

***The 43th General Session of  
the Japanese Society for Dental Materials and Devices (JSDMD)***

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***Tokyo Dental College***

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**Saturday, 10 Apr 2004**

**9:25-9:30 Opening**

**9:30-9:45 Research Report**

A questionnaire on safety of dental materials to clinician members of the society - Summary of the questionnaire -

Imai Yohji<sup>1</sup>, Imai Koichi<sup>2</sup>, Kakuta Kiyoshi<sup>3</sup>, Hirabayashi Sigeru<sup>4</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Osaka Dental Univ., <sup>3</sup>The Nippon Dental Univ., <sup>4</sup>Tsurumi Univ.

**9:45-10:30 Cell and Tissue I**

**A-01 Effects of Ni ions on cell viability and NO Production of murine peritoneal exudates cells (PEC) collected by lavage from thioglycolate injected mice**

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

**A-02 Radical scavenging activity of curcumin**

Fujisawa Seiichiro<sup>1</sup>, Atsumi Tomoko<sup>1</sup>, Kadoma Yoshinori<sup>2</sup>  
<sup>1</sup>Meikai Univ., <sup>2</sup>Tokyo Medical and Dental Univ.

**A-03 Osteoinductive activity of BMP combined with cytocyns derived from blood**

Ito Takashi, Ito Masamitsu, Murakami Hiroshi, Suzuki Tomoo, Ishikawa Atsuko, Hayashi Tatsuhide, Kawai Tatsushi, Noguchi Toshihide  
Aichi-gakuin Univ.

**10:30-11:00 Titanium and Implant Material**

**A-04 Corrosion behavior of Ti and Ti alloys in Pseudo Intraoral environment**

Matono Yoshinari, Nakagawa Masaharu, Udo Koichi, Matsuya Shigeki, Ishikawa Kunio, Terada Yoshihiro  
Kyushu Univ.

**A-05 Manufacture and evaluation of TiN/HAP functionally graded implant by dry synthetic method**

Kondo Hideomi, Yokoyama Atsuro, Kawasaki Takao, Uo Motohiro, Ohkawa Shouji, Akasaka Tsukasa,  
Sugawara Toshi, Watari Fumio  
Hokkaido Univ.

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

**Award (No. P-01 -No. P-08)**

**P-01 Function of New Jaw-Tracking System Using a Home Digital Camcorder**

Kinuta Soichiro, Yatani Hirofumi, Wakabayashi Kazumichi, Nakamura Takashi, Sohmura Taiji, Takahashi Junzo  
Osaka Univ.

**P-02 Effect of post designs with different tapers on root fracture**

Okitsu Motoko, Takahashi Hidekazu, Iwasaki Naohiko, Yoshioka Takatomo, Ebihara Arata, Suda Hideaki  
Tokyo Medical and Dental Univ.

**P-03 Newly development of injectable dental ceramic system**

Ushioda Masaaki, Sekino Masato  
Tokuyama Dental Corp.

**P-04 Casting ring liners15 -Cushioning effect of casting ring liners on the thermal expansion of the investment-**

Takaoka Kenji<sup>1</sup>, Hirose Hideharu<sup>1</sup>, Takahashi Hiroaki<sup>2</sup>, Usui Nobuyuki<sup>1</sup>, Yagihara Kenji<sup>1</sup>, Nishiyama Minoru<sup>1</sup>

<sup>1</sup>Nihon Univ., <sup>2</sup>TOKYO GIKEN

**P-05 Relation between released ions and alloy compositions in the Au-Ag-Pd-Cu alloy system**

Miyake Masashi, Takada Yukyo, Kimura Kouhei, Okuno Osamu  
Tohoku Univ.

**P-06 Development of biocompatible cement for temporary cementation of implant superstructure**

Yanagi Tomochika, Endo Kazuhiko, Ohno Hiroki, Kawashima Isao, Yamane Yuro  
Helath Sciences Univ of Hokkaido

**P-07 Development of titanium biosensor for surface plasmon resonance**

Hirata Isao<sup>1</sup>, Nomura Yuji<sup>1</sup>, Wakasa Kunio<sup>1</sup>, Okazaki Masayuki<sup>1</sup>, Suzuki Kazuomi<sup>2</sup>, Kuboki Takuo<sup>2</sup>  
<sup>1</sup> Hiroshima Univ., <sup>2</sup> Okayama Univ.

**P-08 Effect of the released bisphosphonate from HA-Bis composite on osteoclast**

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

**Cell, Tissue, and Biological Reaction**

**P-10 Development of HAP carrier with micro-porosities Part 2 A cell culture examination**

Nemoto Kimiya<sup>1</sup>, Koishi Yoshikazu<sup>1</sup>, Maeda Takahide<sup>1</sup>, Ogata Yorimasa<sup>1</sup>, Ishizaki Tsutomu<sup>2</sup>  
<sup>1</sup>Nihon Univ. at Matsudo, <sup>2</sup>Sangi

**P-11 In vivo study of thin hydroxyapatite coating on titanium by use of a discharge method**

Yamamoto Hiroki, Sibata Yo, Hosaka Mizuyo, Miyazaki Takashi  
Showa Univ.

