

## The 73<sup>th</sup> General Session of the Japanese Society for Dental Materials and Devices (JSDMD)

April 20 (Saturday) - 21 (Sunday), 2019

Tokyo Dental College Suidobashi Annex School Building

2-1-14 Kanda misakicho, Chiyoda-ku, Tokyo, 101-0061, Japan

April 20 (Saturday)

▪ Hall A

9:25 - 9:30 Opening Remark

9:30 - 10:15 Young Investigator Award Challenge

- A - 1 Acidity-induced release of zinc ion from BioUnion filler and its inhibitory effects on *Streptococcus mutans*  
○Liu Yuhan, Kohno Tomoki, Tsuboi Ririko, Kitagawa Haruaki, Imazato Satoshi  
Osaka University
- A - 2 Elucidation of antibacterial mechanism of Zn-incorporated porous oxide and effect on osteoblast cell activity  
○Shimabukuro Masaya, Tsutsumi Yusuke, Nozaki Yusuke, Ashida Maki, Doi Hisashi, Hanawa Takao  
Tokyo Medical and Dental University
- A - 3 Thermal diffusion of iron on titanium surfaces to improve wear resistance  
○Yamaguchi Hirofumi, Takahashi Masatoshi, Sasaki Keiichi, Takada Yukyo  
Tohoku University

10:15 - 10:45 General Presentation (Oral Session)

- A - 4 Control of isolated silanol groups for improving flexural strength of organic-inorganic composite with nano dual-network structure  
○Ikeda Hiroshi, Nagamatsu Yuki, Shimizu Hiroshi  
Kyusyu Dental University
- A - 5 *In silico* compression test of CAD/CAM composite molar crowns  
○Yamaguchi Satoshi, Lee Chunwoo, Nakase Yutaro, Imazato Satoshi  
Osaka University Graduate School of Dentistry

14:00 - 15:00 Special Lecture

Personal identification by means of racial characteristics of the human bones

Hashimoto Masatsugu  
Department of Forensic Odontology and Anthropology, Tokyo Dental College

15:10 - 16:40 General Presentation (Oral Session)

- A - 6 Effect of yttria content on low temperature degradation of high translucent zirconia  
○Ban Seiji, Iwata Jyunji, Asakura Masaki, Kawai Tatsushi  
Aichi Gakuin university
- A - 7 Improvement of mechanical properties of conventional type dental zirconia by monoclinic zirconia nanoparticle fusing  
○Okada Masahiro, Taketa Hiroaki, Torii Yasuhiro, Matsumoto Takuya  
Okayama University
- A - 8 Cytotoxic evaluation of metals - Measurement by bioluminescence based an anti-oxidant responsive element reporter assay -  
○Hori Miki, Suzuki Takahiro, Fujimoto Kotaro, Kawai Tatsushi  
Aichi Gakuin University
- A - 9 Observation of bone regeneration and angiogenesis by an octacalcium phosphate material in rat calvarial bone defect model  
○Kurobane Tsuyoshi<sup>1</sup>, Shiwaku Yukari<sup>1</sup>, Anada Takahisa<sup>1,2</sup>, Hamai Ryo<sup>1</sup>  
Ikubo Masahiro<sup>1</sup>, Takahashi Tetsu<sup>1</sup>, Suzuki Osamu<sup>1</sup>  
Tohoku University, Kyusyu University
- A - 10 Bone formation of epigallocatechin gallate modified-gelatin sponge with multipotent progenitor cells in rat congenital cleft jaw  
○Sayama Satoshi, Hara Tomoya, Honda Yoshitomo, Baba Shnsuke  
Osaka Dental University

A - 11 Evaluation of the effect of pH on *in vivo* mineralization

○Hara Emillio Satoshi, Okada Masahiro, Matsumoto Takuya  
Okayama University Graduate School

17:15 – 19:15 Banquet (Hotel Metropolitan Edmont)

▪ Hall B

9:40 – 16:30 General presentation (Poster Session)

(10:50 - 11:50 Discussion)

P - 1 Investigation of build direction on the mechanical properties of three dimensional printing material

○Yang Shih-Hong, Yang Chin-Hsiung  
Central Taiwan University

P - 2 The development of liquid acrylamide monomer containing pulp capping materials

