The 84th General Session of the Japanese Society for Dental Materials and Devices (JSDMD)

April 18 (Saturday) – 19 (Sunday), 2026
Tower Hall Funabori
4-1-1 Funabori, Edogawa-Ku, Tokyo, 134-0091, Japan

April 18 (Saturday)

▪ Hall A

9:40 - 9:45 Opening Remark

9:45 - 10:45 Young Investigator Award Challenge

A - 1 Effect of ultraviolet irradiation on microbial removal at acrylic resins by different fabrications
○Kaneko C, Sawada T, Kobayashi T, Takemoto S
Iwate Med. Univ.

A - 2 Dual-targeting PMMA resin for inhibition of bacteria and extracellular matrix in *Streptococcus mutans* biofilms
○Wu T, Kitagawa H, Kitagawa R, Imazato S
Osaka Univ.

A - 3 Development of titanium surface achieving both antibacterial activity and osteoconductivity through magnesium-based coating
○Miyake R, Shimabukuro M, Marukawa E, Kawashita M
Institute of Science Tokyo

A - 4 Carbonate apatite coating enhances early stability while preserving removability of orthodontic mini-screws
○Takehana S, Hayashi K, Takahashi I, Ishikawa K
Kyushu Univ.

14:30 - 15:30 Special Lecture

Science and chemistry in athletic shoes
○Tsuyoshi Nishiwaki
ASICS Corp.

15:40 - 17:10 General Presentation (Oral Session)

A - 5 Feasibility of three-dimensional shape acquisition of a tooth model using smartphone-embedded depth sensors (LiDAR sensor and TrueDepth camera) -an investigation under stitching-independent conditions-
○Bakhtiari D, Ohkuma K
Nippon Dental Univ.

A - 6 Fatigue resistance of cast clasps treated by laser peening
○Masumoto M, Hirota M, Hayakawa T, Ohkubo C
Tsurumi Univ.

A - 7 Finite element analysis and response surface optimization of stress distribution in 3-unit fixed dental prostheses: Effects of material and connector
○Thein S, Okkar K, Onuma H, Kanazawa M, Inokoshi M
Institute of Science Tokyo

A - 8 High-dimensional vectorization and visualization of educational data using artificial intelligence
○Kawai T, Hori M, Kato A, Hori T, Sekine H, Jincho M, Ohno Y
Aichi Gakuin Univ.

A - 9 Machine learning-assisted hard-tissue evaluation using FTIR spectroscopy
○Otaka A, Okada M, Matsumoto T
Okayama Univ.

A - 10 QuantumIR Studio: development of polymer-specialized FTIR prediction software and its application to MMA/HEMA discrimination
○Otsuka Y, Suzuki T, Kono H, Kikuchi M
Kagoshima Univ.

April 18 (Saturday)
▪ Hall B
10:00 – 16:00 General presentation (Poster Session)
(10:50 - 11:50 Discussion：Odd-numbered presentation numbers)

April 19 (Sunday)
▪ Hall B
10:00 – 15:00 General presentation (Poster Session)
(10:50 - 11:50 Discussion：Even-numbered presentation numbers)

P - 1 Development of new composite resin using ion exchange ability (Part3). Evaluation of physical properties based on filler content
○Shintani K, Ueno K, Horiguchi T, Matsubara M, Sasamoto N, Tamaki Y, Kawaki H, Sawada T
Asahi Univ.

P - 2 Mechanical properties of a novel CAD/CAM hybrid resin block
○Ichihara T, Kariya S, Hirano K
GC R&D Corp.

P - 3 Effect of acidulated phosphate fluoride application on surface properties of CAD/CAM block materials
○Hiraba H, Takehana K, Nanri K, Yagihara K, Kodaki T, Yoneyama T, Koizumi H
Nihon Univ.

P - 4 Effect of thermal cycling on the flexural properties of glass fiber-reinforced plastics for dental CAD/CAM
○Kato Y, Nagata S, Hirayama N, Tanimoto Y
Nihon Univ.

P - 5 Mechanical properties of glass fiber-reinforced resin blocks for CAD/CAM systems（Part 2）
○Katayama Y, Ohashi K, Nihei T
Kanagawa Dental Univ.

P - 6 Color change, water sorption, and solubility of dental additive manufacturing composite resins
○Miura D, Ishida Y, Hotta Y, Nakajima K, Shinya A
Nippon Dental Univ.

P - 7 Effect of silica nanoparticle addition on the flexural properties of a vat-photopolymerized resin
○Nagata S, Udagawa T, Hattori M, Nihei T, Tanimoto Y
Nihon Univ.

