

The 46th General Session of the Japanese Society for Dental Materials and Devices (JSDMD)

Nagasaki University (Place: Nagasaki Brick Hall)

Hall A

Thursday, 15 September 2005

9:55-10:00 Opening Remarks

10:00-12:00 General Presentation (Oral)

Implant 1

A-01 Bone response to titanium implant provided with a thin carbonate-containing apatite coating using molecular precursor method

○ Tohru Hayakawa¹, Kenichi Takahashi¹, Masao Yoshinari², Hiroki Hara³, Mitsunobu Sato³, Kimiya Nemoto

¹Nihon Univ. at Matsudo, ²Tokyo Dental College, ³Kogakuin Univ.

A-02 Surface properties of dental implants (Part 3) –Surface analysis of the polished titanium implant extracted from a rat bone–

○ Kouichi Watanabe¹, Akihiko Hashimoto¹, Shuichi Nomura¹, Miguel Masataka Endo², Seigo Okawa¹, Mitsugu Kanatani¹, Syuji Nakano¹, Osamu Miyakawa¹

¹Niigata Univ., ²Mizuho Ikakougyo Ltd.

A-03 Stability and protein adsorption of MPC polymer coating on Ti-Ni alloy

○ Takayuki Yoneyama^{1,2}, Yasuhiko Iwasaki¹, Osamu Fukushima¹, Hisashi Doi¹, Equo Kobayashi¹, Takao Hanawa¹

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

Cell

A-04 Protein adsorption and osteoblast behavior on substrates with different wettability

○ Masao Yoshinari¹, Jianhua Wei², Hesashi Seshima¹, Takashi Kono¹, Tatsumi Noguchi¹, Yutaka Oda¹

¹Tokyo Dental College, ²Fourth Military Medical Univ., China

A-05 Development of a carbon nanotube scaffold for cell culture

○ Naofumi Aoki, Atsuro Yokayama, Tsukasa Akasaka, Motohiro Uo, Fumio Watari
Hokkaido Univ.

A-06 Effect of crude BMP on human periodontal ligaments cells

○ Satoshi Jinno, Tomoo Suzuki, Tatsuhide Hayashi, Masamitsu Ito, Kenjiro Nakano, Ayami Nakamura, Kenjiro Kuroki, Nobuaki Hattori, Hiroyuki Okeya, Tatsushi Kawai, Toshihide Noguchi
Aichi-Gakuin Univ.

A-07 Effect of cell growth on self-assembled monolayers by outermost surface composition change

○ Yoshihiko Fuse, Isao Hirata, Yuji Nomura, Masayuki Okazaki
Hiroshima Univ.

13:00-14:00 Invited Lecture 1

15:15-17:00 General Presentation (Oral)

Porcelain, Cement

A-08 Relation between chemical durability and mechanical properties of dental porcelains consisting of zirconium-containing glasses

○ Masayuki Kon¹, Masahiro Kobayashi², Kenzo Asaoka¹
¹Tokushima Univ., ²Chiba Institute of Technology

A-09 Development of a new ceramic crown –The influence of glass ratio–

○ Atsufusa Koishi, Yutaka Komasa, Kazutoshi Kakimoto, Tadamune Kamemizu, Tetsuo Fukuoka, Taro Inoue, Joji Okazaki
Osaka Dental Univ.

A-10 Mechanical properties of newly developed titanium oxide –Containing root canal sealers

○ Ayami Nakamura, Harumasa Wanibe, Kimitoshi Ando, Akihiro Iwama, Naritaka Kitamura, Naoki Shibata, Kazuhiko Nakata, Satoshi Jinno, Kenjiro Nakano, Syouzo Turuta, Tatushi Kawai, Hiroshi Nakamura,
Aichi-Gakuin Univ.

Adhesion

A-11 New theory of adhesion in new generation

○ Kunio Wakasa¹, Shigeru Uno², Yuuji Nomura¹, Isao Hirata¹, Masayuki Okazaki¹
¹Univ. of Hiroshima, ²Toranomon Hospital

A-12 Development of temporary luting agent –(2)Dental implant

○ Hidetoshi Okada, Yoshinori Ishida, Hiroshi Noguchi, Katsuya Nagayama
Ohu Univ.

A-13 Infrared and raman spectroscopic studies on adhesion between metals and functional monomers – Molecular structures of chemisorbed layers on Metals –

○ Masato Yamamoto¹, Masako Suzuki¹, Akihiro Fujishima¹, Takashi Miyazaki¹, Hisashi Hisamitsu¹, Katsunori Kojima², Yoshinori Kadoma²
¹Showa Univ., ²Tokyo Medical and Dental Univ.

Hall B
Thursday, 15 September 2005
9:55-10:00 Opening Remarks
10:00-12:00 General Presentation (Oral)

Titanium

B-01 Application of hydrogen-treated titanium alloy to dental prosthesis –Experimental manufacture of crown by superplastic forming–

Jun Nakahigashi¹, ○ Kentaro Tsuru², Hirofumi Yoshimura¹
¹Fukuyama Univ., ²Graduate student, Fukuyama Univ.