○Yoshihara Kumiko<sup>1</sup>, Nagaoka Noriyuki<sup>1</sup>, Yoshida Yasuhiro<sup>2</sup>  
<sup>1</sup>Okayama University, <sup>2</sup>Hokkaido University

P - 3 Chemical polymerizability of novel self-adhesive resin cement G-CEM ONE neo

○Murakami Shogo, Arita Akishi, Kumagai Tomohiro  
GC Corporation

P - 4 Charpy impact test measuring single-edge notched dental PEEK

○Mizuno Masanori, Tsuruta Shozo, Kawai Tatsushi  
Aichi Gakuin University

P - 5 Discoloration of light-cured surface coating agent applied on fiberglass-reinforced composite resin for CAD/CAM

○Shiozawa Maho, Suzuki Tetsuya, Iwasaki Naohiko, Takahashi Hidekazu  
Tokyo Medical and Dental University

P - 6 Development of new composite resin using fiber fillers

○Miura Daisuke, Miyasaka Taira, Aoki Harumi, Aoyagi Yusuke, Harada Yuu,  
Watanabe Satoru, Ishida Yoshiki  
The Nippon Dental University

P - 7 Detection and biological effect of acrylic acid copolymer adsorbed on filler of resins composite for abutment

○Igarashi Kazuaki, Moriue Taisuke, Ohki Tatsuya, Saito Ryuichi, Ishida Yosinori  
Okada Hidetoshi, Sekine Hideshi  
Ohu University School of Dentistry

P - 8 Mechanical property of the new bulk fill CR "Gracefil Bulk Flo"

○Murata Takayuki, Ueno Takayuki, Kumagai Tomohiro  
GC Corporation

P - 9 Properties of a new injectable universal composite resin

○Kajikawa Tatsuya, Kita Hirotaka, Hatanaka Kenji  
Kuraray Noritake Dental

P - 10 Evaluation of the technology of surface treatment on inorganic filler of composite resin materials

○Higuchi Koji, Ueno Takayuki, Kumagai Tomohiro  
GC Corporation

P - 11 Marginal leakage of endodontic temporary restorative materials to access cavity prepared of pre-endodontic composite build-up

○Kameyama Atsushi, Haruyama Akiko  
Tokyo Dental College

P - 12 Development of light-cured resin cements containing porous spherical zirconia particles

○Mizobuchi Shingo<sup>1,2</sup>, Takekawa Tomohiro<sup>1</sup>, Nakano Takafumi<sup>1</sup>, Kato Takahiro<sup>1</sup>, Yamazoe Masatoshi<sup>1</sup>  
Anraku Teruo<sup>1</sup>, Kobiyo Kazuya<sup>2</sup>, Otani Masataka<sup>2</sup>, Kan Kei<sup>2</sup>  
<sup>1</sup>YAMAKIN, <sup>2</sup>Kochi University

P - 13 Bond strength of self-adhesive resin cement containing silane coupling agent to CAD/CAM hybrid resin blocks

