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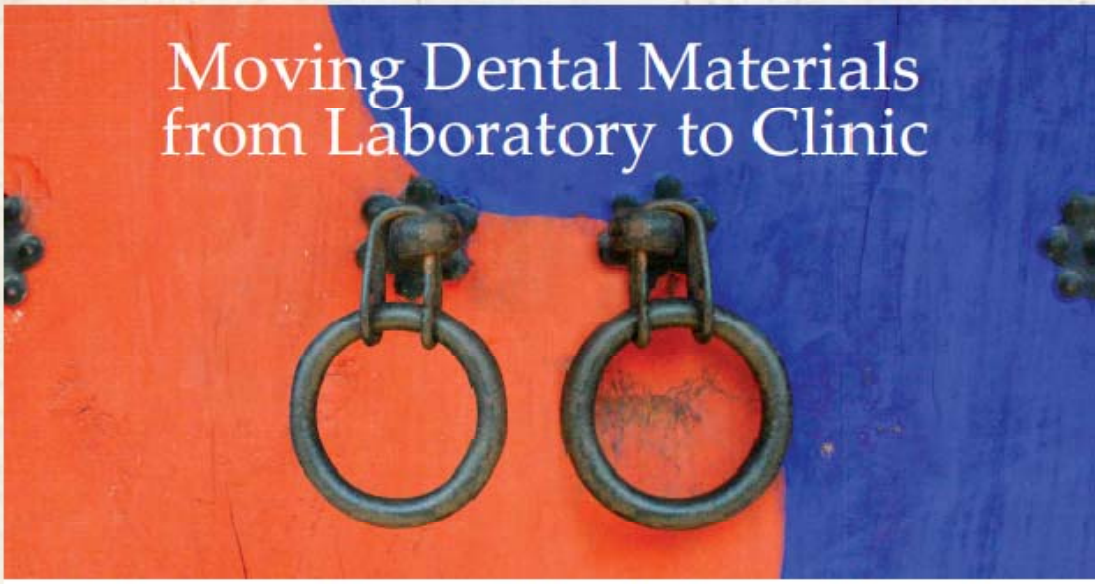

Proceedings of the International Dental Materials Congress 2011

In conjunction with

KRSDM
2011 Annual Meeting of
The Korea Research Society
for Dental Materials

JSDMD
57th Meeting of
The Japanese Society
for Dental Materials and Devices

Eun-Myung Auditorium
Yonsei University Severance Hospital

Seoul, Korea
May 27-29, 2011

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Seoul, Korea

May 27–29, 2011

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Meeting Schedule

Friday, May 27

4:00 pm – 8:00 pm Registration

6:00 pm – 8:00 pm Welcome Reception (Allen Hall)

Saturday, May 28

08:00 am – 05:00 pm Registration

08:50 am – 09:00 am Opening Remarks (Eun-Myung Auditorium)

09:00 am – 11:00 am Invited Lecture I (Eun-Myung Auditorium)

"New Concept of Implant Design and Characteristics"

Coordinator: Kyo-Han Kim (Kyungpook National University, Korea)

Satoshi Imazato (Osaka University, Japan)

09:00 am – 09:40 am "Recent Changes of Dental Implant Design - AnyRidge"

Speaker: Kwang Bum Park (MegaGen Implant Co., Ltd., Korea)

09:40 am – 10:20 am "Implant Surface Treatment"

Speaker: Takao Hanawa (Tokyo Medical and Dental University, Japan)

10:20 am – 11:00 am "Bone Graft Materials"

Speaker: Jonathan C Knowles *(University College London*, United Kingdom)

11:00 am – 12:00 pm Poster Presentation I (Seminar Room 2-3)

12:00 am – 01:00 pm Lunch (3rd Floor)

01:00 pm – 04:00 pm Invited Lecture II (Eun-Myung Auditorium)

"Esthetic Restoration Using CAD/CAM Technology"

Coordinator: Kunio Ishikawa (Kyusyu University, Japan)

Min-Ho Lee (Chonbuk National University, Korea)

01:00 pm – 01:40 pm "Technical Factors Affecting the Properties of Dental Zirconia"

Speaker: Seiji Ban (Aichi Gakuin University, Japan)

01:40 pm – 02:20 pm "Zirconia: What Consequences with Its Use for Dental Restorations "

Speaker: Michael Swain (The University of Sydney, Australia)

02:20 pm – 02:40 pm Coffee Break

Coordinator: Hae-Hyoung Lee (Dankook University, Korea)

Masao Yoshinari (Tokyo Dental Collage, Japan)

02:40 pm – 03:20 pm *"Lifetime Prediction of Dental Implants and Prostheses"*

Speaker: Jason A Griggs (University of Mississippi, U.S.A.)