B-02 Evaluation of surface modified titanium by carbide biomedical application

○ Yuhe Zhu, M Simotuma, Wei Wan, Motohiro Uo, Tsukasa Akasaka, Toshi Sukawara, Fumio Watari
Hokkaido Univ.

B-03 Apatite coating on titanium using an alternate soaking process–Evaluation of bioactivity in vitro–

○ Hiroshi Kono, Motoharu Miyamoto, Hideo Sato, Daisuke Yamashita, Seiji Ban
Kagoshima Univ.

Corrosion

B-04 Corrosion resistance of dental magnetic attachments

○ Yukyo Takada, Osamu Okuno
Tohoku Univ.

B-05 Corrosion mechanism of Ni-Ti alloy in simulated physiological solution containing proteins
○ Kazuhiko Endo, Toshihiro Yuasa, Masahiro Iijima, Itaru Mizoguchi, Hiroki Ohno
Health Sciences Univ. of Hokkaido

B-06 Compositions and released ions of Ti-Ag alloys
○ Masatoshi Takahashi, Yukyo Takada, Masafumi Kikuchi, Osamu Okuno
Tohoku Univ.

B-07 Copper ions released from Ti₂Cu composed of binary Ti-Cu alloys.
○ Yukyo Takada, Osamu Okuno
Tohoku Univ.

15:15-17:00 General Presentation (Oral)

Resin, Photocatalyst

B-08 Relationship between dynamic viscoelastic properties of cold-cured acrylic soft denture liners and type of monomer
○ Hiroshi Murata, Hiroki Chimori, Guang Hong, Taizo Hamada
Hiroshima Univ.

B-09 Vinyl esters/polymer mixture system (Part 2) – Viscoelastic behavior of vinyl esters/PEMA paste –
○ Jiro Tanaka¹, Yoshiya Hashimoto², Masaaki Nakamura², Kazuomi Suzuki¹
¹Okayama Univ., ²Osaka Dental Univ.

B-10 Application for a orthodontic bracket of titanium dioxide photocatalyst
○ Yosuke Sato, Yukiko Takei, Kenjiro Nakano, Kimitoshi Ando, Natu Sato, Ken Miyazawa, Tatsushi Kawai, Shigemi Goto
Aichi-Gakuin Univ.

Clinical applications 1

B-11 Application of haptic device to dentistry (Part 12) –Support for implant surgery : Clinical application and accuracy examination of implant insertion–
○ Takafumi Ohtani¹, Taiji Sohmura¹, Naoki Kusumoto¹, Kazumichi Wakabayashi¹, Shinichi Yamada¹, Takashi Nakamura¹, Yoichi Kumazawa², Masaharu Morishima², Hirofumi Yatani¹
¹Osaka Univ., ²Wada Precision Dental Lab. Co.,Ltd

B-12 An evaluation of new bone formation by three-dimensional X-ray Micro Focus CT –7. Three-dimensional finite element analysis around implantaion –
○ Yasumasa Fukase, Michiaki Sasao, Masahiro Kakatani, Kenzi Yagihara, Terumasa Kaneda, Kiyomi Miyazaki, Minoru Nishiyama
Nihon Univ.

B-13 Application of haptic device to dentistry (Part 11) –Support for osteotomy: Application of bite sprint fabricated by rapid prototyping method for osteotomy–
○ Taiji Sohmura, Seiji Iida, Tomonao Aikawa, Yoshitaka Iguchi, Kenji Takada, Mikihiko Kogou
Osaka Univ.

Hall C

Thursday, 15 September 2005

10:00-16:00 General Presentation (Poster 1)

10:00-12:00 General Presentation (Oral)

Award Challenge Posters (P01-P05)

P-01 The possibility of beta-tricalcium phosphate/monocalcium phosphate monohydrate cement containing beta-calcium pyrophosphate and calcium fluoride as a sealant fused with enamel by CO₂ laser irradiation

○ Hirosuke Goto, Masatoshi Tagaya, Nobukazu Wakamatsu, Yutaka Doi, Yasuo Tamura
Asahi Univ.

P-02 Development of Ti-Cr alloy with corrosion resistance to fluoride

○ Shinji Takemoto, Masayuki Hattori, Masao Yoshinari, Eiji Kawada, Yutaka Oda
Tokyo Dental College

P-03 Crevice corrosion mechanism of ISO Type4 gold alloy in polyvinylpyrrolidone iodine solution

○ Norio Takasusuki, Kazuhiko Endo, Yukito Hirose, Morio Ochi, Hiroki Oono
Health Sciences Univ. of Hokkaido

P-04 Effect of GLUMA[®] desensitizer on long-term tensile bond strength of a self-etching adhesive system to Er:YAG laser-irradiated dentin

○ Masanori Omae¹, Toshiyuki Itota¹, Junichi Doi¹, Masataka Inoue², Kazushi Yoshikawa², Masahiro Yoshiyama²
¹Okayama Univ., ²Osaka Dental Univ.

P-05 A mechanical study on anterior fixed partial denture made of hybrid resin with glass fiber reinforcement.-Effect of load point and glass fiber frame form-

○ Daiichiro Yokoyama, Akikazu Shinya, Shingo Katagiri, Harunori Gomi, Yasuo Hatano, Akiyoshi Shinya
Nippon Dental Univ.