**P-12 Imparting storage/release functions to cross-linked polymers -uptake and release of acriflavine and its analogues into collagen film and acetylcellulose film-**

Cheng Yali, Nezu Takashi, Morikawa Tomohiro, Terada Yoshihiro  
Kyushu Univ.

**P-13 Denaturation and secondary structures of collagen in dentin adhesion**

Nezu Takashi, Fukuda Kyosuke, Nagadome Hatsumi, Terada Yoshihiro  
Kyushu Univ.

**Composite Resin**

**P-14 Depth of cure and surface hardness of light-cured composite resins irradiated using filters that simulate dentin**

Arikawa Hiroyuki, Kanie Takahito, Fujii Koichi, Ban Seiji  
Kagoshima Univ.

**P-15 Radiopaque characteristics of composite resin -Part3 Effect of strontium and zirconium**

Aoyagi Yujin, Takahashi Hidekazu, Iwasaki Naohiko, Jin Jingyue, Babasono Kenichi  
Tokyo Medical and Dental Univ.

**P-16 A study on bond strength of dentin to new types of composite resin core material**

Tsubota Yuji, Matsumoto Yukifumi, Nishimura Yasushi, One Takatoshi, Otsuka Masanori, Fukagawa Nao,  
Hashimoto Koh, Fukushima Shunji  
Tsurumi Univ.

**P-17 Sliding wear at occlusal margin of indirect composite restoration**

Otani Kazunori, Koizumi Hiroyasu, Saitoh Masahiro, Sasao Michiaki, Matsumura Hideo, Nishiyama Minoru  
Nihon Univ.

**P-18 Application of mega-filler to core build-up with composite resin**

Hirabayashi Shigeru, Tsubota Yuji, Nishimura Yasushi, Ohne Takatoshi, Fukushima Syunji

## Adhesive

### P-19 Self-etching primer comprised of amide monomer

Nishiyama Norihiro<sup>1</sup>, Nomura Mitsuru<sup>1</sup>, Teshima Hideki<sup>1</sup>, Nemoto Kimiya<sup>1</sup>, Suzuki Kazuomi<sup>2</sup>

<sup>1</sup>Nihon Univ. at Matsudo, <sup>2</sup>Okayama Univ.

### P-20 Dentin bonding performance of SuperBond Quick

Shimozono Akari, Arata Masami, Zeng Weiping

SUN MEDICAL CO., LTD.

### P-21 Effect of water contained in dentin on the bonding interfaces of all-in one-adhesives

Yoshida Eiji, Uno Shigeru, Nodasaka Yoshinobu, Kaga Masayuki

Hokkaido Univ.

### P-22 Bonding and antibacterial sensitivity of MMA/TBB resin containing amphiliic lipids -Effect of L-alanine n-alky ester/p-toluensulfonic acid salts-

Kazuno Taichi<sup>1</sup>, Fukushima Tadao<sup>1</sup>, Inoue Yusuke<sup>2</sup>, Hayakawa Tohru<sup>3</sup>, Kaminishi Hidenori<sup>3</sup>, Miyazaki Koji<sup>1</sup>

<sup>1</sup>Fukuoka Dental College, <sup>2</sup>Fukuoka College of Health Science, <sup>3</sup>Nihon Univ. at Matsudo

### P-23 Modification effect of silane coupling agents containing poly(fluoro)alkyltrimethoxysilane (Part 13) - Coupling effenct of silane coupling agents containing double bond -

Nihei Tomotaro<sup>1</sup>, Kurata Shigeaki<sup>1</sup>, Ohashi Katsura<sup>1</sup>, Kondo Yukishige<sup>2</sup>, Umemoto Kozo<sup>1</sup>, Yoshino Norio<sup>2</sup>, Teranaka Toshio<sup>1</sup>

<sup>1</sup>Kanagawa Dental College, <sup>2</sup>Tokyo Univ. of Sci.

### P-24 Bond strength of resin cement and temporary cementation to surface coated abutment tooth

Saitoh Masahiro<sup>1</sup>, Kaneda Mitsumasa<sup>1</sup>, Miyanaga Kouichi<sup>1</sup>, Saigou Masataka<sup>1</sup>, Narikawa Masashi<sup>1</sup>, Nakabayashi Nobuo<sup>2</sup>, Nishiyama Minoru<sup>1</sup>

<sup>1</sup>Nihon Univ., <sup>2</sup>Tokyo Medical and Dental Univ.

### P-25 Influence of oxidation treatment temperature and time on adhesion durability of light-cured facing resin to Titanium castings

Ishida Yoshinori, Hoshino Takumi, Okada Hidetoshi, Noguchi Hiroshi, Nagayama Katsuya  
Ohu univ.

## Denture Base Materials

### P-26 Relationship between composition and dynamic viscoelasticity after gelation of tissue conditioners based on PEMA

Murata Hiroshi, Hong Guang, Hamada Taizo  
Hiroshima Univ.

### P-27 Influence of Silicone Remover on Bond Strength of Silicone Soft Denture Liners to a Denture Base Resin

Hong Guang, Murata Hiroshi, Hamada Taizo  
Hiroshima Univ.

### P-28 Elastic recovery and consistency of silicone resilent lining materials for denture during setting

Fujii Koichi, Arikawa Hiroyuki, Kanie Takahito, Ban Seiji  
Kagoshima Univ.