03:20 pm – 04:00 pm "New Concept of Soft Tissue Management in Anterior Immediate Implants"

Speaker: Hoi Wung Chung (Mir Dental Hospital, Korea)

04:00 pm – 05:00 pm Poster Presentation II (Seminar Room 2-3)

04:00 pm – 06:00 pm Poster Presentation Competition(YIA) (Seminar Room 4)

07:00 pm – 10:00 pm Banquet (optional) (boarding time 6:30 pm)

Sunday, May 29

08:00 am – 09:00 am Registration

08:30 am – 10:30 am

Oral Presentation I (Eun-Myung Auditorium)

Coordinator: Isao Hirata (Hiroshima University), Jin-Soo Ahn (Seoul National University), Seung-Han Oh (Wonkwang University), Yoshiya Hashimoto(Osaka Dental University)

Oral Presentation II (Lecture Hall A)

Coordinator: Takuya Matsumoto (Osaka University), Han-Cheol Choe (Chosun University) Hyeong-Cheol Yang (Seoul National Univ.), Takashi Nezu (Iwate Medical University)

Oral Presentation III (Lecture Hall B)

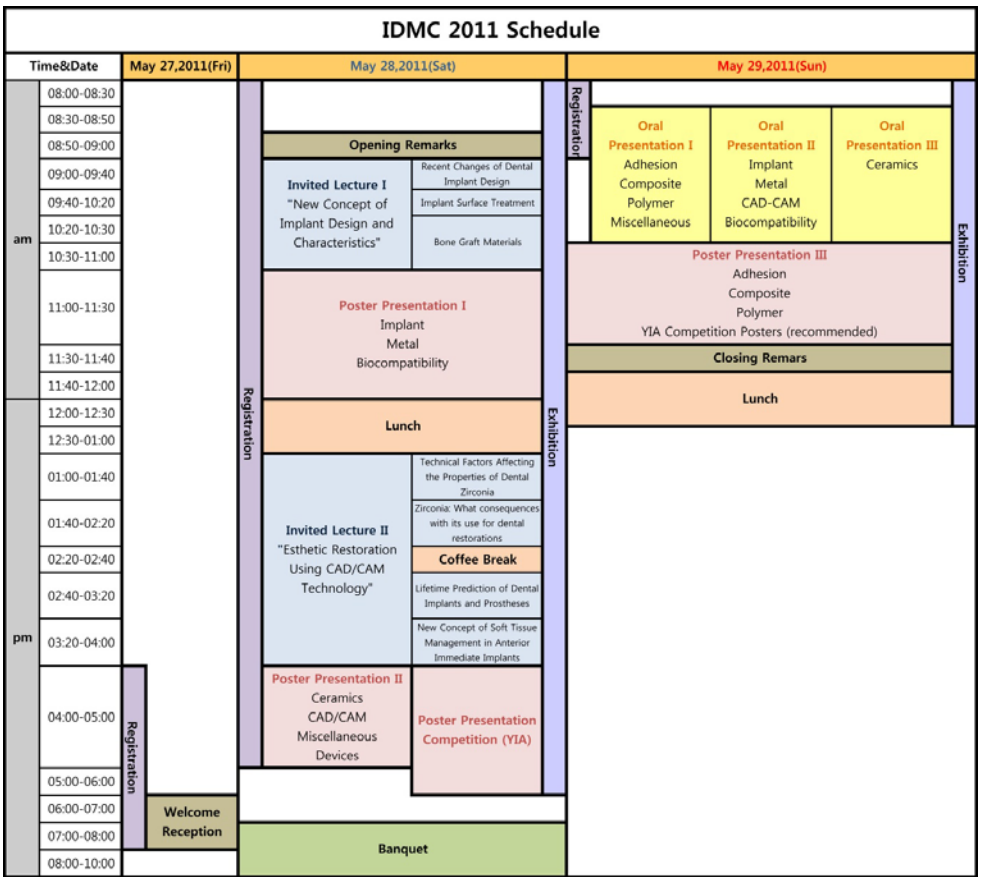
Coordinator: Naoyuki Nomura (Tokyo Medical and Dental Univ.), Yong-Keun Lee (Yonsei Univ.), Hae-Won Kim (Dankook University), Yukimichi Tamaki (Showa University)

10:30 am – 11:30 am Poster Presentation III (Seminar Room 2-3)