P - 8 Microstructure of resin specimens fabricated with vat photo- polymerization
○Asakawa K, Sasaki K, Sawada T, Kaneko C, Hatanaka A, Too Y, Kobayashi T, Takemoto S
Iwate Medical Univ.

P - 9 Effects of post-curing times and environments on the mechanical properties of PMMA denture base
○Huang Y-C, Lee W-F
Taipei Medical Univ.

P - 10 Assessment of skin sensitization potential of self-curing resin releasing substances during polymerization process
○Beniya R, Nozaki K, Matsumura M, Matsumoto A
Institute of Science Tokyo

P - 11 Analysis of wear behavior of polyetheretherketone by two-body wear test (Part 2)
○Kagoura H, Udagawa T, Kasahara M, Hattori M
Tokyo Dental College

P - 12 Evaluation of adhesive strength of experimental denture adhesives containing cellulose nanofiber
○Taka N, Aoyagi Y, Kanatani M
Niigata Univ.

P - 13 Evaluation of the mechanical strength and water resistance of the novel dual-cure resin cement
○Mizobuchi S, Kato T, Yamazoe M
YAMAKIN Co., Ltd.

P - 14 Effects of air-blowing on bond strength of experimental bonding agent
○Yamashita M, Minamisawa H, Hirano K
GC R&D Corp.

P - 15 Basic study on a novel adhesive material for splinting mobile teeth（Part1）-mechanical properties-
○Kitada N, Teramae M
SHOFU Inc.

P - 16 Bond strength to tooth substrate of resin-modified glass ionomer cement: an investigation of early setting stage
○Irie M, Maruo Y, Akiyama K, Matsumoto T
Okayama Univ.

P - 17 Effect of immersion period and current application on the shear bond strength of resin-modified glass-ionomer-cement
○Kubota M, Wada R, Takegawa-Uyama E, Horiuchi S, Sekine K, Tanaka E, Hamada K
Tokushima Univ.

P - 18 Debonding property change of resin-modified glass-ionomer-cements through current application of lower applied voltage
○Wada R, Kubota M, Takegawa-Uyama E, Horiuchi S, Sekine K, Tanaka E, Hamada K
Tokushima Univ.

P - 19 Study on adhesion to zirconia (Part 4) - on the adhesive effect of self-adhesive resin cement -
○Tsunoi S, Katayama Y, Ohashi K, Kimoto K, Nihei T
Kanagawa Dental Univ

P - 20 Influence of surface treatments on bonding to lithium disilicate glass-ceramics
○Yoshihara K, Nagaoka N, Irie M, Maruo Y, Yoshida Y
Okayama Univ.

P - 21 Effect of sandblasting pressure on long-term shear bond strength and flexural strength of machinable fully sintered zirconia
○Iwase R, Okubo K, Nakai H, Kanazawa M, Inokoshi M
Institute of Science Tokyo

P - 22 Effect of milling on the translucency of a second-generation fully sintered zirconia
○Yu R, Ban R, Yang M, Hada T, Iwase R, Inokoshi M
Institute of Science Tokyo

P - 23 Comparison of optical and mechanical properties of multilayered M4Y–5Y zirconia with mixed compositions
Ban S, ○Asakura M, Okuda Y, Mieki A, Kataoka H, Hayashi T
Aichi Gakuin Univ.

P - 24 Providing opacity by coloring materials for dental ceramics in highly translucent zirconia and evaluation of the sintered body structure
○Matsuura A, Sakamoto H
Kuraray Noritake Dental Inc.

P - 25 Evaluation of structural-property relationships of short-time sintered zirconia
○Kawai M, Sakamoto H
Kuraray Noritake Dental Inc.

P - 26 Reaction mechanism analysis and generated radical evaluation of Cu(II)-Supported TNT photocatalysts by means of ESR spectroscopy
○Nishida H, Sekino T, Yamamoto K
Osaka Univ.

P - 27 The effect of chlorine-based disinfectants on the strength of plaster
○Kenichi Yano
Shiken Co., Ltd.

P - 28 Effect of poloxamer 407 on gentamicin sulfate release from calcium phosphate cement
○Moromizato A, Sekine K, Kim Y, Hamada K
Tokushima Univ.

P - 29 Study on the dissolution and degradation behaviors of OCP/PLGA composite material
○Hayashi T, Hamai R, Okada M, Suzuki O
Tohoku Univ.