○Yoshida Keiichi, Sawase Takashi  
Nagasaki University

- P - 14 Effect of MMA-containing primer on bonding strength of resin cement to composite resin blocks for CAD/CAM  
○Asakura Masaki, Hayashi Tatsuhide, Iwata Junji, Uematsu Yasuaki, Mieki Akimichi, Kawai Tatsushi  
Aichi Gakuin University
- P - 15 Influence of storage periods on multipurpose primers on bonding silica with acrylic resin  
○Koizumi Hiroyasu, Okazaki Tomoyo, Mikami Wataru, Kodaira Akihisa, Matsumura Hideo  
Yoneyama Takayuki  
Nihon University School of Dentistry
- P - 16 Bond strength of light-cured bonding systems at region in root canal  
○Shimizu Shinsuke, Noda Mamoru, Takemoto Shinji  
Iwate Medical University
- P - 17 Bonding strength between different colored layers of multi-layered zirconia blocks  
○Iwasaki Naohiro, Yasue Toru, Shiozawa Maho, Takahashi Hidekazu  
Tokyo Medical and Dental University
- P - 18 Apatite formation on titanium oxide nano-tubes under a condition mimicking body fluid  
○Nishida Hisataka<sup>1,2</sup>, Sekino Tohru<sup>1</sup>  
<sup>1</sup>Osaka University, <sup>2</sup>Osaka Dental University
- P - 19 Apatite formation ability of Co-Cr alloy treated with surface modification by incorporation of apatite nuclei  
○Yabutsuka Takeshi  
Kyoto University
- P - 20 Thermal decomposition of carbonate apatite powder  
○Maruta Michito, Kajimoto Noboru, Tsuru Kanji  
Fukuoka Dental College
- P - 21 Thermal analysis of dental ring liners  
○Tsuruta Shozo, Aimu Kouki, Kawai Tatsushi, Yamamoto Ichihiro  
Aichi Gakuin University
- P - 22 Fractured surface analysis of porcelain-fused to cast Ti-Cr alloy  
○Sawada Tomofumi<sup>1,2</sup>, Sugawara Shiho<sup>1</sup>, Sasaki Kaori<sup>1</sup>, Saito Setsuo<sup>1</sup>, Taira Masayuki<sup>1</sup>, Takemoto Shinji<sup>1</sup>  
<sup>1</sup>Iwate Medical University, <sup>2</sup>University of Tübingen
- P - 23 Surface modification of low modulus Ti-Ni alloy by pulse oxidation method  
Hsu Hsueh-Chuan<sup>1</sup>, ○Loh Kuan-Yee<sup>1</sup>, Ho Wen-Fu<sup>2</sup>, Wu Shih-Ching<sup>1</sup>, Hsu Shih-Kuang<sup>1</sup>  
<sup>1</sup>Central Taiwan University of Science and Technology, <sup>2</sup>National University of Kaohsiung
- P - 24 Influence of strontium on properties of MgO-CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> bioactive glass  
Wu Shih-Ching<sup>1</sup>, ○Hu Chia-Wei<sup>1</sup>, Hsu Shih-Kuang<sup>1</sup>, Hsu Hsueh-Chuan<sup>1</sup>, Ho Wen-Fu<sup>2</sup>  
<sup>1</sup>Central Taiwan University of Science and Technology, <sup>2</sup>National University of Kaohsiung
- P - 25 Adhesion and Proliferation of Saos-2 and Ca9-22 on the grooved and pillared titanium surfaces  
○Kaga Naoyuki<sup>1</sup>, Akasaka Tsukasa<sup>2</sup>, Yoshida Yasuhiro<sup>2</sup>  
<sup>1</sup>Fukuoka Dental College, <sup>2</sup>Hokkaido University
- P - 26 Influence of acid etching treatment on surface properties of titanium  
○Okada Kei, Okada Masahiro, Matsumoto Takuya  
Okayama University
- P - 27 Soft tissue attachment to surface modified zirconia implants  
○Inuma Yohei, Hirota Masatsugu, Ohkubo Chikahiro, Hayakawa Toru  
Tsurumi University
- P - 28 Mixed adsorption of antibacterial proteins to titanium surface studied by twin QCM  
○Nezu Takashi, Hasan Gazi Mehedi, Nagano-Takebe Futami, Endo Kazuhiko  
Health Science University of Hokkaido
- P - 29 Comparison of accuracy using intraoral scanners with different lost teeth area model  
○Shiratori Sakura<sup>1</sup>, Shinya Akikazu<sup>1,2</sup>, Fujishima Shin<sup>1</sup>, Niitsuma Akinori<sup>1</sup>, Kuroda Soichi<sup>1</sup>  
Hatta Minoru<sup>1</sup>, Gomi Harunori<sup>1</sup>  
<sup>1</sup>The Nippon Dental University, <sup>2</sup>University of Turku
- P - 30 Edge stability of the novel lithium disilicate glass ceramic block for CAD/CAM  
○Akiyama Shigenori, Kojima Kenji, Kumagai Tomohiro  
GC Corporation