10:00-16:00 General Presentation (Poster 1)
(14:00-15:00 Discussion)

Titanium

P-06 Feasibility of titanium casting using ceramic mold with high thermal conductivity - Case of high-temperature mold using hBN plate -

○ Mitsugu Kanatani, Seigo Okawa, Kouichi Watanabe, Osamu Miyakawa, Syuji Nakano, Noriyasu Hotta, Masayoshi Kobayashi
Niigata Univ.

P-07 Hydrogen absorption properties of Ti-Pd alloy in fluoride solutions

○ Ken'ichi Yokoyama, Kenzo Asaoka
Tokushima Univ.

P-08 A study of the Titanium oxide film after heat treatment (part 2) The diffusion of oxygen and nitrogen

○ Nobuyoshi Terashima, Takamitsu Yoshida, Kaoru Tamura, Nobuko Horasawa, Ken Takeuti, Keigo Hayano, Sakae Nagasawa, Miitio Itou
Matsumoto Dental Univ.

Casting

P-09 A method of metal prosthesis by a microwave oven - Improvement of a kiln -

○ Kazuo Ohkuma¹, Tomoyuki Yoneyama²
¹The Nippon Dental Univ., ²Tokyo Denki Univ.

Corrosion

P-10 Research for corrosion and corrosion loss in quantity of dental casting silver alloy and dental casting Au-Pd alloy (II)

○ Yoshizo Okamoto¹, Shigeyasu Naruse², Kouji Miyazaki¹
¹Fukuoka Dental College, ²Tokuriki Honten Co.,Ltd.

P-11 Elemental change of cast Ag-Pd-Au-Cu alloy surface by selective dissolution treatment

- Setsuo Saitoh, Kaori Sasaki, Takashi Nezu, Masayuki Taira, Yoshima Araki
Iwate Medical Univ.

Bioceramics

P-12 Influence of sintering temperature on bone response to tape-cast TCP sheets

- Yasuhiro Tanimoto, Tohru Hayakawa, Kimiya Nemoto
Nihon Univ. at Matsudo

P-13 Transformation of 3D-Printing gypsum model to HAp by treating in ammonium phosphate solution (Part3) –Consideration of gypsum powder and post-hardening treatment–

- Rungnapa Lowmunkong¹, Taiji Sohmura¹, Yumiko Suzuki², Shigeki Matsuya², Kunio Ishikawa²
¹Osaka Univ., ²Kyushu Univ.

P-14 Influence of amount of electrical energy on flexural strength of ceramic produced by electro-layered method.

- Hisataka Nishida¹, Kazumichi Wakabayashi¹, Shizuo Higuchi², Taiji Soumura¹, Tohru Sekino¹,
Takashi Nakamura¹, Hirofumi Yatani¹
¹Osaka Univ., ²Wada Precision Dental Laboratories Co.

P-15 Preparation of porous carbonate apatite for growth factor carrier

- Keiichi Kanayama, Mitsunobu Kitago, Masafumi Shiraki, Toshiaki Shibutani, Yutaka Doi
Asahi Univ.

P-16 Application of zirconia/alumina nano-composite to all ceramic crown. Part 2 Evaluation of bonding durability

- Hideo Sato¹, Seiji Ban¹, Masahiro Nawa²
¹Kagoshima Univ., ²Matsushita Electric Works, Ltd.

P-17 Chemical durability of various glass fibers for biomaterials

- Masahiro Kobayashi¹, Masayuki Kon², Hidekazu Takahashi³
¹Chiba Institute of Technology, ²Tokushima Univ., ³Tokyo Medical and Dental Univ.

P-18 Anodic oxidation of titanium in solution containing Ca and P

– Morphology of calcium phosphate deposited electrochemically

- Seigo Okawa, Syuji Nakano, Mitsugu Kanatani, Kouichi Watanabe, Osamu Miyakawa
Niigata Univ.

P-19 Fabrication of reticulated calcium phosphate crystallites

- Mayumi Iijima, Nobukazu Wakamatu, Hideo Kamemizu, Masanori Adachi, Yutaka Doi
Asahi Univ.

P-20 Effect of light-curing conditions on shear bond strength of adhesive resin cements to ceramics

- Muneaki Honda, Jun Omatsu, Yoshiaki Hasegawa, Yuko Nagasawa, Atsushi Yamazaki, Atsushi Harashima, Yoko Takahashi, Ken-Ichi Wada, Minako Niikura, Taniichiro Yamaga, Yasushi Hibino, Hiroshi Nakajima, Meikai Univ.

Resin

P-21 Changes in flexural properties of resins for provisional restorations

- Toshiki Takamizawa, Kanako Yamaguchi, Youhei Asaka, Takeshi Yoshida, Masashi Miyazaki, Susumu Ando, Takashi Kuroda
Nihon Univ.