P - 30 Preparation of bioactive glass from biomass-derived Si and Ca sources and the effects of varying Si/P contents on its properties
Ho WF, ○Huang YC, Wu SC, Hsu HC
Natl. Univ. Kaohsiung

P - 31 Zinc-doped antibacterial bioactive glass-ceramic synthesized via the sol-gel method using rice husks and eggshell ash as raw materials

Ho WF, ○Huang JC, Wu SC, Kao YL, Hsu HC
Natl. Univ. Kaohsiung

P - 32 Evaluation of β-tricalcium phosphate scaffolds fabricated via different additive manufacturing techniques for bone tissue engineering

○Peng SC, Peng PW, Lee WF, Chen XY
Taipei Medical Univ.

P - 33 Alg–LF–Zn powder modification of tissue conditioners

○Ge T, Valanezhad A, Odatsu T, Yin Q, Zhu J, Jing S, Abe S, Watanabe I
Nagasaki Univ.

P - 34 BAG-lactoferrin-zinc powder modification of tissue conditioner

○Yin Q, Valanezhad A, Odatsu T, Ge T, Hu Y, Sheng L, Abe S, Watanabe I
Nagasaki Univ.

P - 35 Evaluation of PEG-based antifungal photocurable hydrogels using a lithium-containing photoinitiator

○Suzuki T, Otsuka Y, Kono H, Kikuchi M
Kagoshima Univ.

P - 36 Evaluation of bone regeneration by sustained release of bone morphogenetic protein from porous polyetheretherketone

○Shiotani Y, Jo J, Takasugi S, Adachi T, Yasui K, Hashimoto Y, Nishiura A
Osaka Dental Univ.

P - 37 Controlled drug release of resin composite with nano-structured silica particles

○Sheng L, Hu Y, Ge T, Yin Q, Zhu J, Jing S, Safaee S, Valanezhad A, Era Y, Abe S, Murata H, Watanabe I
Nagasaki Univ.

P - 38 Analysis of the femur in mice administered bisphosphonate drugs using a viscoelastic model

○Kojima K, Sugamori Y, Shibata Y
Showa Medical Univ.

P - 39 Nanomechanical characterization of dentin bridge derived from the Vital Pulp Therapy material

○Tsujigami Y, Watanabe C, Shibata Y
Showa Medical Univ.

P - 40 Intracellular delivery of microRNA by cationized gelatin nanoparticles

○Lu S, Jo J, Hashimoto Y, Yamamoto K
Osaka Dental Univ.

P - 41 Angiogenic effects of iPS-derived periodontal ligament cell–derived exosomes on human umbilical vein endothelial cells

○Taniguchi Y, Iwasaki K, Jo J, Ishikawa H, Momota Y, Hashimoto Y
Osaka Dental Univ.

P - 42 Fast-acting antimicrobial behavior of pure copper coatings fabricated by multi-beam blue-diode laser cladding

○Li L, Chen P, Yoshida T, Takenaka K, Mokudai T, Sato Y, Tsukamoto M, Kanetaka H
Tohoku Univ.

P - 43 Antibacterial activity evaluation of chitosan-urethane-like surface modification on titanium surface

○Sekine K, Hanawa S, Takegawa E, Hamada K
Tokushima Univ.

P - 44 Biocompatibility of new ceramic-coated implant materials

○Tani A, Komasa S, Sato M, Ogata C, Hashimoto Y
Osaka Dental Univ.

P - 45 Calcification by stem cells from human exfoliated deciduous teeth on micro/nano patterns

○Akasaka T, Nakanishi K, Yoshida Y
Hokkaido Univ.

P - 46 Early tissue interface responses to carbon nanohorn-coated titanium in a mouse calvarial defect model

○Amano H, Hirata E, Sakaguchi K, Yokoyama A
Hokkaido Univ.

P - 47 Design and development of high MRI-compatibility Zr-rich medium entropy alloys with low magnetic susceptibility for dental implant applications

Ho W-F, ○Liang JT, Hsu HC, Wu SC
Natl. Univ. of Kaohsiung

P - 48 Enhancing antibacterial performance of low-Cu, Zr-rich medium entropy alloys via Mo-controlled segregation for dental implant applications

Hsu HC, ○Chen PH, Ho WF, Wang HF, Kao YL, Wu SC
Central Taiwan Univ. of Sci. and Technol.

P - 49 Effects of CuO addition on antibacterial, mechanical, and cellular responses of L-PBF Ti-CuO alloys

○Chen J, Chen P, Niimura A, Dong M, Zhou W, Nomura N, Kanetaka H
Tohoku Univ.

