

## The 75<sup>th</sup> General Session of the Japanese Society for Dental Materials and Devices (JSDMD)

April 18 (Saturday) – 19 (Sunday), 2020

Matsumoto Dental University Main Building

1780 Gobara Hirooka, Shiojiri, Nagano-pre, 399-0781, Japan

April 18 (Saturday)

▪ Hall A

9:25 - 9:30 Opening Remark

9:30 - 10:15 Young Investigator Award Challenge

A - 1 Crystal orientation and three-point flexural strength of pressed lithium disilicate

○Matsubara M, Ban S, Asakura M, Kawai T  
Aichi Gakuin Univ.

A - 2 Effect of new surface treatment of zirconia on shear bond strength

○Kimura Tatsuya, Miida Keito, Taka Norimasa, Aoyagi Yujin, Okawa Seigo  
Niigata Univ.

A - 3 Preparation of 3D-printable composite with nano-dual-network-structure and its application to crown restoration

○Ikeda H, Sodeyama M, Nagamatsu Y, Shimizu H  
Kyushu Dental Univ.

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

A - 4 Mechanical properties of pit filling HAp films deposited by Er:YAG laser deposition

○Minamino T, Hontsu S, Yamamoto E, Hashimoto Y,  
Kindai Univ.

A - 5 Comparative study of gray scale value of cone-beamed and multi-detected CT

○Kawahara D, Suzuki H  
Institute of Clinical Materials

14:00 - 15:30 Symposium

Dental Implant Prostheses over Long Period of Time:

Alteration in Superstructure, Implant Body and Bones.

1. Long term prognosis of Implant prosthesis

○Kawazu Hiroshi  
Meikai University School of Dentistry

2. Dynamic consideration of the reacted events

○Nagasawa Sakae  
Department of Dental prosthodontic, Matsumoto Dental University

3. Mechanical stress and coupling mechanism of bone metabolism

○Udagawa Nobuyuki  
Department of Oral Biochemistry, Matsumoto Dental University

4. Coordinator

Nakajima Hiroshi  
Meikai University School of Dentistry

16:30 - 17:00 General Presentation (Oral Session)

A - 6 Prediction of hydrolysis amount of silane coupling layer in CAD/CAM resin composite blocks

○Chunwoo Lee, Satoshi Yamaguchi, Satoshi Imazato  
Osaka University)

A - 7 Mechanical properties of high translucent zirconia fused with with monoclinic zirconia and silica

○Okada M, Uno S, Taketa H, Torii Y, Matsumoto T

17:15 – 19:15 Banquet (Library Building of Matsumoto Dental University)

▪ Hall B

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

(11:00 - 11:45, 15:35 - 16:20 Discussion)