Poster Presentation Competition(YIA) (Seminar Room 3: open to the public)

11:30 am – 11:40 am Closing Remarks (Eun-Myung Auditorium)

11:40 am – 12:30 pm Lunch (3rd Floor)



General Session Program

Oral Presentation I (O1–O12): Sunday, May 29, 8:30 am – 10:30 am, Eun-Myung Auditorium

Chair: Isao Hirata (Hiroshima University), Jin-Soo Ahn (Seoul National University), Seung-Han Oh (Wonkwang University), Yoshiya Hashimoto(Osaka Dental University)

O1-Adh01 TEM Characterization of a Silorane Composite Bonded to Enamel/Dentin.
*Mine A[1)], De Munck J[2)], Kuboki T[1)], Yoshida Y[1)], Suzuki K[1)], Van Meerbeek B[2)]
([1]Dentistry and Pharmaceutical Science, Graduate School of Medicine, Okayama Univ., Okayama, Japan, [2]Catholic University of Leuven, Leuven, Belgium)

O1-Com01 Biopolymer-coated Glass Nanofibers with Bioactivity for Use as Tissue Regenerative Matrices.
Kim JJ[1,2)], Won JE[1,2)], Shin US[1,2)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science School of Dentistry, Dankook Univ., Cheonan, Korea)

O1-Com02 Contraction Stresses in Direct and Indirect Resin Composite Restorations Evaluated by Crack Analysis.
*Yamamoto T[1)], Nakamura Y[2)], Nishide A[1)], Kubota Y[1)], Momoi Y[1)]
([1]Dept. of Oper. Dent., [2]Dept. of Fixed Pros., Tsurumi Univ., Yokohama, Japan)

O1-Com03 Biocompatible-modified Magnetic Nanoparticles for Biomedicine.
Singh RK[1)], Eltohamy M[1)], El-Fiqi AM[1,2)], Shin US[1,2)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science School of Dentistry, Dankook Univ., Cheonan Korea)

O1-Com04 Curing Efficiency of Three Different Curing Modes at Different Distances for Four Composites.
*Zhu S[1)], Platt JA[2)]
([1]JiLin Univ., ChangChun, China, [2]Indiana Univ., Indianapolis, USA)

O1-Pol01 The Influence of Film-forming Materials on the Properties of Fluoride Varnish.
*Zhao XY, Li ZH, Wang JQ, Li SB
(The 4th Military Medical Univ., Xi'an 710032, China)

O1-Pol02 Development of 4-META/MMA-based Adhesive Resin with FGF-2 Releasing Property - Influences of Resin Monomers on Functions of FGF-2.
*Takeda K[1)], Imazato S[2)], Kiba W[1)], Ebisu S[1)]
([1]Department of Restorative Dentistry and Endodontology, [2]Department of Biomaterial Science, Osaka Univ., Osaka, Japan)

O1-Pol03 Effect of Polymer-based Rotary File in Root Canal Irrigation on Smear Layer Removal: A SEM Study.
*Masudi SM, Thauk M, Ariffin Z, Tin Oo MM
(Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia)

O1-Mis01 Analysis of Strengthening Mechanisms of Human Dentin by UV Irradiation.
*Furuya Y, Hayashi M, Takeda Y, Ebisu S
(Graduate School of Dentistry, Osaka Univ., Suita, Japan)

O1-Mis02 Biomechanics of Viscoelastic Masticatory Mucosa.
*Wakabayashi N[1)], Ona M[1)], Takaichi A[1)], Sawada A[2)], Suzuki T[2)], Igarashi Y[1)]
([1]Tokyo Medical and Dental Univ., Tokyo, Japan, [2]Iwate Medical Univ., Morioka, Japan)

O1-Mis03 Tooth Whitening, Heat and Cytocompatibility of the Mixture of Self-heating Zeolite and 34.5% Hydrogen Peroxide.
*Lee JM [1)], Kim KM[1,2)], Kim MJ[1,2)], Lee YK[1)], Roulet JF[3)], Kim KN[1,2)]
([1]Department and Research Institute of Dental Biomaterials & Bioengineering, [2]Research Center for Orofacial Hard tissue Regeneration, College of Dentistry, Yonsei Univ., Seoul, Korea, [3]Ivoclar-Vivadent Co., Lichtenstein)

O1-Mis04 Bone-like Tissue Induced by rhBMPs *in vitro* has Ossification Potential *in vivo.*
*Hayashi T, Asai T, Asakura M, Sasaki K, Uematsu Y, Mieki A, Kataoka H, Kawai T
(Department of Dental Materials Science School of Dentistry, Aichi Gakuin Univ., Nagoya, Japan)