## Luting Materials

### P-29 Effects of enamel surface curvature on orthodontic adhesive shear bond strength

Hioki Makiha<sup>1</sup>, Nakahara Rizako<sup>1</sup>, Nakasone Yuji<sup>2</sup>

<sup>1</sup>The Nippon Dental Univ., <sup>2</sup>Tokyo Univ. of Sci.

### P-30 Application of an ultrasonic pluse technique on determination of hardening characteristics of luting

cements

Inage Hirohiko, Miyazaki Masashi, Kurokawa Hiroyasu, Ando Susumu  
Nihon Univ.

**P-31 Study on improvement of retention force with surface treatment of Au-Ag-Pd alloy**

Terashima Nobuyoshi, Yoshida Takamitsu, Horasawa Noriko, Yokoyama Kouta, Niino Tooyu, Tumura  
Tooru, Nagasawa Sakae, Ito Michio  
Matsumoto Dental Univ.

**Ceramic and Post**

**P-32 Effect of test methods on flexural strength of dental ceramics**

Jin Jigue, Takahashi Hidekazu, Iwasaki Naohiko, Aoyagi Yujin, Babasono Kenichi  
Tokyo Medical and Dental Univ.

**P-33 Prediction of ductile/brittle transition condition in grinding of dental porcelain**

Wakamatsu Nobukazu, Kamemizu Hideo, Iijima Mayumi, Horiguchi Takashi, Adachi Masanori, Goto  
Takayasu, Doi Yutaka  
Asahi Univ.

**P-34 Flexural properties of commercial fiber post after accelerating aged test**

Iwasaki Naohiko, Aoyagi Yujin, Jin Jingyue, Babasono Kenichi, Takahashi Hidekazu  
Tokyo Medical and Dental Univ.

**P-35 Effect of Cyclic Loading to Fiber Post**

One Takatoshi, Tsubota Yuji, Nishimura Yasushi, Otsuka Masanori, Fukagawa Nao, Hashimoto Koh,  
Fukushima Shunji  
Tsurumi Univ.

**Dental Alloy and Cast**

**P-36 Relationship between heat treatment and mechanical properties for titanium**

Shiratori Norihiko, Yoshida Takamitsu, Terashima Nobuyoshi, Nagasawa Sakae, Onizawa Toru, Mori Koji,  
Ono Hirohito, Kuroiwa Akihiro, Ito Michio  
Matsumoto Dental Univ.

**P-37 Deformation properties of Ti-6Al-7Nb alloy removable partial denture**

Srimaneepong Viritpon<sup>1</sup>, Yoneyama Takayuki<sup>1, 2</sup>, Doi Hisashi, Kobayashi Equo, Wakabayashi Noriyuki<sup>1</sup>,  
Hamanaka Hitoshi<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Univ. of Tokyo

**P-38 Tensile strength and porosity of experimental Ti-Zr-Sn dental alloys**

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

**P-39 Laser weld's joining of dental alloys (Part 2) Joining of Co-Cr alloy and type 4 gold alloy**

Yoshida Takamitsu, Nagasawa Sakae, Terashima Nobuyoshi, Nakajima Mitsuhiro, Yamakura Kazunori,  
Mizoguchi Toshihide, Yagasaki Hiroshi, Ito Michio  
Matsumoto Dental Univ.

**P-40 Fusing of the multi-purpose alloy on the gold metal frame by electroforming**

Yamaguchi Yoko, Takahashi Hidekazu, Shiota Makoto, Iwasaki Naohiko  
Tokyo Medical and Dental Univ.

**P-41 Effects of heat treatments on the mechanical properties of 35Ag-30Pd-20Au-15Cu alloy containing Sn or In**

Churnjitiapirom Pornkiat, Goto, Shin-ichi, Nakai Akira, Miyagawa Yukio, Oguro Hideo  
Sch. of Dentistry at Niigata, The Nippon Dental Univ.

**P-42 Improve of super-elasticity dental gold alloys Part 2 some properties of 7 kinds of mother alloys added Ru, Hf, La, Sm and Gd**

Yoshida Takaichi, Aoki Harumi, Okamura Hiroyuki

The Nippon Dental Univ.

**P-43 A Study on the Fitness of Titanium Product Restoration Part 3-Fitness of MOD Inlay**

Anzai Masaaki, Kuroiwa Akihiro, Uda Go, Minemura Takashi, Yamamoto Akio, Kasahara Etsuo, Igarashi Yasmusasa, Ito Mitsuo  
Matsumoto Dental Univ.

**P-44 Casting of MOD inlay using the rings a hole on both sides using gold-silver-palladium alloy**

Ohkuma Kazuo  
The Nippon Dental Univ.

**Research Report**

A questionnaire on safety of dental materials to clinician members of the society - Detail of the questionnaire -

Imai Yohji<sup>1</sup>, Imai Koichi<sup>2</sup>, Kakuta Kiyoshi<sup>3</sup>, Hirabayashi Sigeru<sup>4</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Osaka Dental Univ., <sup>3</sup>The Nippon Dental Univ., <sup>4</sup>Tsurumi Univ.