- P - 1 Influence of oxidation of copper on bond strength using acrylic resin and organic sulfur compound  
○Hiraba H, Koizumi H, Kodaira A, Kodaki T, Yagihara K, Yoneyama T, Matsumura H  
Nihon Univ.
- P - 2 Effect of the rigid transfer coping with pattern resin for two-implant impression techniques  
○Hori M, Kato A, Hasegawa A, Fujimoto K, Kawai T  
Aichi Gakuin Univ.
- P - 3 Effect of handpiece maintenance spray on bonding of denture base resin  
○Komachiya M, Kitazawa F, Haruyama A, Horasawa N, Kuroiwa A, Kameyama A  
Matsumoto Dental Univ.,
- P - 4 A new hand-mixed glass-ionomer cement for filling: Interfacial gap-formation in Class I restoration and bond strength to tooth structure.  
○Irie M, Maruo Y, Nishigawa G, Minagi S, Matsumoto T  
Okayama Univ.
- P - 5 Effect of Mixture of temporary cements with different hardness on various properties  
○Moriue T, Uchida M, Ohki T, Saito R, Igarashi K, Ishida Y, Okada H  
Ohu Univ.
- P - 6 Adhesion of various dental luting cements to the polished surface of metallic dental materials  
○ Kohda K, Nagasawa S, Kameyama A, Yamamoto A, Kuroiwa A  
Matsumoto Dental Univ.
- P - 7 Evaluation of mechanical properties of bond (second bottle) in new two-step bonding material  
○Kensuke F, Arita A, Kumagai T  
GC Corporation
- P - 8 Synthesis of apatite used calcium-containing discarded eggshell and evaluation of pigment adsorption  
○Mochizuki C, Sakai Y, Nakamura K, Hirota M, Hayakawa T  
1BIOAPATITE Inc.
- P - 9 Chipping resistance and microstructure of the novel glass ceramic block for CAD/CAM  
○Yamamoto K, Kumagai T  
GC Corporation
- P - 10 Bonding strength of various resin cements to three types of lithium silicate glass ceramic blanks for CAD/CAM  
○Takahashi S, Hotta Y, Sasaki K, Sasaki M, Shibata Y  
Showa Univ
- P - 11 Analysis of two-step adsorption of fibronectin and albumin onto titanium monitored by quartz crystal microbalance method  
○Hirota M, Hayakawa T  
Tsurumi Univ.
- P - 12 Bioactivity evaluation of anodized Ti-5Nb-5Mo by low temperature vapor-thermal or hydro-thermal treatment  
Ho Wen-Fo, ○Shih Yi-Cheng, Yang Hsiang-Wei, Hsu Hsueh-Chuan, Wu Shih-Ching, Hsu Shih-Kuang  
National University of Kaohsiung, Taiwan,
- P - 13 Biphasic calcium phosphate synthesized from eggshells  
Ho Wen-Fo, ○Yu Hui-Chun, Hsu Hsueh-Chuan, Wu Shih-Ching, Hsu Shih-Kuang  
National University of Kaohsiung, Taiwan,
- P - 14 Development of novel implant osseointegrated-mice model with superstructure-like region  
○Hiraoka M, Mine Y, Minoda M, Nikawa H, Murayama T  
Hiroshima Univ.
- P - 15 Solid-state Ti-6Al-4V adhesive for soft tissues: Effect of acid treatment time  
○Wang Y, Xie S, Okada M, Matsumoto T  
Okayama University)
- P - 16 Study on hybrid resin composites using CAD/CAM (Part. 9) - Characteristics of resin composite blocks for molars –  
○Kuroda T, Kameyama Y, Katayama Y, Wada Y, Ohashi K, Tanimoto Y, Hirayama S, Nihei T  
Kanagawa Dental Univ.