Oral Presentation II (O13 – O25): Sunday, May 29, 8:30 am –10:30 am, Lecture Hall A

Chair: Takuya Matsumoto (Osaka University), Han-Cheol Choe (Chosun University)
Hyeong-Cheol Yang (Seoul National University), Takashi Nezu (Iwate Medical University)

O2-Imp01 Immobilization of Ag Nanopaticles/FGF-2 on Modified Titanium Implant Surface and Behavior of Human Gingival Fibroblasts.
Ma QL, Mei SL, Ji K, *Zhang YM
(School of Stomatology, Fourth Military Medical Univ., Xi'an, China)

O2-Imp02 Enhancement of Fibroblast Growth on Microgroove-surfaced Pure Titanium Substratum.
*Furuhashi A, Ayukawa Y, Atsuta I, Okawachi H, Koyano K
(Section of Implant and Rehabilitative Dentistry, Division of Oral Rehabilitation, Faculty of Dental Science, Kyushu Univ., Fukuoka, Japan)

O2-Imp03 Application of Carbon Nanotube Coated 3D Scaffold for Bone Tissue Engineering.
*Hirata E, Uo M, Watari F, Yokoyama A
(Hokkaido Univ., Sapporo, Japan)

O2-Imp04 *In vitro* and *in vivo* Evaluation of Ca-modified Titanium with Ca-ozone Treatment.
*Tsuru K[1)], Sakaguchi M[1)], Ayukawa Y[1)], Moriyama Y[1)], Maruta M[1)], Matsuya S[2)], Koyano K[1)], Ishikawa K[1)]
([1]Kyushu Univ., Fukuoka, Japan, [2]Fukuoka Dental College, Fukuoka, Japan)

O2-Imp05 Effects of Granular Size on the Tissue Response to Carbonate Apatite Granules in Rabbit.
*Ishikawa K[1)], Miyamoto Y[2)], Fujisawa K[2)], Nagai H[2)], Tsuru K[1)], Maruta M[1)], Matsuya S[3)]
([1]Kyushu Univ., Fukuoka, Japan, [2]Tokushima Univ., Tokushima, Japan, [3]Fukuoka Dental College, Fukuoka, Japan)

O2-Imp06 Osteoinductive Activity of BMP-Metal Composite Material.
*Kawai T, Hayashi H, Tsuruta S, Taniyama M, Hamajima S, Sato Y, Kobayashi S, Ohno Y, Uematsu Y
(School of Dentistry Aichi-gakuin Univ., Nagoya, Japan)

O2-Met01 Unique Hardening Behavior of Dental Ag-Pd-Au-Cu Alloys with Different Cu Contents Through Solution Treatment.
*Kim Y-H[1)], Niinomi M[2)], Nakai M[2)], Fukui H[3)]
([1]Graduate Student of Tohoku Univ., Sendai, Japan, [2]Institute for Materials Research, Tohoku Univ., Sendai, Japan, [3]Aichi-Gakuin Univ., Nagoya, Japan)

O2-Met02 Electrochemical Impedance Spectroscopy Analyses of Titanium Alloys in Peroxide- or Fluoride-containing Solutions.
*Oda Y, Takemoto S, Hattori M, Hasegawa K, Yoshinari M, Kawada E
(Tokyo Dental College, Chiba, Japan)

O2-CAD01 Influence of Nb and Fe Additions on Microstructure, Mechanical Properties of Ni-Cr-Mo Alloy for CAD/CAM.
*Kang YH[1)], Lee SB[1)], Cho SW[2)], Park KJ[2)], Kim GM[1)], Kim KN[1)]
([1]Yonsei Univ., Seoul, Korea, [2]CeragemBiosys, Ilsan, Korea)

O2-Bio01 Bisphosphonate Immobilization to Apatite Coated Titanium Web for Bone Regeneration.
*Hayakawa T[1)], Ametani A[2)], Yoshinari M[3)], Hara H[4)], Sato M[4)]
([1]Tsurumi Univ., Yokohama, Japan, ,[2]Hilex Corp, Amagasaki, Japan, [3]Tokyo Dental College, Chiba, Japan, [4]Kogakuin Univ.,Tokyo, Japan)

O2-Bio02 Room-temperature Ionic Liquids (RTILs)-assisted Preparation of Polymeric Porous Scaffolds.
Lee HY[1,2)], Bang SH[1,2)],Shin US[1,2)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science School of Dentistry, Dankook Univ., Cheonan, Korea)