**Computer Aided**

**P-45 Development of Electrical Standard Protocol System in Dentistry**

Kawai Tatsushi, Kabutomori Masamichi, Takei Yukiko, Nakano Kenjiro, Itou Toshiki, Suzuki Tomoo, Takahasi Kenta, Andou Kimitoshi, Satou Yousuke, Kawai Toshiki, Uematsu Yasuaki, Nishi Takeshi, Narita Yousuke Aichi-gakuin Univ.

**P-46 The security system for information leakage prevention of personal computer**

Arai Koichi  
Meikai Univ.

**P-47 Application of Rapid Prototyping to Dentistry (Part 2) - Support for orthodontics: Fabrication of Set up model-**

Lowmunkong Rungnapa<sup>1</sup>, Sohmura Taiji<sup>1</sup>, Hojo Hirokazu<sup>2</sup>, Takahashi Junzo<sup>1</sup>

<sup>1</sup>Osaka Univ, <sup>2</sup>Osaka Dental Univ.

**P-48 Accuracy of crowns fabricated by dental CAD/CAM Effect of different materials and rest diameter**

Yara Atushi<sup>1</sup>, Ogura Hideo<sup>1</sup>, Kakuta Kiyoshi<sup>1</sup>, Sakamoto Yuuki<sup>2</sup>

<sup>1</sup>The Nippon Dental Univ., <sup>2</sup>GC CORP.

**14:15-16:00 General Presentation (Oral)**

**14:15-15:15 Computer Aided**

**A-06 Three-dimensional modeling of dental casts using B-spline function**

Hirogaki Yasushi<sup>1</sup>, Sohmura Taiji<sup>2</sup>, Takahashi Junzo<sup>2</sup>

<sup>1</sup>Communication Research Lab., <sup>2</sup>Osaka Univ. Biomaterial

**A-07 Pulse-Shaped Laser Welding of Dental Metals (Part2)**

Togaya Toshihiro  
Kyoto Univ.

**A-08 An evaluation of new bone formation by three-dimensional X-ray Micro Focus CT - 3. Three dimentional finite element analysis -**

Fukase Yasumasa, Takahashi Kensuke, Uehara Hiroyuki, Sasao Michiaki, Kaketani Masahiro, Matsumoto Mitsuhiro, Nishiyama Minoru  
Nihon Univ.

**A-09 Application of haptic device to dentistry (Part 5) Support for dental implantology: Attempt for clinical application**

Sohmura Taiji, Kusumoto Naoki, Lowmunkong Rungnapa, Nishida Masahiko, Wakabayashi Kazumichi, Yamada Shinichi, Kojima Tetsuya, Nakamura Takashi, Yatani Hirofumi, Takahashi Junzo  
Osaka Univ.

**15:15-16:00 Material Testing**

#### A-10 Measurement methods for fracture toughness value of dental ceramics by IF method

Fujishima Akihiro, Maehara Satoshi, Miyazaki Takashi  
Showa Univ.

#### A-11 Dentine adhesive system: bonding area(theory)

Wakasa Kunio<sup>1</sup>, Ikeda Atsuharu<sup>1</sup>, Nomura Yuuji<sup>1</sup>, Hirata Isao<sup>1</sup>, Okazaki Masayuki<sup>1</sup>, Shintani Hideaki<sup>1</sup>, Sano Hidehiko<sup>2</sup>

<sup>1</sup>Hiroshima Univ, <sup>2</sup>Hokkaido Univ

#### A-12 Fatigue strength and the change in strain of super-elastic Ti-Ni alloy dental castings

Kasuga Jumpei<sup>1</sup>, Yoneyama Takayuki<sup>2</sup>, Doi Hisashi<sup>1</sup>, Kobayashi Equo<sup>1</sup>, Fukushima Osamu<sup>1</sup>, Hamanaka Hitoshi<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Univ. of Tokyo

### 16:15-18:15 Symposium

## Sunday, 11 Apr 2004

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

#### 9:00-9:45 Gypsum and Investment

##### A-13 Thermal behavior of gypsum-bonded investment mold in a furnace (I) Weight change and DTA

Mori Toshiko<sup>1</sup>, Kim Kyo Han<sup>1</sup>, Matsuya Shigeki<sup>2</sup>, Ishikawa Kunio<sup>2</sup>

<sup>1</sup>Kyungpook National Univ., <sup>2</sup>Kyushu Univ.

##### A-14 Thermal behavior of gypsum-bonded investment mold in a furnace

Udoh Koh-ichi<sup>1</sup>, Nakagawa Masaharu<sup>1</sup>, Matsuya Shigeki<sup>1</sup>, Ishikawa Kunio<sup>1</sup>, Mori Toshiko<sup>2</sup>, Kim Kyo Han<sup>2</sup>

<sup>1</sup>Kyushu Univ., <sup>2</sup>Kyungpook National Univ.

##### A-15 Transformation of gypsum into hydroxyapatite monolith in phosphate solutions

Suzuki Yumiko, Matsuya Shigeki, Udoh Koh-ichi, Nakagawa Masaharu, Koyano Kiyoshi, Ishikawa Kunio  
Kyushu University

### 9:45-10:15 Surface Modification 1

##### A-16 Effect of heat treatments on bioactivity of surface-modified titanium with calcium

Kon Masayuki<sup>1</sup>, Sultana Razia<sup>1</sup>, Hanawa Takao<sup>2</sup>, Miyamoto Youji<sup>3</sup>, Asaoka Kenzo<sup>1</sup>

<sup>1</sup>Tokushima Univ., <sup>2</sup>Nat. Inst. Mater. Sci., <sup>3</sup>Akita Univ.