P-22 Shape memory alloy fiber reinforced resin matrix smart composite (Part 12) –effects of gold plating on fiber–

- Kenichi Hamada, Fumiaki Kawano, Kenzo Asaoka
The Univ. of Tokushima

- P-23 Deterioration of denture base resins –Discoloration and odor characteristics–
○ Hiroyuki Arikawa, Takahito Kanie, Kouichi Fujii, Seiji Ban
Kagoshima Univ.
- P-24 Studies on the residual monomer for trial materials of denture base resin
○ Takaharu Takeshita
GCDP CORP
- P-25 Dental application of silver methacrylate
○ Koichi Yoshida, Harumi Aoki, Takaichi Yoshida
Nippon Dental Univ. at Tokyo
- P-26 Study on handling of hard resin for crown and bridge
○ Akio Izumida, Ryotaro Marumori, Yayoi Okuyama, Masanobu Yoda, Kohei Kimura
Tohoku Univ.
- Composite resin 1
- P-27 Effects of accelerated aging tests for flexural properties of experimental fiber posts
○ Naohiko Iwasaki¹, Hidekazu Takahashi¹, Masahiro Kobayashi²
¹Tokyo Medical and Dental Univ., ²Chiba Institute of Technology
- P-28 Fatigue properties of filling composite resin in physiological salt solution and ethanol solution
Kazuo Matukawa¹, ○ Izuru Nishikawa¹, Hidekazu Takahashi², Koichi Okada³
¹Osaka Institute of Technology, ²Tokyo Medical and Dental Univ., ³Kuraray Medical INC.
- P-29 The mechanical properties of cylindrical composite test piece reinforced with the glass fiber
○ Takahito Kanie, Hiroyuki Arikawa, Koichi Fujii, Seiji Ban
Kagoshima Univ.
- P-30 Development of soft magnetic resin composite material with high corrosion resistance (Part 1) Effects of 4-META and filler contents on working time and setting time
○ Hiroko Soma, Yukio Miyagawa
The Nippon Dental Univ. at Niigata
- Adhesion 1
- P-31 Micro-tensile bond strength of sound and carious primary tooth dentin measured with original designed Jig
○ Yumiko Hosoya¹, Eiji Kawada², Toshiaki Ushigome², Yutaka Oda²
¹Nagasaki Univ., ²Tokyo Dental College
- P-32 New measuring method of polymerization contraction of optical cure type composite resin
○ Akihiko Watanabe, Masahiro Nagai, Kazunari Akiyoshi
Tokyo Medical and Dental Univ.
- P-33 Structure and character of silane coupling layer (Part 2) –Long-term water resistance of silane coupling layers–
○ Katsura Ohashi¹, Tomotaro Nihei¹, Shigeaki Kurata¹, Yukishige Kondo², Kozo Umemoto¹, Norio Yoshino², Toshio Teranaka¹
¹Kanagawa Dental College, ²Tokyo Univ. of Science
- P-34 Influence of environmental moisture on dentin bond strength of single-step adhesive systems
○ Akitomo Rikuta, Yasushi Chiba, Akira Yamamoto, Keishi Tsubota, Masashi Miyazaki, Susumu Ando, Takashi Kuroda
Nihon Univ.
- P-35 Chemical interaction between hydroxyapatite and functional phosphoric acid ester monomers

○ Daisuke Fukegawa¹, Yasuhiro Yoshida¹, Kazuomi Suzuki¹, Satoshi Hayakawa¹, Akiyoshi Osaka¹,
Bart Van Meerbeek²
¹Okayama Univ., ²Catholic Univ. of Leuven

P-36 Durability on shear bond strength between electrodeposited dental alloys with 4-MET and resin for crown and bridge

○ Taishi Kojima, Masahiro Kaketani, Masahiro Saitoh, Kenichi Matsudaira, Setsuko Sakaguchi, Hideharu Hirose, Minoru Nishiyama
Nihon Univ.

P-37 Electrodeposition of adhesive monomer on dental alloy – Durability of treated surface of type4 gold alloy–

○ Masahiro Kaketani, Taishi Kojima, Yasumasa Fukase, Masashi Narikawa, Tatch Inoue, Hideharu Hirose, Minoru Nishiyama
Nihon Univ.

Cell

P-38 Regulation of cell dynamics by mechanical stimulation

○ Takuya Matsumoto
Osaka Univ.

P-39 Chemical deposition of carbonate apatite coatings on Ti substrate with sulfurized SAM

○ Yusuke Yamaguchi, Hideo Kamemizu, Mayumi Iijima, Seitarou Saku, Hiroto Kotake, Tadamori Kajimoto, Kouji Yamamoto, Yutaka Doi
Asahi Univ.

P-40 Initial attachment of osteoblast-like cells to titanium with surface modification

○ Motoharu Miyamoto, Hiroshi Kono, Yukari Iwaya, Hideo Sato, Daisuke Yamashita, Seiji Ban, Yuichi Izumi
Kagoshima Univ.

P-41 Bone tissue engineering by inhibition of S100A4 in mesenchymal stem cell

○ Seita Adachi, Yoshiya Hashimoto, Mari Akiyama, Masaaki Nakamura
Osaka Dental Univ.

Dissolution

P-42 Development of the microcapsule which a membrane dissolves in by temperature – combination rate of gelatine and collagen peptide –

○ Kazuo Ohkuma
The Nippon Dental Univ.