- P - 17 Development of CAD/CAM resin composite crown for primary teeth -Evaluation of wear property of experimental CR block containing S-PRG filler  
○Nakase Y, Yamaguchi S, Okawa R, Nakano K, Imazato S  
Osaka Univ.
- P - 18 New Photopolymer for additive manufacturing having impact absorbable feature—Impact absorption property  
○Kazuo Ohkuma, Miku Kazama-Koide, Suguru Endo, Kaoru Koide  
Nippon Dental Univ.
- P - 19 Study on hybrid resin composites using CAD/CAM (Part. 10)-Clinical results of resin blocks for premolar crown –  
○Nakamura K, Ohashi K, Hoshi N, Kimoto K, Nihei T  
Kanagawa Dental Univ.
- P - 20 Increase of compressive strength and ion releases of trial product of capsule type filling material that combined BioUnion  
○Shida E, Mori D, Kumagai K  
GC Corporation
- P - 21 Evaluation of composition and structure of bone substitute having apatite structure  
○Kimura N, Ishizuka S, Yamanaka K, Kumagai T  
GC Corp
- P - 22 Effect of material factors on biocompatibility of hydroxyapatite bone substitute (Part1)  
○Takeyama H, Maruta M, Kajimoto N, Matsuura T, Tsuru K  
Fukuoka Dental College
- P - 23 Fabrication of  $\beta$ -TCP based on dissolution and precipitation reaction of calcium sulfate  
○Maruta M, Kajimoto N, Tsuru K  
Fukuoka Dental College
- P - 24 Evaluation of bone regeneration ability of gelatin porous scaffolds on rat calvarial bone defect  
○Hatakeyama T, Shiwaku Y, Hamai R, Anada T, Sakai S, Sato T, Sasaki K, Suzuki O  
Tohoku Univ
- P - 25 Different activated pathways of NADPH oxidase by different size Ti particles and Ti plate in human PMN  
○Moriguchi K, Hori M, Kawai T  
Aichi-Gakuin Univ.
- P - 26 Development of controlled drug release materials using thermos responsible composite hydrogels.  
○Shigeaki Abe, Yuko Era, Ko Nakanishi, Alireza Valanezhad, Ikuya Watanabe  
Nagasaki Univ.
- P - 27 Dissolution behavior of stainless steel brazed with silver solder in saline solution  
○Saitoh S, Sasaki K, Sawada T, Hatanaka A, Hattori M, Takemoto S  
Iwate Medical Univ.,
- P - 28 Surface texture of titanium plate immersed in hard water.  
○Shintani K, Tamaki Y, Okuyama K, Horiguchi T, Kawaki H2, Miyao M  
Asahi Univ.
- P - 29 Effect of mixing methods on mechanical properties of dental stone  
○Shigeta H, Matsumoto S, Eda Y, Nagasawa Y, Suzuki R, Wada K, Hibino Y, Nakajima H  
Meikai Univ.
- P - 30 Study on novel wash type alginate impression material - The adhesive strength to the base impression –  
○Nihei T, Kuroda T, Wada Y, Ohashi K  
Kanagawa Dental Univ.
- P - 31 Dimensional change of alginate impression material for precision impression and the effect of disinfection  
○Niizeki N, Ueno T, Kumagai T  
GC Corporation
- P - 32 Analyzing dental restoration of human victim  
○Tsuruta S, Mizuno M, Uematsu Y, Aimu K, Kawai T  
Aichi Gakuin Univ.

April 21 (Sunday)

▪ Hall A

9:00 - 10:00 General Presentation (Oral Session)

A - 8 Effect of micro/nano-patterns to osteoclastgenesis

○Akasaka T, Tamai M, Yoshida Y  
Hokkaido Univ.

A - 9 Characterization of osteoinduction ability of carbonate apatite honeycomb scaffolds

○Koichiro Hayashi, Kunio Ishikawa  
Kyushu Univ.

A - 10 Novel role of osteocalcin in the regulation of bone matrix orientation as a bone quality parameter

○Nakano T, Ozasa R, Okada M, Matsumoto T, Moriishi T, Komori T  
Osaka Univ.

A - 11 Development of biodegradable composite filament for 3D printer -Micropore formation on 3D printed scaffold-

○Hirata I, Kato K  
Hiroshima Univ.

▪ Hall A

10:00 - 11:00 Special Lecture

Mini-review on dental materials & devices through Heisei period

○Tamaki Yukimichi  
Asahi University

▪ Hall C

12:00 - 12:50 Luncheon Seminar/ Seminar for Dental Materials Adviser, Senior Adviser

Features of Er:YAG Lasea 「Erwin AdvErL EVO」 and clinical application

Horiuchi Motoyuki  
Morita Co.,Ltd.

13:55 - 14:25 General Presentation (Oral Session)

A - 12 Improvement of internal fitness of CAD/CAM crowns by optimizing the feed speed

○Nozaki K, Matsumura M, Shin C, Yamashita K, Matsumura M, Miura H  
Tokyo Med. and Dent. Univ.