O2-Bio03 *In vitro* Evaluation of Osteoclastic Resorption on Carbonate Apatite Block Derived from Dicalcium Phosphate and Calcium Carbonate.
*Daitou F[1)], Tsuru K[1)], Maruta M[1)], Matsuya S[2)], Terada Y[1)], Ishikawa K[1)]
([1]Kyushu Univ., Fukuoka, Japan, [2]Fukuoka Dent. College, Fukuoka, Japan)

O2-Bio04 The Cytotoxicity Evaluation of the Polyvinyl Siloxane Impression Materials using the Agar Diffusion Test as a Function of Time.
* Kwon JS[1)], Lee SB[1,2)], Kim KM[1, 2)], Kim KN[1, 2)]
([1]Research Center for Orofacial Hard Tissue Regeneration, Seoul, Korea, [2]Department and Research Institute of Dental Biomaterials and Bioengineering, College of Dentistry, Yonsei Univ., Seoul, Korea)

Oral Presentation III (O26–O37): Sunday, May 29, 8:30 am –10:30 am, Lecture Hall B

Chair: Naoyuki Nomura (Tokyo Medical and Dental Univ.), Yong-Keun Lee (Yonsei University), Hae-Won Kim (Dankook University), Yukimichi Tamaki (Showa University)

O3-Cer01 A Comparison of the Bond Strengths of Layered and Pressed-on Veneering Porcelains to Zirconia.
*Hata U[1)], Uehara Y[2)], Sakurai Y[2)], Wakamatsu N[1)], Yamamura O[1)], Fujiwara S[1)], Doi Y[1)]
([1]Asahi Univ., Gifu, Japan, [2] Fine Co. Inc., Osaka, Japan)

O3-Cer02 Calcium Phosphate Hollow Spheres for Hard Tissue Repair.
*Hong MH, Kim KM, Lee YK
(Department and Research Institute of Dental Biomaterials and Bioengineering, Yonsei Univ. College of Dentistry, Seoul, Korea)

O3-Cer03 β-Tricalcium Phosphate with Macropores and Micropores.
*Kim SM, Kim KM, Lee YK
(Yonsei Univ., Seoul, Korea)

O3-Cer04 Esthetic Rehabilitation of Bi-arch Anterior Teeth Utilizing Zirconia-based-ceramic Restorations: a Case Report.
*Zhao K, Pan Y
(Sun Yat-sen Univ., Guangzhou, China)

O3-Cer05 Assessment of Osteogenic Responses to Zinc-incorporated Bioactive Glasses.
Oh SA[1,2)], Won JE[1,2)], Kim JJ[1,2)], Shin US[1,2)], Lee HH[1,3)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, Korea, [2]Institute of Tissue Regeneration Engineering, Korea, [3]Dankook Univ., Cheonan, Korea)

O3-Cer06 Self-setting Calcium Phosphate Microsphereical Carriers for the Reconstruction of Hard Tissues.
Park JH[1,2)], Lee GS[1,2)], Shin US[1,2)], Lee HH[1,3)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science, School of Dentistry, Dankook Univ., Cheonan, Korea)

O3-Cer07 Bonding Strength between Zirconia and Dental Porcelain (Part 4) Interaction of Surface Roughness with Firing Temperature.
*Tsuruki J[1)], Noda M[1)], Okuda Y[1)], Miyamoto M[1)], Ban S[2)]
([1]Kagoshima Univ., Kagoshima, Japan, [2]Aichi Gakuin Univ., Nagoya, Japan)

O3-Cer08 Porosity of Dental Gypsum Investments in Setting and Heating Process.
*Asaoka K
(Tokushima Univ., Tokushima, Japan)

O3-Cer09 Fabrication of βTCP Foam using Magnesium Oxide as Stabilizer.
*Nikaido T[1,2)], Tsuru K[1)], Daitou F[1)], Munar M[1)], Maruta M[1)], Matsuya S[3)], Nakamura S[2)], Ishikawa K[1)]
([1]Department of Biomaterials, [2]Section of Oral and Maxillofacial Surgery, Kyushu Univ., Fukuoka, Japan, [3]Fukuoka Dental College, Fukuoka, Japan)

O3-Cer10 Effect of Surface Treatment on Bonding Strength of Zirconia Ceramics to Resin Cements.
*Sato H, Yamasaki Y
(Kagoshima Univ., Kagoshima, Japan)