P - 50 Effects of plasticizers addition strategies on the rheological properties of photocurable zirconia slurries for 3D printing

Wu SC, ○You XQ, Hsu HC, Ho WF
Central Taiwan Univ. of Sci. and Tech.

P - 51 Preparation of dental composite materials by Polymer-Infiltrated-Ceramic-Network (PICN) technique

Hsu HC, ○Wang HY, Yeh TP, Hsu SK, Lin CW
Central Taiwan Univ. of Sci. and Tech.

P - 52 Dental technician's verification of polishing of zirconia with diamond-containing dental rubber abrasive

○Tsukamoto F, Asakura M, Goto T, Uematsu Y, Hayashi T, Ban S
Aichi Gakuin Univ.

P - 53 Effects of stress-relaxation properties of aligner materials on tooth movement in aligner orthodontics -Finite element study-

○Yokoi Y
Matsumoto Dental Univ.

P - 54 Cross-modal deep learning–based diagnosis support for maxillary canine impaction using panoramic radiographs

○Takeda S, Yoshimi Y, Okazaki S, Mine Y
Hiroshima Univ.

P - 55 Formulation of concentration-tunable dental gels containing neutral electrolyzed water via methylcellulose–agar composite

○Nagamatsu Y, Ikeda H, Nagamatsu H
Kyushu Dental Univ.

P - 56 Effects of different primers and adhesives on shear bond strength of repaired resin composite–veneered PEEK interim material

○Angwarawong T, Eausukul T, Sittiwong P, Wongchaisamorn P, Angwaravong O
Khon Kaen Univ.

P - 57 Effect of nano-hydroxyapatite toothpastes on dentin remineralization

○Angwaravong O, Yodsuwan R, Angwarawong T
Khon Kaen Univ.

P - 58 Use of hydroxyapatite as an oral heavy metal detox agent

○Bikharudin A, Sung PC, Otaka A, Okada M, Matsumoto T
Okayama Univ.

P - 59 Oral-related wearable assistive devices: Secondary perioral environmental improvement and potential clinical applications

○Kameda T, Sakamoto M, Terada K, Oka S
Nippon Dental Univ.

P - 60 Development of antibacterial dentures using titanium apatite spray processing

○Komasa S, Sato H, Miyake A, Hashimoto Y
Osaka Dental Univ.

P - 61 Traction force characteristics of orthodontic elastics combined with magnets

○Takahashi M, Numazaki K, Nagano-Takebe F, Nezu T
Health Sciences Univ. Hokkaido

P - 62 Effect of differences in gingival morphology design on the durability of floor resin

○Kitaoka N
Shiken Co., Ltd.

April 19 (Sunday)

▪ Hall A

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

A - 11 Withdrawn

A - 12 Effect of thermal cycling on retention force between PEEK posts with different surface treatments and resin for core build-up

○Kasahara M, Kagoura H, Udagawa T, Hattori M
Tokyo Dental College

A - 13 Development of a PEEK adhesive targeting phenyl groups: Evaluation of bond strength and wettability

○Hori M, Ohkuma K, Kawai T, Hayashi T
Aichi Gakuin Univ.

▪ Hall A

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

※This program is exclusive to Dental Materials Adviser/Senior Adviser holders.

13:00 - 14:30 Symposium

1. Paradigm shift of dental adhesives through academic collaboration

○Okada Masahiro
Tohoku University

2. Current status and issues of adhesive materials and composite materials in dental treatment

○Nihei Tomotaro
Kanagawa Dental University

3. Introduction to the adhesion society of Japan and trends in adhesive technology

○Ougizawa Toshiaki
Institute of Science Tokyo

4. Adhesives and composite materials using cross-linked polymer blends

○Kishi Hajime
University of Hyogo

14:40 - 15:25 General Presentation (Oral Session)

A - 14 Analyses of dissolution and hydrolysis reaction of octacalcium phosphate with different crystallinity

○Hamai R, Ishimura S, Okada M, Tsuchiya K, Suzuki O
Tohoku Univ.

A - 15 Effect of H_2 gas evolution on electrical debonding properties of resin modified glass-ionomer- cement

○Atsumi K, Takegawa-Uyama E, Hamada K
Tokushima Univ.

A - 16 Development of a salivary enzyme-responsive sticker for visualizing the wearing time of removable orthodontic appliances (Part 1) : Evaluation of the salivary reaction layer

○Hasegawa M, Hori M, Inoue H, Komori J, Kawai T, Hori T, Hayashi T
Tokai Dental Medical College

15:30 Closing Remark