- P - 31 Development of controlled drug-release dental materials using caged nanoporous silica particles  
 ○Era Yuko<sup>1,2</sup>, Abe Shigeaki<sup>2</sup>, Tsukasa Akasaka<sup>2</sup>, Yasuhiro Yoshida<sup>2</sup>  
<sup>1</sup>Saitama Prefectural <sup>2</sup>University, Hokkaido University
- P - 32 Effect of adhesive components on the sustainability of antibacterial activities of experimental fluoride varnish  
 ○Shin Seong-jin, Son Ju-Lee, Oh Seunghan, Bae Ji-Myung  
 Wonkwang University
- P - 33 Evaluation of dental ceramics by the weight-drop impact test  
 ○Watanabe Satoru, Miyasaka Taira, Ishida Yoshiki, HaradaYuu, Aoki Harumi, Miura Daisuke, Aoyagi Yusuke  
 Nippon Dental University at Tokyo
- P - 34 Iosipescu shear strength of acrylic resins  
 ○Nagasawa Yuko, Hibino Yasushi, Shigeta Hirotaka, Eda Yoshikazu, Matsumoto Shigeki  
 Wada Kenichi, Nakajima Hiroshi  
 Meikai University

April 21 (Sunday)

▪ Hall A

9:30 - 10:30 General Presentation (Oral Session)

A - 12 Redox and antibacterial ability of titania nanosheet with highly oriented crystal orientation

○Hayashi Kenichiro, Nozaki Kosuke, Nemoto Reina, Yamashita Kimihiro, Miura Hiroyuki  
Tokyo Medical and Dental University

A - 13 Evaluating effect of supersaturated degree with respect to calcium phosphate on adsorption behavior of protein onto octacalcium phosphate

○Hamai Ryo, Suzuki Osamu  
Tohoku University Graduate School of Dentistry

A - 14 Hydrothermal apatite synthesis from calcium oxide and polyphosphate (Part11)- Impurity analysis-

○Narusawa Hideaki, Katoka Yu, Miyazaki Takashi  
Showa University

A - 15 Optimization of cell nanofragment mineralization for faster *in vitro* bone tissue synthesis

○Akhter Mst Nahid, Hara Emilio Satoshi, Okada Masahiro, Matsumoto Takuya  
Okayama University

▪ Hall C

12:00 - 13:00 Luncheon Seminar/ Seminar for Dental Materials Adviser, Senior Adviser

Development of carbonated apatite bone graft substitute named "Cytrans" as research output from university

Yamanaka Katsuyuki  
GC Corporation, Research and Development Department

▪ Hall A

13:00 - 15:00 Symposium

1.Current status and issues of digital solutions for the future

Hotta Yasuhiro

Dept. of conservative, Div. of Biomaterials and Engineering, Showa University school of Dentistry

2.The present and directivity of digital dentistry

Suese Kazuhiko  
Osaka Dental University

4.Clinical application of digital technology to implant therapy

Kondo Hisatomo

3.CAD/CAM in the fixed and removable prosthodontics

Ohkubo Chikahiro

Tsurumi University, School of Dental Medicine

Department of prosthodontics and Oral Implantology, School of Dentistry, Iwate Medical University

5.Current status of digital dentistry in dental laboratory

Kimura Kenji  
Kyowa Dental Laboratory Co, Ltd

6.Future prospective of Digital dentistry from company view

Ebihara Yoshinori  
GC Corporation, Research and Development Department

15:10 - 16:40 General Presentation (Oral Session)

A - 16 Application of strontium-releasing bioactive glass to glass ionomer cement

○Sasaki Jun-Ichi, Kiba Wakako, Abe Gabriela, Katata Chihiro, Kitagawa Haruaki, Imazato Satoshi  
Osaka University Graduate School of Dentistry

A - 17 Individual identification method of unidentified people in cases of widespread disasters – Similarity calculation of occlusal surface using Python -

○Hori Tadasuke<sup>1,2</sup>, Hori Miki<sup>1</sup>, Sekine Hironao<sup>1,2</sup>, Kawai Tatsushi<sup>1</sup>  
<sup>1</sup>Aichi Gakuin University, <sup>2</sup>Alid Inc.