Sterilization, Disinfection

P-43 Effects of electrolyzed waters on human enamel surface

○ Yuki Nagamatsu, Ker-Kong Chen, Kiyoshi Tajima, Hiroshi Kakigawa, Yoshio Kozono
Kyushu Dental College

P-44 Removal of mouth order by bactericidal effect of electrolyzed neutral water

○ Moriaki Taniguchi, Yuki Nagamatsu, Ker-Kong Chen, Kiyoshi Tajima, Hiroshi Kakigawa, Yoshio Kozono
Kyushu Dental College

P-45 Preparation of glycoconjugate for inhibitor of bacterial adhesion

○ Tsukasa Akasaka, Motohiro Uo, Satoshi Sugawara, Fumio Watari
Hokkaido Univ.

Toxicity

P-46 Effect of titanium ion on cell viability of macrophage-like RAW264 cells

○ Masayuki Taira¹, Kaori Sasaki¹, Setsuo Saitoh¹, Takashi Nezu¹, Yoshima Araki¹, Takayuki Narushima²
¹Iwate Medical Univ., ²Tohoku Univ.

P-47 Properties and cytotoxicity of metal encapsulating carbon nanocapsules (MECNCs).

- Motohiro Uo, Tsukasa Akasaka, Kazuchika Tamura, Yasunori Totsuka, Atsuro Yokoyama, Fumio Watari
Hokkaido Univ.

P-48 A proposal to evaluate differentiation of ES-D3 cells by alkaline phosphatase (ALP) activity

- Koichi Imai, Masaaki Nakamura
Osaka Dental Univ.

17:30-20:00 Banquet (Wel City Nagasaki)

Hall A
Friday, 16 September 2005
10:00-12:00 General Presentation (Oral)

Implant 2

A-14 Osteointegration of titanium implant with CaCl₂ hydrothermal treatment

- Masaharu Nakagawa, Lei Zhang, Koichi Udoh, Shigeki Matsuya, Kunio Ishikawa
Kyushu Univ.

A-15 Cytocompatibility of natural apatite thin film deposited by laser ablation

- Yoshiya Hashimoto^{1,3}, Ryota Hatanaka², Masanobu Kusunoki^{2,3}, Hiroaki Nishikawa^{2,3}, Shigeki Hontsu^{2,3}, Masaaki Nakamura¹
¹Osaka Dental Univ., ²Kinki Univ., ³JST

A-16 Formation and cell response of periodic structure on titanium surface with femtosecond laser

- Shoji Takeda¹, Shinpei Kakehi¹, Hiroshi Sawada², Kousuke Kawahara², Masaaki Nakamura¹
¹Osaka Dental Univ., ²NEC Machinery Corp.

Tissue

A-17 Development of the biofunctional implant materials part(12) Effect of scaffold for chondrocyte

- Kenjiro Nakano, Tatsuhide Hayashi, Yosuke Sato, Kimitoshi Ando, Ayami Nakamura, Satoshi Jinno, Kenjiro Kuroki, Takafumi Asai, Masashi Okano, Tatsushi Kawai
Aichi-Gakuin Univ.

A-18 Influence of plasma inner surface treatment for porous poly(L-lactic) acid scaffold on bone regeneration in vivo

- Masashi Hara, Masafumi Nakagawa, Fumio Teraoka
Osaka Univ.

A-19 Hydroxyapatite coating to inner surface of porous PLLA scaffold and bone regeneration in vivo

- Fumio Teraoka, Masashi Hara, Masafumi Nakagawa
Osaka Univ.

A-20 Real-time analysis between titanium and bio-interactive molecules using surface plasmon resonance

- Isao Hirata¹, Yuji Nomura¹, Kunio Wakasa¹, Masayuki Okazaki¹, Yasuhiro Yoshida², Kazuomi Suzuki², Kenji Maekawa², Takuo Kuboki²
¹Hiroshima Univ., ²Okayama Univ.

13:00-14:00 Invited Lecture 2

15:15-16:00 General Presentation (Oral)

Dissolution, Wear, Toxicity

A-21 Levels of chemical substances remaining in self-curing resins for orthodontics

- Toshio Hongo¹, Hidekazu Takahashi¹, Naohiko Iwasaki¹, Sakari Hikage², Atsushige Sato³
¹Tokyo Medical and Dental Univ., ²Health Sciences Univ. of Hokkaido, ³Showa Univ.

A-22 Effect of medium on occlusal wear of resin composites in combined wear test

- Kiyoshi Kakuta, Amornrat Wonglamsam, Mihoko Kon, Hideo Ogura
The Nippon Dental Univ.

A-23 Effects of LPS and Ni²⁺ ion on gene expression of macrophage-like RAW264 by 32k DNA microarray

- Masayuki Taira, Kaori Sasaki, Setsuo Saitoh, Takashi Nezu, Yoshima Araki
Iwate Medical Univ.

16:00-16:05 Closing Remarks

Hall B

Friday, 16 September 2005

10:00-12:00 General Presentation (Oral)

Dental alloy

B-14 Properties of newly prepared dental gold alloys with cobalt

- Noriyoshi Ishi, Keiji Iwasaki, Satoshi Sgawara, Yuhe Zhu, Tukasa Akasaka, Motohiro Uo, Fumio Watari
Hokkaido Univ.