A - 13 Automated extraction of anatomical landmarks using artificial intelligence (AI) - A trial by pseudo-models

○Kato A, Hori M, Hori T, Jincho M, Kawai T, Honda M  
Aichi Gakuin Univ.,

▪ Hall A

14:30 - 16:00 Symposium

1. What do you need for future dental bonding?

○Nihei Tomotaro  
Kanagawa Dental University

2. Shift from "invisible" dental adhesion to "attractive" dental adhesion

○Kameyama Atsushi  
Matsumoto Dental University

3. Adhesion in Pediatric Dentistry

○Yawaka Yasutaka  
Hokkaido University

4. Clinical capability of zirconia resin-bonded prostheses

○Komine Futoshi  
Nihon University School of Dentistry

5. Realize adhesion to protect tooth substance

○Tanoue Naomi  
Nagasaki University Hospital

16:00 Closing Remark

▪ Hall B

9:40 - 15:30 General Presentation (Poster Session)

(11:05 - 11:50, 13:00 – 13:45 Discussion)

- P - 33 Characterization of engineering plastics fabricated by supercritical carbon dioxide  
○Kimura T, Watababe M, Kishida A  
Tokyo Med. Dent. Univ.
- P - 34 Investigation of dental casting using resin for 3D Printer  
○Takekawa T, Kato T, Yamazoe M  
YAMAKIN CO., LTD.
- P - 35 Influence of building direction of additive manufacturing on fitting accuracy of 3D printed complete denture  
○Shimpo H, Yoshidome G, Waki T, Kohgo O, Ohkubo C  
Tsurumi Univ..
- P - 36 Multi ion release from S-PRG nanofiller containing tissue conditioner  
○Watcharapong Tonprasong, Masanao Inokoshi, Makoto Shimizubata, Keita Hatano, Motohiro Uo, Takahiro Wada,  
Rena Takahashi, Shunsuke Minakuchi  
Tokyo Medical and Dental University
- P - 37 Bending strength of 4-META/MMA-TBB resin containing antibacterial agents  
○Yamamoto M, Inokoshi M, Shimizubata M, Nozaki K, Takagaki T, Yoshihara K, Minakuchi S  
Tokyo Medical and Dental Univ.,
- P - 38 Study on characteristics of temporary resin composite (Part 2) - Mechanical properties of each resin composite -  
○Katayama Y, Ohashi K, Kameyama Y, Wada Y, Aoki K, Midono T, Tanimoto Y, Nihei T  
Kanagawa Dental Univ.
- P - 39 Mechanical properties of novel fiber compounded flowable composite resin “everX Flow”  
○Funayama N, Ueno T, Kumagai T  
GC Corp.
- p - 40 Mechanical evaluation of bulk-fill resin composites by the dynamic micro-indentation method  
○Iwasaki T, Yamauchi S, Yaguchi T, Takahashi H, Kamiya N, Hirayama S, Tanimoto Y  
Nihon Univ.
- P - 41 Study on comparison between MMA-based and composite resin-based luting agents  
○Ohashi K, Katayama Y, Kuroda T, Nihei T  
Kanagawa Dental Univ.
- P - 42 Strain behavior of dental cements at impact loading  
○Eda Y, Nagasawa Y, Hibino Y, Shigeta H, Matsumoto S, Shimano I, Nakajima H  
Meikai Univ.
- P - 43 Overtime dependency in shear bond strength of various adhesive resin composite cements  
○Shinya A, Niitsuma A, Fujishima S, Shiratori S, Kuroda S, Hatta M, Gomi H  
Nippon Dental Univ.
- P - 44 Effect of different phosphoric acid treatment times on resin adhesion strength of enamel  
○Saito R, Ohki T, Uchida M, Moriue T, Igarashi K, Ishida Y, Okada H,  
Ohu Univ.
- P - 45 Influence of vertical bone defect model on fracture strength of re-adhesive root  
○Kyogoku K, Someya T, Kasahara M, Hasegawa K, Ichikawa H, Yoshida H, Doi H, Hattori M  
Tokyo Dental College
- P - 46 Wear behavior of ceramic for CAD/CAM crown to bovine enamel  
○Someya T, Kasahara M, Kyogoku K, Hattori M, Igarashi T, Aichi T, Noguchi T  
Tokyo Dental College
- P - 47 Mechanical properties and microstructures of commercial glass-ceramics for dental CAD/CAM systems  
○Kono H, Kikuchi M  
Kagoshima Univ.
- P - 48 Synthesis of flower-like hydroxyapatite from oyster shells by microwave irradiation  
Ho Wen-Fo, ○Lu Yi-Cheng, Hsu Hsueh-Chuan, Wu Shih-Ching, Hsu Shih-Kuang  
National University of Kaohsiung, Taiwan,