##### A-17 Cytocompatibility of Hydroxyapatite Thin Film Deposited by Laser Abrasion

Hashimoto Yoshiya<sup>1</sup>, Kawashima Masami<sup>2</sup>, Hontsu Shigeki<sup>2</sup>, Higuchi Yuichi<sup>1</sup>, Komasa Yutaka<sup>1</sup>, Nakamura Masaaki<sup>1</sup>

<sup>1</sup>Osaka Dental Univ., <sup>2</sup>Kinki Univ.

### 10:15-11:00 Surface Modification 2

##### A-18 Hydroxyapatite Thin Film Formation on a Ti Substrate by Molecular Precursor Method Part 1 -Effect of Firing Temperature-

Takahashi Kenichi<sup>1</sup>, Hayakawa Tohru<sup>1</sup>, Hara Hiroki<sup>2</sup>, Yoshinari Masao<sup>3</sup>, Sato Mitsunobu<sup>2</sup>, Nemoto Kimiya<sup>1</sup>

<sup>1</sup>Nihon Univ. at Matsudo, <sup>2</sup>Kougakuin Univ, <sup>3</sup>Tokyo Dental College

##### A-19 Preparation of apatite coating onto Ti from solution

Honda Yutaka<sup>1</sup>, Inuzuka Masahiro<sup>1</sup>, Nakamura Satoshi<sup>1</sup>, Nakamura Miho<sup>1</sup>, Sekijima Yasutaka<sup>2</sup>, Kobayashi Takayuki<sup>1</sup>, Yamashita Kimihiro<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Chiba Inst. Tech.

**A-20 Cell and tissue compatibility of nickel-free stainless steel manufactured with nitrogen absorption process**

Hanawa Takao<sup>1,3</sup>, Yamamoto Akiko<sup>1</sup>, Kuroda Daisuke<sup>1</sup>, Yokoyama Atsuro<sup>2</sup>, Kawasaki Takao<sup>2</sup>, Kohgo Takao<sup>4</sup>

<sup>1</sup>Nat. Inst. Mater. Sci., <sup>2</sup>Hokkaido Univ, <sup>3</sup>Univ. Tsukuba, <sup>4</sup>Hokkaido Univ.

**10:00-15:00 General Presentation (Poster)****Cell, Tissue, and Biological Reaction****P-49 Response of osteoblast-like cells on porous sintered titanium**

Takeda Shoji<sup>1</sup>, Oshima Hiroshi<sup>1</sup>, Kakehi Shimpei<sup>1</sup>, Kato Koji<sup>2</sup>, Nakamura Masaaki<sup>1</sup>

<sup>1</sup>Osaka Dent Univ., <sup>2</sup>Kogi

**P-50 Effects of UV-O<sub>3</sub> irradiation on wettability and cell adhesion of titanium and titanium alloy**

Kakehi Shimpei, Oshima Hiroshi, Takeda Shoji, Ueda Akihiro, Nakamura Masaaki

Osaka Dental Univ

**P-51 Apatite coating on titanium mesh using hydrothermal-electrochemical method -Adsorption of protein-**

Yuda Akihiko, Iwaya Yukari, Izumi Yuich, Ban Seiji

Kagoshima Univ.

**P-52 Surface shape change and cell proliferation change of H<sub>2</sub>O<sub>2</sub> treated Ti**

Mizoguchi Toshihide, Yoshida Takamitsu, Nagasawa Sakae, Terashima Nobuyoshi, Yagasaki Hiroshi, Ito Michio

Matsumoto Dental Univ.

**P-53 Protein immobilization on hydrophilic poly-lactic acid**

Nagai Megumi<sup>1</sup>, Hayakawa Tohru<sup>1</sup>, Yoshinari Masao<sup>2</sup>, Makimura Masaharu<sup>1</sup>, Nemoto Kimiya<sup>1</sup>

<sup>1</sup>Nihon Univ. at Matsudo, <sup>2</sup>Tokyo Dental College

**P-54 Cell viability of photo fabrication resins**

Imai Koichi, Ueda Akihiro, Nakamura Masaaki

Osaka Dental Univ.

**Composite Resin****P-56 Enamel micro-cracks produced around composite restorations of less polymerization shrinkage composite resin**

Han linlin, Ishizaki yuko, Okamoto akira, Fukushima masayoshi, kota kohichi, Okiji takashi  
Niigata Univ

**P-57 Degree of conversion of commercial indirect composite**

Kawase Hiroyuki, Kawamoto Yoshikazu, Saitoh Masahiro, Nishiyama Minoru, Kakehashi Yoshiyuki,  
Mastumura Hideo  
Nihon Univ.

**P-58 Thermal properties of light-activated cavity liners -Evaluation from composition analysis-**

Saitoh Masahiro, Hirose Hideharu, Wakashima Mitsuru, Masutani Shigeyuki, Kojima Taishi, Nishiyama  
Minoru  
Nihon Univ.