B-15 Fretting fatigue properties of dental Ag-Pd-Cu-Au-Zn alloy

- Wataru Kawagishi¹, Mitsuo Niinomi¹, Toshikazu Akahori¹, Hisao Fukui², Hiroyuki Toda¹
¹Toyohashi Univ. of Technology, ²Aichi-Gakuin Univ.

B-16 Effect of tensile stress on corrosion resistance of dental Ag-Pd-Cu-Au-Zn alloy

- Toru Nakanishi¹, Mitsuo Niinomi¹, Toshikazu Akahori¹, Hisao Fukui², Hiroyuki Toda¹
¹Toyohashi Univ. of Technology, ²Aichi-Gakuin Univ.

Clinical applications 2

B-17 Influence of hydrogen peroxide on bovine enamel

- Toshiaki Ushigome, Shinji Takemoto, Masayuki Hattori, Masao Yoshinari, Eiji Kawada, Yutaka Oda
Tokyo Dental College

B-18 An influence of hydrostatic pulpal pressure on the dentin bonding of all-in-one systems

- Keiichi Hosaka¹, Monica Yamauti^{1,2}, Miwako Ogata¹, Masaomi Ikeda¹, Masatoshi Nakajima¹, Junji Tagami^{1,2}
¹Tokyo Medical and Dental Univ., ²COE Program FRMDRTB TMDU

B-19 Enforcement of the revised pharmaceutical affairs law and current issues in dental treatment. – The problems with regulatory control surrounding dental treatment –

- Atushi Noda, Katuya Ohta, Katumi Takahashi, Tadasige Kamemizu

B-20 Core build up using fiber post –Comparison of extracting strength between direct method and indirect method–

○ Satoko Hosono, Haruka Saito, Saburo Kakutani, Michio Simakura
Ohu Univ.

15:15-16:00 General Presentation (Oral)

Laser, Numerical analysis

B-21 Bactericidal effect of laser

○ Masato Makihara, Hiroshi Kakigawa, Yuki Nagamatsu, Ker-Kong Chen, Kiyoshi Tajima, Yoshio Kozono
Kyushu Dental College

B-22 Laser weld's joining of dental alloys (Part 3) –Effect of surface condition–

○ Takamitsu Yoshida, Sakae Nagasawa, Kaoru Tamura, Toshihide Mizoguchi, Taira Koichi, Naruhiko Shiratori, Nobuyoshi Terashima, Toru Niino, Hiroshi Yagasaki, Michio Ito,
Matsumoto Dental Univ.

B-23 Non-linear finite element stress analysis on the titanium implants

○ Sakae Nagasawa¹, Keigo Hayano¹, Toru Niino¹, Takamitsu Yoshida¹, Toshihide Mizoguchi¹, Nobuyoshi Terashima¹, Kaoru Tamura¹, Michio Ito¹, Hiroshi Yagasaki¹, Osamu Kubota², Masayuki Yoshimura²

¹Matsumoto Dental Univ., ²Yoshioka CO.LTD.

16:00–16:05 Closing Remarks

Hall C

Friday, 16 September 2005

10:00-16:00 General Presentation (Poster 2)

(14:00–15:00 Discussion)

Dental alloy

P-49 Age-hardening and phase transformation in an Ag-Cu-Pd-Au alloy

○ Hyung-Il Kim¹, Hyo-Joung Seol¹, Doung-Hun Lee¹, Yong Hoon Kwon¹, Yukyo Takada², Osamu Okuno²

¹Pusan National Univ., ²Tohoku Univ.

P-50 Effect of composition on the microstructures of dental Ag-Pd-Cu-Au alloys

○ Yasuhiro Tanaka, Toshiaki Ogata, Eri Miura, Yasuko Takuma, Takanobu Shiraishi, Kunihiro Hisatsune
Nagasaki Univ.

P-51 XPS analysis of tarnish films on experimental Pd-free dental low-karat gold alloys in a 0.1% Na₂S solution

○ Yasuko Takuma, Takanobu Shiraishi, Yasuhiro Tanaka, Kunihiro Hisatsune
Nagasaki Univ.

P-52 Cytotoxicity of palladium-free precious alloys

○ Shoji Takeda¹, Takanobu Shiraishi², Masaaki Nakamura¹
¹Osaka Dental Univ., ²Nagasaki Univ.

Cement

P-53 Effect of water on shear strength of glass ionomer cements for luting

○ Atsushi Yamazaki, Atsushi Harashima, Muneaki Honda, Yuko Nagasawa, Jun Omatsu, Yoshiaki Hasegawa, Minako Niikura, Tsutomu Tawaragi, Taniichiro Yamaga, Yasushi Hibino, Hiroshi Nakajima
Meikai Univ.

Investment

P-54 Titanium casting using magnesia-based gypsum-bonded investment Part 1. Basic properties of investment

○ Fazal Reza¹, Yukimichi Tamaki², Hidekazu Takahashi¹, Naohiko Iwasaki¹, Takashi Miyazaki²
¹Tokyo Medical and Dental Univ., ²Showa Univ.

