa
The Nippon Dental Univ.

- P-086** Effects of number, arrangement and diameter of fiber posts on bending strength of composite resin core buildups
 ○Y. Tokiniwa, Y. Tsubota, K. Sasaki, S. Kitamura, R. Nomoto, Susumu Hirano, S. Fukushima
 Tsurumi Univ.
- P-087** Initial polymerization shrinkage in various light-cured resin composite
 ○T. Suzuki, M. Hara, M. Hasegawa, H. Okamura, T. Miyasaka, T. Kimishima, Y. Nara, I. Katsuumi
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- P-088** Measurement of degree of conversion of resin-based luting cements by Univ. spectroscopic analysis
 ○A. Fujisima, M. Yamamoto, T. Miyazaki
 Showa Univ.
- P-089** Experimental production of composite resin containing titanium oxide as light induced catalyst
 ○T. Miyasaka, H. Okamura
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- P-090** Properties of low viscosity resin composites
 ○Y. Kasiwada, E. Yosida, R. Nomoto, S. Hirabayasi, K. Nitta, S. Hirano
 Tsurumi Univ.
- P-091** Fundamental Properties of a New Hard Resin for Crown and Bridge with Nano Filler
 ○A. Izumida, R. Marumori, M. Yoda, K. Kimura
 Tohoku Univ.
- [Resin]*
- P-092** Property change of denture base acrylic resin by denture cleaners
 ○M. Hashiguchi, Y. Nishi, T. Kanie, E. Nagaoka, S. Ban
 Kagoshima Univ.
- P-093** Development of denture fabrication system Part 1. Temperature of dental flask and change of inner pressure
 ○M. Nakagawa, F. Teraoka, Y. Inaba, T. Sohmura
 Osaka Univ.
- P-094** Development of denture fabrication system Part 2. Polymerization accuracy
 ○Y. Inaba, F. Teraoka, M. Nakagawa, T. Sohmura
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- P-095** Mechanical properties of Urethane monomer/polymer mixtures
 ○T. Kanie¹, A. Kawaura², S. Katsura², H. Arikawa¹, K. Fujii¹, S. Ban¹
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- P-096** Influence of combination of component on durability of viscoelasticity of tissue conditioners
 ○T. Maeda, G. Hong, S. Sadamori, T. Hamada
 Hiroshima Univ.
- P-097** Influence of component on change of viscosity and adhesive strength of denture adhesives
 ○G. Hong¹, H. Murata², T. Maeda¹, T. Hamada¹
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- P-098** Development of the resin-based denture for elderly person: modulus of softness, relaxation stress rate and ratio of dimensional recovery of the commercially available tissue conditioners and EHMA-MMA copolymers
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- [Adhesion]*
- P-099** Morphological Observation of Root Dentin
 ○K. Nakano, T. Masuda, Y. Sato, M. Hattori, H. Masuda, T. Kwawi, A. Senda
 Aichi-Gakuin Univ.
- P-100** Bond strength of one step bonding systems to artificial demineralized root dentin
 ○J. Doi, M. Omae, K. Yamaji, Y. Nishitani, M. Yoshiyama
 Okayama Univ.
- P-101** Retention of fiber post and composite resin core in direct and indirect methods

○N. Fukagawa, Y. Tsubota, S. Kitamura, K. Sasaki, Y. Tokiniwa, Y. Nishimura, K. Hashimoto, S. Fukushima
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P-102 Bonding durability against water of hydrophobic resin for pure gold

○Y. Kadoma
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P-103 Electrodeposition of adhesive monomer on dental alloy - Electrodeposition on pure metal surface -

○M. Kaketani, Y. Fukase, K. Yoshihashi, K. Miyazaki, M. Yui
Nihon Univ.

P-104 Effect of a combination of thiouracil and phosphate primers on bond strength of resin to silver-palladium-copper-gold alloy

○Y. Taira, K. Kamada, R. Jimbo, K. Soeno, K. Yoshida, T. Sawase, M. Atsuta
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P-105 Effect of solvent of self-etching system to the resin/dentin interface

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P-106 Solvent effect on the hydrolysis of 4-MET

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P-107 Development of adhesive primer comprised of amid monomer Part 5. Hydrolytic stability of Phosphoric acid monomer

○M. Odaki, M. Wakami, N. Nishiyama, K. Nemoto, M. Aida
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[Implant]

P-108 Effect of titanium surface roughness on osteoclast differentiation

○S. Makihira, Y. Mine, K. Eduardo, H. Nikawa
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P-109 Photo-induced Super Hydrophilicity Enhance Osseointegration

○T. Sawase, R. Jimbo, M. Atsuta
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P-110 Chemical deposition of carbonate apatite coatings on Ti substrate with sulfized SAM. 4. Osteoblastic Cells Proliferation on the substrate.

○Y. Yamaguchi, K. Yamamoto, S. Saku, M. Iijima, Y. Doi
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P-111 Physio-chemical properties of hydroxyapatite containing aspartic acid

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[Biological Reaction]

P-112 Osteoblast activity on CO₃ apatite-collagen sponges

○M. Akamatsu, M. Nagao, M. Masunishi, R. Yokota, H. Hayashi, I. Hirata, M. Okazaki
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P-113 Effect of cell contact to Au-Cu alloy on the cellular function

○T. Yamazaki, A. Yamazaki, K. Kishino, Y. Hibino, H. Nakajima, H. Sakagami, H. Sakashita, J. Shimada
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P-114 Vascular bonding with bioabsorbable adhesives

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P-115 Fatigue properties of dentin

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P-116 The induction of CYP1A1 expression by di(2-ethylhexyl) phthalate.

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P-117 Imaging of exposed particulate materials in mice

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P-118 Effects of different occlusal and brushing cycles on combined wear

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[Disinfection, Sterilization]

P-119 Effect of storage of alginate impressions following spray with disinfectant solution on the dimensional accuracy and deformation of maxillary edentulous working casts

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P-120 Gelation of electrolyzed neutral water and its constitutional stability

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P-121 Inhibition mechanism of growth of *Streptococcus mutans* with artificial glyco-polymer

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