**Adhesive****P-59 Development of the adhesive system for modified sealed restoration effect of HEMA/solvent combinations on bond strength to demineralized dentin**

Doi Junichi, Itota Toshiyuki, Nakabo Satoshi, Torii Yasuhiro, Yoshiyama Masahiro  
Okayama Univ.

**P-60 Tensile bond strength of newly-developed screw-installed orthodontic bracket**

Narita Sachiyo, Komoriyama Manabu, Hanyuda Ai, Hirashita Ayao, Hirano Susumu  
Tsurumi Univ.

**P-61 Influence of bovine teeth obtained from different area on enamel and dentin bond strength**

Sato Hikaru, Miyazaki Masashi, Sato Tomomi, Higaki Jun, Ando Susumu  
Nihon Univ.

**P-62 Water durability of resin bonds to dental metals treated with adhesion promoting monomers for precious metals**

Kadoma Yoshinori  
Tokyo Medical and Dental Univ.

**Ceramic Materials**

**P-63 Preparation of carbonated apatite by treatment of calcite in various phosphate solutions**

Lin Xin, Matsuya Shigeki, Udoch Koh-ichi, Nakagawa Masaharu, Ishikawa Kunio, Terada Yoshihiro  
Kyushu University

**P-64 Development of hard-tissue substitute of carbonate apatite by superplastic deformation - Biocompatibility-**

Adachi Masanori, Wakamatsu Nobukazu, Goto Takayasu, Kamemizu Hideo, Iijima Mayumi, Horiguchi  
Takashi, Doi Yutaka  
Asahi Univ.

**P-65 Relation between the strength and solubility of zirconium-containing glass fibers with immersion in simulated body fluids**

Kobayashi Masahiro<sup>1</sup>, Kon Masayuki<sup>2</sup>  
<sup>1</sup>Chiba Inst. Tech., <sup>2</sup>Tokushima Univ.

**P-66 Fusion of calcium phosphate to enamel surface with a CO<sub>2</sub> laser -Phase change in CO<sub>2</sub> laser-irradiated powder compacts of MCPM and DCPD -**

Goto Hirosuke, Wakamatsu Nobukazu, Iizima Mayumi, Doi Yutaka, Tamura Yasuo  
Asahi Univ

**P-67 Recycling of dental gypsum-bonded investment**

Zhang Zutai, Tamaki Yukimichi, Hotta Yasuhiro, Takashiba Shigeyuki, Okazaki Yuichiro, Miyazaki Takashi  
Showa University

**Impression Materials and Model Materials**

**P-68 Effect of storage of alginate impressions following spray with disinfectant solutions on the dimensional accuracy and deformation of stone models -Storage time-**

Hiraguchi Hisako, Nakagawa Hisami, Kurotani Tomoko, Kitoh Kenji, Miyazaki Kiyomi, Nishiyama Minoru  
Nihon Univ.

**P-69 Effect of storage of alginate impressions following spray with disinfectant solutions on the surface roughness of stone models**

Nakagawa Hisami, Hiraguchi Hisako, Hagino Norihito, Yoshihashi Kazue, Inoue Taro, Nakajima Yoshio,  
Nishiyama Minoru  
Nihon Univ.

**P-70 Surface roughness and detail producibility of stone models obtained from agar impressions immersed in phthalal disinfectant**

Tanabe Naoki, Uchida Hirobumi  
Nihon Univ.

**P-71 Disinfection of Stone Cast by Microwave. Part4.The influence of Dental Stone**

Yamada Yasuhiro, Miyao Motonobu, Fujiwara Syu, Nagasawa Toru  
Asahi Univ

**Pulp Capping**

**P-72 Leachability of temporary restorative resin using non-phthalate ester plasticizers**

Kawahara Toshiya, Nomura Yuji, Shibata Satoki, Tanaka Nobuyuki, Teshima Wataru, Fujitani Morioki, Okazaki Masayuki, Shintani Hideaki  
Hiroshima Univ.

**P-73 Leachability of phthalates from resinous temporary filling materials**

Hongo Toshio<sup>1</sup>, Hikage Sakari<sup>2</sup>, Sato Atsuhige<sup>3</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Health Sciences Univ. of Hokkaido, <sup>3</sup>Showa Univ

**P-74 Trial production of expansive temporary sealing -material sealing-**

Noguchi Hiroshi, Okada Hidetoshi, Ishida Yoshinori, Kakumoto Yoshimi, Oikawa Hitoshi, Nagayama Katsuya  
Ohu univ.

**Denture Base Materials**

**P-75 Shape memory alloy fiber reinforced resin matrix smart composite (Part 9) -shape recovery behavior with heating-**

Hamada Kenichi, Kawano Fumiaki, Asaoka Kenzo  
Tokushima Univ.

**P-76 Light-curing type reinforcement used a glass cloth for denture base resin. -On the effect of oligomers for preimpregnation-**

Kanie Takahito, Arikawa Hiroyuki, Fujii Koichi, Ban Seiji  
Kagoshima Univ.