A - 18 Repair of enamel using Er:YAG laser deposition method

, Minamino Tomoki<sup>1</sup>, Hirai Mizuki<sup>1</sup>, Hashimoto Yoshiya<sup>2</sup>, Yoshikawa Kazushi<sup>2</sup>, ○Hontsu Shigeki<sup>1</sup>  
<sup>1</sup>Kindai University, <sup>2</sup>Osaka Dental University

A - 19 The dental application of dissolving method for polymethyl methacrylate

○Kajimoto Noboru, Maruta Michito, Tsuru Kanji  
Fukuoka Dental College

16:00 Closing Remark

▪ Hall B

15:00 - 16:00 General Presentation (Poster Session)

(10:50 - 11:50 Discussion)

P - 35 A new precapsulated glass-ionomer cement for filling: interfacial gap-formation in Class I restoration and bond strength to tooth structure

○Irie Masao, Maruo Yukinori, Nishigawa Goro, Minagi Shogo, Matsumoto Takuya  
Okayama University Graduate School of Dentistry

P - 36 Study on wear of commercially resin-based luting agents

○Katayama Yuta, Kameyama Yuka, Wada Yuki, Ohashi Katsura, Aoki (Miyake) Kaori,  
Midono Tomoyasu, Nihei Tomotaro  
Kanagawa Dental University

P - 37 Antimicrobial effects of CAREDYNE RESTORE on *porphyromonas gingivalis*

○Nagano Yasuyuki, Mori Daizaburo, Kumagai Tomohiro  
GC Corporation

P - 38 Measurement of fluorine distribution into tooth structure from fluoride-containing luting materials using by nuclear reaction

○Okuyama Katsushi<sup>1</sup>, Matsuda Yasuhiro<sup>2</sup>, Yamamoto Hiroko<sup>3</sup>, Shintani Kohei<sup>1</sup>, Horiguchi Takashi<sup>1</sup>, Saito Takashi<sup>2</sup>  
Hayashi Mikako<sup>3</sup>, Yoshida Yasuhiro<sup>4</sup>, Tamaki Yukimichi<sup>1</sup>  
<sup>1</sup>Asahi University, <sup>2</sup>Health Science University of Hokkaido, <sup>3</sup>Osaka University, <sup>4</sup>Hokkaido University

P - 39 Effect of storage condition on shear strength of self-adhesive resin cements

○Eda Yoshikazu, Nagasawa Yuko, Hibino Yasushi, Shigeta Hirotaka  
Matsumoto Shigeki, Nakajima Hiroshi  
Meikai University

p - 40 Adhesive performance of self-adhesive resin cement -Influence of immersion in water and pretreatment-

○Wada Yuki, Aoki Kaori, Kameyama Yuka, Katayama Yuta, Ohashi Katsura, Nihei Tomotaro  
Kanagawa Dental university

P - 41 Influence of application time of universal adhesives on bond strength and surface free energy

○Takamizawa Toshiki, Imai Arisa, Ishii Ryo, Tsujimoto Akimasa, Suzuki Takayuki, Sai Keiichi  
Ouchi Hajime, Miyazaki Masashi  
Nihon University

P - 42 The development of calcium silicate based cement. (Part 3) –MTA cement with improved X-ray radiopacity–

○Kato Takahiro, Nakano Takafumi, Mizobuchi Shingo, Matsuura Ritao, Yamazoe Masatoshi, Anraku Teruo  
YAMAKIN

P - 43 Study on hybrid resin composites using CAD/CAM (Part. 8) - Characteristics of commercial CAD/CAM hybrid resin blocks for molar -

○Kameyama Yuka<sup>1</sup>, Ohashi Katsura<sup>1</sup>, Katayama Yuta<sup>1</sup>, Wada Yuuki<sup>1</sup>, Miyake-Aoki Kaori<sup>1</sup>  
Tanimoto Yasuhiro<sup>2</sup>, Hirayama Satoshi<sup>2</sup>, Nihei Tomotaro<sup>1</sup>  
<sup>1</sup>Kanagawa Dental University, <sup>2</sup>Nihon University School of Dentistry at Matsudo

P - 44 Improvement of gluing by surface modification of ultraviolet rays to CAD/CAM resin block

○Nagsaawa Sakae, Okazaki Kosuke, Kuroiwa Akihiro  
Matsumoto Dental University

P - 45 Effect of thermal cycling on retention force between resin composites and woven fiber posts

○Someya Tomoko<sup>1</sup>, Kasahara Masaaki<sup>1</sup>, Kyogoku Kei<sup>1</sup>, Hattori Masayuki<sup>1</sup>, Takahashi Hidekazu<sup>2</sup>  
<sup>1</sup>Tokyo Dental College, <sup>2</sup>Tokyo Medical and Dental University