O3-Cer11 PMMA-ZrO_2 Composite with Excellent Machinability Used for Dental CAD/CAM System.
*Shibao Li, Xinyi Zhao, Yimin Zhao, Lihui Tang, Cheng Xie
(School of Stomatology, The Fourth Military Medical Univ., Xi'an, China)

O3-Cer12 Dynamic Fatigue Behaviour and Numerical Life of Dental Ceramic Material.
*Zhao K[1)], Cheng QT[1)], Wu WQ[1)], Zhang XP[2)]
([1]Department of Prosthodontics, Guanghua School of Stomatology, Sun Yat-sen Univ., Guangzhou, China, [2]School of Mechanical Engineering, South China University of Technology, Guangzhou, China)

Poster Presentation Competition (YIA01–YIA15)

: Saturday, May 28, 04:00–06:00 pm , Seminar Room 4: Closed-door Presentation (Recommended)
Sunday, May 29, 10:30–11:30 am, Seminar Room 3: open to the public

YIA01 Synthesis of Hydroxyapatite Nanocrystals and Their Application as Coating Agents for Biodegradable Polymers.
*Okada M[1)], Takeda S[1)], Furuzono T[2)]
([1]Osaka Dent. Univ., Osaka, Japan, [2]Kinki Univ., Wakayama, Japan)

YIA02 Calcium Phosphate Nucleation Ability on the Titanium Surface Modification via Alkylphosphonic Acid with Carboxyl Group.
*Wu Jiang[1, 2)], Hirata Isao[1)], Zhao Xianghui[2)], Okazaki Masayuki[1)]
([1]Hiroshima Univ., Hiroshima, Japan, [2] Fourth Military Medical Univ., Xi'an, China)

YIA03 Cytotoxicity Test using Polyurethane Disc as Dentin-substitutes in a Dentin Barrier Test.
*Kim MJ[1,2)], Kim KN[1,2)], Lee YK[1)], and Kim KM[1,2)]
([1]Department & Research Institute of Dental Biomaterials & Bioengineering, [2]Research Center for Orofacial Hard Tissue Regeneration, College of Dentistry, Yonsei Univ., Seoul, Korea)

YIA04 The Effect of N-Acetylcysteine on Cytotoxicity and Anti-differentiation Activity of Dentin Bonding Agents.
*Son KM, Kim NR, Park HC, Zhu TT, Lim BS, Yang HC
(Seoul National Univ., Seoul, Korea)

YIA05 Evaluation of Antibacterial Effects of an Experimental Primer Containing MDPB for Resin-based Root Canal Filling System.
*Yoshikawa R[1)], Izutani N[1)], Imazato S[2)], Kitagawa H[1)], Ebisu S[1)]
([1]Department of Restorative Dentistry and Endodontology, [2]Department of Biomaterials Science, Osaka Univ., Suita, Japan)

YIA06 Effect of Sodium Ascorbate on Bond Strength to Bleached Enamel.
*Leetrakulwanna C, Vongphan N, Senawongse P
(Department of Operative Dentistry and Endodontics, Faculty of Dentistry, Mahidol Univ., Bangkok, Thailand)

YIA07 Nanocomposites Scaffolds Reinforced with Modified Multi-walled Carbon Nanotubes for Hard Tissue Engineering.
Biligzaya D[1,2)], Shin US[1,2)], Lee HH[1,3)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science School of Dentistry, Dankook Univ., Cheonan, Korea)

YIA08 Effects on Bone Regeneration When Collagen Model Polypeptides Are Combined with Various Sized Alpha-tricalcium Phosphate Particles.
*Sakai K[1)], Hashimoto Y[1)], Baba S[2)], Nishiura A[1)], Matsumoto N[1)]
([1]Osaka Dent Univ., Osaka, Japan, [2]Institute of Biomedical Research & Innovation, Kobe, Japan)

YIA09 Surface Property and Streptococcal Adherence of Ce-TZP/Al_2O_3 Nanocomposite.
*Sawada Tomofumi, Sawada Tomoji, Hamada N, Kumasaka T, Kimoto K
(Kanagawa Dental College, Yokosuka, Japan)

YIA10 Mechanical Retention for Low-fusion Porcelain and the Sponge-like Surface of 14K Gold Alloy.
*Ida Y, Nagano F, Hashimoto M, Ohno H, Endo K
(Health Sciences University of Hokkaido, Tobetsu, Japan)

YIA11 Mecahnical and Biological Performances of Nanocomposite Fibrous Membranes for Guided Bone Regeneration.
Park JH[1,2)], Jegal SH[1,2)], Kim TH[1,2)], Kim JH[1,2)], Lee HH[1,3)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science School of Dentistry, Dankook Univ., Cheonan, Korea)