P-55 Development of casting investment preventing blackening of noble metal alloy-effect of Mg(OH)₂ or Ca(OH)₂ added-

○ Akira Nakai, Shin-Ichi Goto, Hideo Ogura
The Nippon Dental Univ.

Model material

P-56 Surface reproduction of dental stone models -Compatibility between dental stones and alginate impression materials-

○ Toshiyuki Sejima¹, Masahiro Saitoh², Junko Hayashi², Hiroyasu Nishiyama¹, Kazunori Shimomura², Teiji Shibasaki¹, Minoru Nishiyama²
¹Saiseikai Central Hospital Tokyo, ²Nihon Univ.

Porcelain

P-57 Effects of heating condition after silanization on bonding strength

○ Kenichi Babasono, Hidekazu Takahashi, Naohiko Iwasaki
Tokyo Medical and Dental Univ.

P-58 Fatigue strength of dental ceramics using gypsum-bonded investment

○ Ryo Tokunaga, Hidekazu Takahashi, Naohiko Iwasaki, Norimasa Kurosaki
Tokyo Medical and Dental Univ.

P-59 Studies on properties of layering porcelains-mechanical strength, thermal expansion,X-ray diffraction-

○ Minori Hatta, Akikazu Shinya, Harunori Gomi, Shingo Katagiri, Yasuo Hatano, Akiyoshi Shinya
The Nippon Dental Univ.

Composite resin 2

P-60 Possibility of clasp application using glass fiber-reinforcement type composite resin

○ Fumiko Takita, Masatoshi Iwahori, Nobukazu Wakamatsu, Yutaka Doi, Motonobu Miyao
Asahi Univ.

P-61 Measurement of polymerization shrinkage of composite resin using laser displacement meter

○ Taira Miyasaka, Hiroyuki Okamura
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P-62 A Study of Colour for Dentistry on Light-cured Composite Resins

○ Susumu Ando¹, Naoshi Hirohata¹, Masashi Miyazaki¹, Takashi Kuroda¹, Yumiko Hosoya²
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P-63 Property of composite resin using reducing agent immobilized fillers

○ Kouhei Masuki¹, Yuji Nomura¹, Satoki Shibata¹, Isao Hirata¹, Yukinori Nahara², Masayuki Okazaki¹
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P-64 Dimensional change of composite resin for crown and bridge during polymerization and after water storage

○ Minako Niikura, Atsushi Harashima, Ken-Ichi Kuramochi, Taniichiro Yamaga, Yasushi Hibino, Hiroshi Nakajima

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P-65 Effect of single-step adhesive systems of changes in elastic modulus of dentin

- Hirohiko Inage, Kazuaki Nakamura, Satoshi Uekusa, Hiroyasu Kurokawa, Masashi Miyazaki, Susumu Ando, Takashi Kuroda
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P-66 Adhesive primers for precious metals containing an acidic adhesive bonding promoter

- Yoshinori Kadoma
Tokyo Medical and Dental Univ.

P-67 Effects of water sorption on modulus of elasticity of bonding resins

- Shuichi Ito¹, Takashi Saito¹, Kazuhiko Endo¹, Hiroki Ohno¹, Masanori Hashimoto², Masahiro Yoshiyama³
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P-68 Structure and character of silane coupling layer (Part 3) –The effect by the difference of the molecular structure and the exposure time after the treatment–

- Shigeaki Kurata¹, Katura Ohashi¹, Tomotaro Nihei¹, Tosio Teranaka¹, Yukinari Kondo², Norio Yosino², Kozo Umemoto¹
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P-69 Factors affecting bond strength of luting resin cements to cp titanium treated by Rocatec system.

- Miho Kubo, Akihiro Fujishima, Yusuke Shimakura, Takeshi Suganuma, Takashi Miyazaki, Tadaharu Kawawa
Showa Univ.

P-70 Collagen-adhesive monomer interaction in adhesion to dentin –quantitative analysis of hydrophilic/hydrophobic interaction of monomer analogues with collagen, part2–

- Tomohiro Morikawa¹, Takashi Nezu², Yoshihiro Terada¹
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P-71 Development of adhesive primer comprised of amid monomer Part2 Thermocycle effect

- Misako Odaki, Norihiro Nishiyama, Kimiya Nemoto, Masahiro Aida
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P-72 Effect of disinfection of alginate impressions on the scratch hardness of stone models

- Hisako Hiraguchi, Hisami Nakagawa, Kenji Kitoh, Norihito Hagino, Kohichi Miyanaga, Kazue Yoshihashi, Minoru Nishiyama
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P-73 Synthesis and characterization of novel porous phosphorylcholine hydrogels cross-linked with methacryloyl-functionalized polyphosphates

- Chookaet Wachiralarpphaithoon, Yasuhiko Iwasaki, Kazunari Akiyoshi
Tokyo Medical and Dental Univ.