P - 46 Influence of background color on color differences and spectral reflectance of the structural colored resin composite

○Kurokawa Hiroyasu, Takimoto Masayuki, Shiratsuchi Koji, Suda Shunichi  
Takahashi Nao, Miyazaki Masashi  
Nihon University

- P - 47 Wear resistance of 3D-printed crown and bridge materials  
○Kato Hiroki, Ueno Takayuki, Kumagai Tomohiro  
GC Corporation
- P - 48 Adhesive properties of PEEK with a chemical modification  
○Okawa Seigo, Taka Norimasa, Kimura Tatsuya, Aoyagi Yujin, Izumi Kenji  
Niigata University
- P - 49 Influence of different enamel etching methods for universal adhesive bonding  
○Tsujiimoto Akimasa, Shimatani Yusuke, Nagura Yuko, Hirokaen Eizo, Nojiri Kie, Ishii Ryo  
Takamizawa Toshiki, Miyazaki Masashi  
Nihon University
- P - 50 Effect of differences in phosphoric acid concentration and treatment time on resin adhesive strength  
○Saito Ryuichi, Ohki Tatsuya, Moriue Taisuke, Igarashi Kazuaki, Shirato Takayuki,  
Ishida Yoshinori, Okada Hidetoshi  
Ohu University
- P - 51 XPS analysis of gold surface treated with metal and multi primers  
○Saitoh Setsuo<sup>1</sup>, Sugawara Shiho<sup>1</sup>, Sasaki Kaori<sup>1</sup>, Sawada Tomofumi<sup>1</sup>, Taira Masayuki<sup>1</sup>, Nagaoka Noriyuki<sup>2</sup>  
Yoshihara Kumiko<sup>2</sup>, Takemoto Shinji<sup>1</sup>  
<sup>1</sup>Iwate Medical University, <sup>2</sup>Okayama University
- P - 52 Evaluation of ethanol extract of propolis as a coating material of titanium  
○Shintani Kohei<sup>1</sup>, Kawaki Harumi<sup>1</sup>, Tsuruta Hanemi<sup>1</sup>, Ikeno Kumiko<sup>2</sup>, Nakamura Genjiro<sup>2</sup>, Horiguchi Takashi<sup>1</sup>,  
Okuyama Katsushi<sup>1</sup>, Kondoh N<sup>1</sup>, Hotta M<sup>1</sup>, Tamaki Yukimichi<sup>1</sup>  
<sup>1</sup>Asahi University, <sup>2</sup>AKITAYAHONTEN CO.,LTD.
- P - 53 Effects of aging on mechanical properties and phase transformation of  $\beta$ -Ti alloy  
Ho Wen-Fo<sup>1</sup>, ○Jian Zhong-Lin<sup>1</sup>, Hsu Hsueh-Chuan<sup>2</sup>, Wu Shih-Ching<sup>2</sup>, Hsu Shih-Kuang<sup>2</sup>  
<sup>1</sup>National University of Kaohsiung, <sup>2</sup>Central Taiwan University of Science and Technology
- P - 54 Characterization of 316L stainless steel prepared by selective laser melting  
Ho Wen-Fo<sup>1</sup>, ○Lin Ting-Yu<sup>1</sup>, Hou Po-Jen<sup>1</sup>, Hsu Hsueh-Chuan<sup>2</sup>, Lin Dong-Lung<sup>3</sup>  
<sup>1</sup>National University of Kaohsiung, <sup>2</sup>Central Taiwan University of Science and Technology,  
<sup>3</sup>Taiwan Metal Additive Manufacturing Co., Ltd
- P - 55 Preparation of chitosan/hydroxyapatite composite nanofibers by electrospinning  
Ho Wen-Fo<sup>1</sup>, ○Tseng Hsin-I<sup>1</sup>, Hsu Hsueh-Chuan<sup>2</sup>, Wu Shih-Ching<sup>2</sup>, Hsu Shih-Kuang<sup>2</sup>  
<sup>1</sup>National University of Kaohsiung, <sup>2</sup>Central Taiwan University of Science and Technology
- P - 56 Zirconia coating on titanium using molecular precursor method  
○Tokunaga Yoshiki<sup>1</sup>, Hirota Masatsugu<sup>1</sup>, Sato Mitsunobu<sup>2</sup>, Hayakawa Tohru<sup>1</sup>  
<sup>1</sup>Tsurumi University, <sup>2</sup>Kogakuin University
- P - 57 The synergistic effect of chloride and fluoride on the corrosion behavior of titanium and zirconium in acidic solution  
○Hasan GaziMehedi, Nagano-Takebe Futami, Nezu Takashi, Endo Kazuhiko  
Health Science University of Hokkaido
- P - 58 Light transmission of fiber posts  
○Nitta Keiko<sup>1</sup>, Nomoto Rie<sup>1</sup>, Kamimoto Yoshihisa<sup>2</sup>, Tsuchikawa Masuji<sup>2</sup>, Tsubota Yuji<sup>1,3</sup>, Hayakawa Tohru<sup>1</sup>  
<sup>1</sup>Tsurumi University, <sup>2</sup>Sun Medical, <sup>3</sup>Tsubota Dental Clinic
- P - 59 Stress analysis of soft reliners using SPH method-viscoelasticity analysis by creep tests-  
○Onuma Hiraku, Inokoshi Masanao, Hirayama Daisuke, Inoue Minoru, Minakuchi Shunsuke  
Tokyo Medical and Dental University
- P - 60 Ion release capacity of a novel S-PRG filler containing denture adhesive  
○Hatano Keita, Inokoshi Masanao, Shimizubata Makoto, Wada Takahiro, Uo Motohiro  
Takahashi Rena, Minakuchi Syunsuke  
Tokyo Medical and Dental University
- P - 61 Effects of denture cleaners on the surface of denture liners  
○Hoshika Tomohiro<sup>1</sup>, Ikeda Masaomi<sup>2</sup>, Nishitani Yoshihiro<sup>1</sup>  
<sup>1</sup>Kagoshima University, <sup>2</sup>Tokyo Medical and Dental University
- P - 62 Effect of reinforcement appliance on deformation of maxilla complete denture  
○Aichi Tetsuya<sup>1,2</sup>, Toda Atushi<sup>1</sup>, Hada Tamaki<sup>3</sup>, Tsuruki Jiro<sup>4</sup>, Minakuchi Shunsuke<sup>3</sup>