YIA12 Dependence of Silane Coupling Agent on Shear Bonding Strength between Titanium Alloy and Segmented Polyurethane after Immersion in Water.
*Nakai M[1)], Niinomi M[1)], Kamura H[2)], Hanawa T[3)]
([1]Tohoku Univ., Sendai, Japan, [2]Graduate Student of Tohoku Univ., Sendai, Japan, [3]Tokyo Medical and Dental Univ., Tokyo, Japan)

YIA13 Flexural Properties of a New Face Guard Core Material Measured by Three Point Bending Test.
*Abe K[1)], Churei H[1)], Kobayashi M[2)], Takahashi H[1)], Ueno T[1)]
([1]Tokyo Medical and Dental Univ., Tokyo, Japan, [2]Chiba Institute of Technology, Chiba, Japan)

YIA14 Electrical Polarization Characteristics and BSA Binding Capability of Hydrothermally Treated $CaTiO_3$ Powder.
*Hong SB[1)], Seo YW[2)], Jeong SH[2)], Kim JW[1)], Park YJ[1)], Song HJ[1)]
([1]Department of Dental Materials, School of Dentistry, Chonnam National Univ., Gwangju, Korea, [2]KBSI, Gwang-Ju Center, Gwangju,
Korea)

YIA15 Incorporation of Silver Nanoparticles to Chitosan Gel and Evaluation of Its Bactericidal Effect.
*Carolina Sámano-Valencia, Gabriel Alejandro Martínez-Castañón, Nuria Patiño-Marín, Rita Elizabeth Martínez-Martínez, Juan Pablo Loyola-Rodríguez, Nereyda Niño-Martínez
(Advanced Education General Dentistry Program, San Luis Potosi Univ., Mexico)

Poster Presentation I: Saturday, May 28, 11:00 am – 12:00 pm, Seminar Room 2-3

Implant

P1-Imp01 Surface Modification of Titanium Implant by Anodic Oxidation Treatment and Bisphosphate Immobilization.
*Kim WG[1)], Lee SJ[1)], Soh YJ[1)], Lee MH[1)] , Kim HS[1)], Kim BI[2)], Bae TS[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2]Sunchon National Univ., Suncheon, Korea)

P1-Imp02 Bioactivity of Precalcified Nanotubular TiO_2 Layer on Titanium Implant.
*Yang EJ[1)], Park IS[1)], Chung HW[1,2)], Watari F[3)], Uo M[3)], Lee MH[1)], Bae TS[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2]Jeonju Mir Dental Hospital, Jeonju, Korea, [3]Hokkaido Univ., Sapporo, Japan)

P1-Imp03 Biomechanical Considerations of Different Collar Structured Implants Supporting 3-Unit Fixed Partial Denture.
*Meriç G[1)], Erkmen E[2)], Kurt A[3)]
([1]Near East Univ., Nicosia Mersin-10, Turkey, [2]Gazi Univ., Ankara, Turkey, [3]Atılım Univ., Ankara, Turkey)

P1-Imp04 Influence of Prosthesis Type and Material on the Biomechanical Behaviour of Implant Retained Fixed Partial Dentures.
*Meriç G[1)], Erkmen E[2)], Kurt A[3)]
([1]Near East Univ., Nicosia Mersin-10, Turkey, [2]Gazi Univ., Ankara, Turkey, [3]Atılım Univ., Ankara, Turkey)

P1-Imp05 Surface Characteristics of Titanium Implant Modified by Blasting and Acid-etching.
*Lee KJ[1)], Park IS[1)], Choi SK[2)], Ryoo GH[2)], Park KB[2)], Lee MH[1)], Bae TS[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2]MegaGen implant, Gyeongsan, Korea)

P1-Imp06 Characteristics and Osteoblastic Cells Responses of Thermally Oxidated Surface.
* Lee YJ, Jeon HR, Park KD, Lee BA, Kim YJ
(Department of Dental Science, Graduate School, Chonnam National Univ., Gwangju, Korea)

P1-Imp07 Titania Nanotubes Supported Gelatin Stabilized Gold Nanoparticles for Medical Implants.
*Neupane MP, Yu B, Kim YK, Park IS, Park HH, Bae TS, Lee MH
(Chonbuk National Univ., Jeonju, Korea)

P1-Imp08 The Basic Experiment about the Effective of Sintered Titanium Dioxide as a Bone Filling Material.
*Asai T, Hayashi T, Kuroki K, Mieki A, Kataoka H, Kawai T
(Aichi Gakuin Univ., Nagoya, Japan)