**P-77 Influence of dispersibility of short fibers with zirconium-containing glass on strengthening of fiber-glass-reinforced denture base resin**

Kon Masayuki<sup>1</sup>, Kobayashi Masahiro<sup>2</sup>, Kawano Fumiaki<sup>1</sup>, Asaoka Kenzo<sup>1</sup>

<sup>1</sup>Tokushima Univ., <sup>2</sup> Chiba Inst. Tech.

**Alloy and Corrosion**

**P-78 Effects of Cr contents on galvanic corrosion of magnetic stainless steels in contact with the platinum-iron magnetic alloy**

Nakamura Keisuke<sup>1</sup>, Haoka Katsunori<sup>2</sup>, Takada Yukyo<sup>1</sup>, Kimura Kohei<sup>1</sup>, Okuno Osamu<sup>1</sup>

<sup>1</sup>Tohoku Univ., <sup>2</sup> Haoka Dental Clinic

**P-79 Quantity of ion released from Ti-Ni alloy with electrolytic treatments in relation to components of electrolytes**

Fukushima Osamu<sup>1</sup>, Yoneyama Takayuki<sup>1, 2</sup>, Doi Hisashi<sup>1</sup>, Kobayashi Equo<sup>1</sup>, Hamanaka Hitoshi<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Univ. of Tokyo

**P-80 Corrosion fatigue properties of alpha + beta type Ti-5Al-13Ta alloy castings in 0.9% NaCl solution**

Doi Hisashi<sup>1</sup>, Yoneyama Takayuki<sup>1, 2</sup>, Kobayashi Equo<sup>1</sup>, Hamanaka Hitoshi<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Univ. of Tokyo

**P-81 The reduction behavior of hydrogen peroxide on titanium and titanium alloy in phosphate solution**

Nasuda-Kouyama Akemi, Nomoto Shigemitsu, Kikuchi Hisaji, Nishiyama Minoru  
Nihon Univ.

**P-82 Hydrogen embrittlement properties of work-hardened Ni-Ti superelastic alloy in fluoride solutions**

Yokoyama Ken'ichi, Kaneko Kazuyuki, Moriyama Keiji, Asaoka Kenzo  
Tokushima Univ.

**P-83 Corrosion resistance of Nb added Ti-Zr based alloys in a pseudo-physiological environment**

Kobayashi Equo<sup>1</sup>, Doi Hisashi<sup>1</sup>, Yoneyama Takayuki<sup>1, 2</sup>, Hamanaka Hitoshi<sup>1</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Univ. of Tokyo

**P-84 Surface Modification of Dental Metal by Electro Beam System (Part 1) Change of Surface Roughness**

Wakabayashi Kazumichi, Sohmura Taiji, Nakamura Takashi, Kojima Tetsuya, Hiarata Tetsuya, Kinuta Sohichiro, Takahashi Junzo, Yatani Hirofumi  
Osaka Univ.

## Computer Aided, Others

**P-85 Machining of Crown and abutment by using an Optical profile machining with 5 Axis Control System.**  
An Hiroshi, Nishikawa Tatsuya  
Osaka Electro-Communication Univ.

**P-86 Automatic Fabrication of Prostheses Using a CAD/CAM System (Part22) Reproduction of Dentition Data by New Digitizing System**

Hotta Yasuhiro, Ozawa Atsushi, Fujiwara Toshihisa, Miyazaki Takashi, Satou Masashi  
Showa Univ.

**P-87 Application of haptic device to dentistry (Part 6) - Support for surgical orthodontics: comparison of pre-and post operation -**

Sohmura Taiji, Iida Seiji, Aikawa Tomonao, Kitagawa Taiji, Kogo Mikihiko, Takahashi Junzo  
Osaka Univ

**P-88 A Mechanical Study on Fixed Partial Denture with Composite Resin for Anterior**

Yokoyama Daiichiro, Shinya Akikazu, Matsuda Tetuzi, Shinya Akiyoshi  
Nippon Dental Univ.

**P-89 The development of the water supply faucet mounting type ozone disinfection vessel**

Arai Koichi  
Meikai Univ.

## Research Report

**A questionnaire on safety of dental materials to clinician members of the society - Detail of the questionnaire -**

Imai Yohji<sup>1</sup>, Imai Koichi<sup>2</sup>, Kakuta Kiyoshi<sup>3</sup>, Hirabayashi Sigeru<sup>4</sup>

<sup>1</sup>Tokyo Medical and Dental Univ., <sup>2</sup>Osaka Dental Univ., <sup>3</sup>The Nippon Dental Univ., <sup>4</sup>Tsurumi Univ.

## 13:00-17:00 General Presentation (Oral)

### 13:00-13:45 Cell and Tissue 2

**A-21 Nano structure control of poly(L-lactide) by plasma treatment and interface reaction**

Teraoka Fumio, Hara Masashi, Nakagawa Masafumi, Takahashi Junzo  
Osaka Univ.

**A-22 Evaluation of the resin-modified glass ionomer cement containing bioactive glasses by osteoblastic cell culture**

Matsuya Shigeki<sup>1</sup>, Ana Ika Dewi<sup>1</sup>, Ishikawa Kunio<sup>1</sup>, Yuasa Tetsuya<sup>2</sup>, Miyamoto Youji<sup>3</sup>

<sup>1</sup>Kyushu Univ, <sup>2</sup>Tokushima Univ., <sup>3</sup>Akita Univ.