Hattori Masayuki<sup>2</sup>, Takahashi Hidekazu<sup>3</sup>

<sup>1</sup>Kawabe Rinshou Kyoujitsu, <sup>2</sup>Tokyo Dental College

<sup>3</sup>Tokyo Medical and Dental University, <sup>4</sup>Tokuyama University

P - 63 Comparison of error after division of various division restoration formula models

○Matsumoto Kazuhisa

Shiken Corporation

P - 64 Relation between particle size of gold nanoparticles and adhesion to bacteria and inhibition of initial biofilm formation

○Hashimoto Masanori, Honda Yoshitomo

Osaka Dental University

P - 65 Imparting antibacterial property to dental stone model by adding cetylpyridinium chloride to mixing water

○Nagamatsu Yuki, Ikeda Hiroshi, Shimizu Hiroshi

Kyusyu Dental University

P - 66 Disinfection effect of oral care gel prepared at time of use using neutral electrolyzed water

○Nagamatsu Yuki, Nagamatsu Hiroshi, Ikeda Hiroshi, Shimizu Hiroshi

Kyusyu Dental University

P - 67 Education for programming and IoT in dentistry

○Kawai Tatsushi<sup>1,2</sup>, Hori Miki<sup>1,2</sup>, Hori Tadasuke<sup>1,2,3</sup>, Sekine Hironao<sup>1,2,3</sup>, Jincho Makoto<sup>1,2,4</sup>

Matsumoto Takanori<sup>1,4</sup>, Hasegawa Akito<sup>1,2</sup>

<sup>1</sup>Aichi Gakuin University, <sup>2</sup>Tokai College of Dental Technology, <sup>3</sup>Alid Incorporated, <sup>4</sup>Eden Corporation

P - 68 Wettability of root canal sealer on dentin exposed to excimer UV irradiation

○Inoue Toshiko, Saito Makoto, Nishimura Fumio, Miyazaki Takashi

Showa University