- P - 49 Non-equiatomic medium-entropy alloys for dental applications  
Ho Wen-Fu1, ○Wong Ka-Kin, Hsu Hsueh-Chuan, Wu Shih-Ching, Hsu Shih-Kuang  
National University of Kaohsiung, Taiwan
- P - 50 Apatite formation ability of carbon fiber-reinforced PEEK treated with surface modification by incorporation of apatite nuclei  
○Yabutsuka T  
Kyoto Univ.
- P - 51 Characterization of silver-incorporated hydroxyapatite coatings deposited on c.p. Ti  
Hsu Hsueh-Chuan, ○Chang Yuan-Chen, Ho Wen-Fu, Wu Shih-Ching, Hsu Shih-Kuang  
Central Taiwan Univ.
- P - 52 Evaluation of titanium surface properties brushed with different toothbrush bristles  
○Urabe S, Shuto T, Murayama T, Mine Y  
Hiroshima Univ.
- P - 53 Application of additive manufacturing for fabricating jigs for three-point bending tests for composite resins  
○Ishida Y, Shinya A, Aoki H, Miura D, Harada Y, Watanabe S.  
Nippon Dent. Univ.
- P - 54 Quantitative evaluation of mobility measurement devices  
○Suzuki H, Kawahara D  
Institute of Clinical Materials
- P - 55 Automatic identification method of specified tooth by means of artificial intelligence (Part 2)  
○Hori T, Hori M, Jincho M, Sekine H, Kato A, Ohno Y, Kawai T  
Alid inc.
- P - 56 Measurement accuracy of contact angle —Comparison between top-view and conventional methods—  
○Nezu T, Nagano-Takebe F, Hasan GM, Endo K  
Health Sciences Univ. Hokkaido
- P - 57 Effects of resin blocks and ceramic blocks for CAD/CAM on cell viability –  
○Nakai M, Yokoyama T, Hashimoto Y, Imai K  
Osaka Dental Univ.
- P - 58 Influence of cell viability in various commercial denture lining materials  
○Yokoyama T, Nakai M, Hashimoto Y, Imai K  
Osaka Dental Univ
- P - 59 Evaluation of ameloblast differentiation in the OCP/SF2 cell spheroids  
○Tadano M, Shiwaku Y, Hamai R, Anada T, Suzuki O  
Tohoku Univ.,
- P - 60 Wear behavior between esthetic restorations and bovine enamel  
○Hatanaka A, Sawada T, Sasaki K, Saitoh S, Someya T, Hattori M, Takemoto S.  
Iwate Medical Univ.
- P - 61 Nanomechanical properties of the mantle dentin  
○Inoue T, Saito M, Nishimura F, Miyazaki T, Shibata Y  
Showa Univ.
- P - 62 Effects of attachment and friction in aligner orthodontics  
○Yukiko Yokoi, Yoshimi Kawahara, Tatsuo Takaya, Jun Kawamura, Atsushi Kameyama, Akihiro Kuroiwa,  
Norimasa Okafuji,  
Matsumoto Dental Univ.
- P - 63 Effect of dental semiconductor laser irradiation on hard tissue - Effect of irradiation on dentin –  
○Omata A, Kuroda T, Katayama Y, Tomiyama K, Ohashi K, Mukai Y, Nihei T  
Div. of Clinical Biomaterials
- P - 64 Long-term storage stability of bactericidal ingredients in high concentration electrolyzed water  
○Nagamatsu Y, Nagamatsu H, Ikeda H, Shimizu H  
Kyushu Dental Univ.