P-74 Mineral and collagen derived from fish-skin supplementation improves bone metabolism in ovariectomized rats

- Toshihide Mizoguchi¹, Kaoru Tamura¹, Sakae Nagasawa¹, Takamitsu Yoshida¹, Nobuyoshi Terashima¹, Noriko Horasawa¹, Hiroshi Yagasaki¹, Yoshiharu Matahira², Michio Ito¹
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P-75 New scaffolds consist of DNA/lipid complex and Poly(L-lactide) –Drug release functions–

- Tadao Fukushima¹, Minoru Kawaguchi¹, Tohru Hayakawa², Yusuke Inoue³, Shoji Takeda⁴,

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P-76 Crystallographic properties of apatites with different CO₃ contents

○ Hidetaka Hayashi, Rie Yokota, Isao Hirata, Yuji Nomura, Kunio Wakasa, Masayuki Okazaki
Hiroshima Univ.

P-77 Morphology of remineralized human enamel surface

○ Toshiyuki Ohsawa, Fumio Teraoka
Osaka Univ.

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P-78 Application of bone defects on mandiblar with hydroxyapatite/collagen sponge

○ Yoshihisa Koyama¹, Masanori Kikuchi², Daisuke Shoji³, Naomi Mochizuki³, Katsumi Kawamura³,
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P-79 Proliferation levels of osteoblastic cells on the sintered titanium dioxide.

○ Yukiko Takei, Yosuke Sato, Hideya Ohashi, Tatsuhide Hayashi, Michie Ito, Hideki Kawai, Yasuaki
Uematsu, Masamichi Kabutomori, Tatsushi Kawai
Aichi-Gakuin Univ.

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P-80 The three dimensional teeth models –Voxel model–

○ Sakae Nagasawa, Akihiko Obata, Yoshinori Arai, Takamitsu Yoshida, Naruhiko Shiratori, Yuuji
Deguchi, Michio Ito, Akihiro Kuroiwa
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P-81 Effect of toothbrush

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P-82 Electropolishing of titanium and its alloys for miller finishing

○ Kiyoshi Tajima¹, Akira Miyawaki², Yuki Nagamatsu¹, Hiroshi Kakigawa¹, Yoshio Kozono¹
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P-83 Surface modification of dental alloy by electron-beam system (Part 4) –Examination on the surface of Titanium and Au-Ag-Pd alloy–

○ Junko Tokunaga¹, Tetsuya Kojima¹, Taiji Sohmura¹, Yujiro Nomura², Soichiro Kinuta¹, Kazumichi
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P-84 The ozone generating tubes of Ar-Hg which lit the over of 3 years

○ Koichi Arai¹, Nobuo Ando²

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P-85 Laser welding of dental alloy –EPMA observation on the weld zone of different metal–

○ Hisaji Kikuchi, Tomoko Kurotani, Mitsuru Wakashima, Masataka Saigoh, Yoshio Nakajima,
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P-86 Weldability of laser welded Ti-6Al-7Nb alloy castings by tensile test

- Hisashi Doi¹, Viritpon Srimaneepong¹, Takayuki Yoneyama^{1,2}, Equo Kobayashi¹, Takao Hanawa¹
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P-87 Antibacterial characteristics of toothpaste containing essential oils

- Harumi Horibe, Miyuki Takahashi, Mika Gondoh, Keiko Tono, Yusuke Inoue
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P-88 Mechanical properties of hand scalers

- Mitsuko Inoue, Hiroyuki Arikawa, Takahito Kanie, Koichi Fujii, Seiji Ban
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P-89 The most suitable surface treatment of IPS Empress 2 glass ceramics, Part 1 Effect of acid etching treatments on the flexural strength

- Utako Hata, Nobukazu Wakamatsu, Osamu Yamamura, Shu Fujiwara, Yutaka Doi
Asahi Univ.

P-90 Metalartifact of dental material in MR image (PART2)-A correlation with an eddy current in metal occurring and metalartifact in MR imaging-

- Tomohide Taniyama^{1,3}, Taiji Sohmura¹, Masaaki Aoki², Takanori Etoh³
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P-91 Enforcing the revised pharmaceutical affairs law and its influence on dental treatment. - A brief ummary on pharmaceutical affairs law and the supply of dental equipment -

- Atushi Noda, Katuya Ohta, Tadasige Kamemizu
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P-92 The systemic revision of the JIS and its potential influence on dental materials. - The new JIS certificate system and the materials covered by health insurance -

- Masaru Kamio, Katumi Takahashi, Tadasige Kamemizu
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P-93 Present status and problems surrounding the production of prosthetic Appliances with products not approved under pharmaceutical affair law - Discussions on the non-clasp denture -

- Bunsaku Yoshida, Katuya Ohta, Katumi Takahashi
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- Hiroyuki Arikawa, Takahito Kanie, Kouichi Fujii, Seiji Ban
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P-95 Evaluation of bond strength, detached surface and screw performance of a screw-installed bracket

- Sachiyo Narita, Susumu Hirano, Ayao Hirashita
Tsurumi Univ.

P-96 Properties of orthodontic bracket adhesion materials

- Akihiko Obata^{1,2}, Yuji Deguchi¹, Koichi Taira¹, Sakae Nagasawa¹, Noriko Horasawa¹, Saburo Kurihara¹, Kenji Kurashina², Michio Ito¹
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