**A-23 Effect of Nano/Micro particles on living body**

Tamura Kazuchika<sup>1</sup>, Takashi Noriyuki<sup>1</sup>, Iosif Rosca<sup>1</sup>, Akasaka Tukasa<sup>1</sup>, Atsumi Takashi<sup>2</sup>, Satou Yoshinori<sup>2</sup>, Watari Fumio<sup>1</sup>, Totsuka Yasuniri

<sup>1</sup>Hokkaido Univ., <sup>2</sup>Tohoku Univ.

## 13:45-14:30 Adhesive

**A-24 Diffusion of resin monomer to dentin and its effect on strength**

Kamishima Naoko, Ohata Noboru, Uo Motohiro, Ohkawa Shouji, Akasaka Tsukasa, Sugawara Toshi, Watari Fumio  
Hokkaido Univ.

**A-25 The laboratory performance of a newly designed one bottle/one step resin bonding**

Yamada Toshimoto<sup>1</sup>, Sugizaki Jumpei<sup>1</sup>, Morigami Makoto<sup>1</sup>, Arita Akishi<sup>2</sup>, Kojima Shinichi<sup>2</sup>, Mashio Go<sup>2</sup>, Akabane Shoji<sup>2</sup>

<sup>1</sup>Toranomon Hospital Dental Clinic, <sup>2</sup>GC CORPORATION R&D

**A-26 Influence of hybridization effectiveness on long-term durability of total-etch adhesives bonded to dentin**

Yoshida Yasuhiro, Suzuki Kazuomi  
Okayama Univ.

**14:30-15:00 Molding**

**A-27 Fabricated of sintered carbon nanotubes and their properties.**

Wang Wei<sup>1</sup>, Kondo Hideomi<sup>1</sup>, Yokoyama Atsuro<sup>1</sup>, Kawasaki Takao<sup>1</sup>, Uo Motohiro<sup>1</sup>, Ohkawa Syouji<sup>1</sup>, Akasaka Tsukasa<sup>1</sup>, Sugawara Toshi<sup>1</sup>, Ohmori Mamoru<sup>2</sup>, Watari Fumio<sup>1</sup>

<sup>1</sup>Hokkaido Univ. <sup>2</sup>Tohoku University

**A-28 Preparation of  $\beta$ -TCP sheet using doctor blade method**

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

**15:00-15:45 Resin**

**A-29 The study of the fluorescent glass filler for composite resin**

Uo Motohiro, Akasaka Tsukasa, Rosca Iosif, Ohkawa Shoji, Sugawara Toshi, Watari Fumio, Tani Kazutoshi, Morita Manabu  
Hokkaido Univ.

**A-30 Repairing of acrylic base resin and artificial tooth using adhesive resin. Effect of heating after priming to ceramic tooth on bonding strength.**

Yamaga Taniichirou, Harashima Atsushi, Honda Muneaki, Yamazaki Atsushi, Kuramochi Ken-ichi, Takahashi Yoko, Hibino Yasushi, Nakajima Hiroshi  
Meikai Univ.

**A-31 Improvement of Dental Resins in Properties (Part 9) - Photo- and thermo-polymerization behavior and mechanical properties of UDMA/MAA system -**

Tanaka Jiro, Suzuki Kazuomi  
Okayama Univ.

**15:45-16:30 Casting Alloys**

**A-32 Friction and wear in the fretting and sliding dental alloys(part2)**

Fukui Hisao<sup>1</sup>, Tsuruta Syouzou<sup>1</sup>, Kaikawa Kentarou<sup>1</sup>, Touyama Masashi<sup>1</sup>, Niinomi Mitsuo<sup>2</sup>  
<sup>1</sup>Aichi-gakuinUniv., <sup>2</sup>Toyohashi Univ.

**A-33 Effect of Au addition on the corrosion resistance of Ag-In casting alloy**

Endo Kazuhiko, Nakajima Tomohito, Ohno Hiroki, Kawashima Isao, Yamane Urou  
Health Sciences Univ. of Hokkaido

**A-34 Effects of casting defect on fatigue strength of dental Ag-Pd-Cu-Au-Zn alloy**

Mori Masaki<sup>1</sup>, Niinomi Mitsuo<sup>1</sup>, Mizumoto Toshio<sup>1</sup>, Akahori Toshikazu<sup>1</sup>, Fukui Hisao<sup>2</sup>, Takeda Junji<sup>1</sup>  
<sup>1</sup>Toyohashi Univ. of Technology, <sup>2</sup>Aichi-Gakuin Univ.

**16:30-17:00 Clinical Evaluation**

**A-35 Five-year clinical evaluation of resin composite restorations**

Nikaido Toru, Takada Tsunehiko, Kitasako Yuichi, Ogata Miwako, Shimada Yasushi, Yoshikawa Takako, Nakajima Masatoshi, Otsuki Masayuki, Tagami Junji  
Tokyo Medical and Dental Univ.

**A-36 The clinical survey of cervical lesions with the first appointment patients**

Morigami Makoto, Sugizaki Jumpei, Kondo Masaya, Yamada Toshimoto  
Toranomon Hospital Dental Clinic