P1-Imp09 Bioactivity of Ti-6Al-4V Alloy Implant Treated with Ibandronate.
*Moon SH[1)], Bae TS[1)], So YJ[1)], Lee MH[1)], Kim BI[2)], Kim HS[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2]Sunchon National Univ., Suncheon, Korea)

P1-Imp10 A Finite Element Analysis of Two Different Collar Structured Implants Supporting Cantilever Fixed Partial Denture.
*Erkmen E[1)], Meriç G[2)], Kurt A[3)]
([1]Gazi Univ., Ankara, Turkey, [2]Near East Univ., Nicosia Mersin-10, Turkey, [3]Atılım Univ., Ankara, Turkey)

P1-Imp11 Influence of Shape and Loading Direction of Zirconia Abutment on Bending Fracture Strength.
*Mashio G, Takahashi A, Sakamoto Y, Takayama M and Sakuma T
(R&D Dept. GC Corporation, Tokyo, Japan)

P1-Imp12 Development of the Carbon Nanotube-coated Anodized Titanium.
*Inoue S[1)], Uo M[1)], Hirata E[1)], Lee MH[2)], Bae TS[2)], Watari F[1)], Yokoyama A[1)]
([1]Hokkaido Univ., Sapporo, Japan, [2]Chonbuk National Univ., Jeonju, Korea)

P1-Imp13 Surface Analysis of Titanium Influenced by Plasma Glow Discharge.
*Muraji N[1)], Iwata T[1)], Kawai T[2)], Ueda N[3)], Miyazawa K[3)] Goto S[3)], Tanaka Y[1)]
([1]Department of Removable Prosthodontics, Aichi-Gakuin Univ., Nagoya, Japan, [2]Department of Dental Materials Science, Aichi-Gakuin Univ., Nagoya, Japan, [3]Department of Orthodontics, Aichi-Gakuin Univ., Nagoya, Japan)

P1-Imp14 Enhancements of Bone-titanium Integration by NaOCl- mediated Biofunctionalization of Titanium.
*Kono M[1)], Ichioka Y[1)], Kado T[1)], Fukumoto M[2)], Sakata M[2)], Aita H[1)], Furuichi Y[1)], Endo K[1)], Koshino H[1)]
([1]Health Sciences University of Hokkaido, Toubetsu, Japan, [2]University of Hokkaido, Sapporo, Japan)

P1-Imp15 Effect of Attachment Design on the Retention of Implant Retained Auricular Prostheses: An *in vitro* Study.
*Wonglamsam A, Puttipisitchet O, Srithavaj T, Urapepon S, Thaworanunta S
(Mahidol Univ., Bangkok, Thailand)

P1-Imp16 Analysis of Abutment Fracture on a Single Standing Implant.
*Yamaguchi Y [1)], Shiota M [2)], Ahn K [1)], Nagao H [3)], Kasugai S[2)]
([1]Clinic for Implant Dentistry, Dental Hospital, Tokyo Medical and Dental Univ., Tokyo, Japan, [2] Oral Implantology and Regenerative Dental Medicine, Tokyo Medical and Dental Univ., Tokyo, Japan, [3] Yurigaoka Dental Clinic, Kanagawa, Japan)

P1-Imp17 Study on the Biomolecular Adsorption on Titanium Implant Retrieved from Rat Bone.
*Watanabe K, Okawa S, Kanatani M, Ito K, Kaneko H, Yamaga Y
(Niigata Univ., Niigata, Japan)

P1-Imp18 Enhancement of Initial Cell Attachment to a Titanium Surface Cleaned by Simple Chemical and Physical Treatments.
*Ichioka Y, Kado T, Ida Y, Aita H, Furuichi Y, Koshino H, Endo K
(Health Sciences University of Hokkaido, Ishikari-Tobetsu, Japan)

P1-Imp19 Surface Characteristics of Oxide Films on Titanium-based Metals Formed by AC-type Microarc Oxidation Combined with Hydrothermal Treatment.
*Min KK, Lee SH, Lee DS, Park YJ, Song HJ
(Department of Dental Materials, School of Dentistry, Chonnam National Univ., Gwangju, Korea)

P1-Imp20 Characteristics of BSA Release from Bone-like Apatite on Titanium Coated by Coprecipitation Method.
*Song HJ[1)], Kim HY[1)], Kohn DH[2)], Lee SH[1)], An JH[1)], Park YJ[1)]
([1]Department of Dental Materials, School of Dentistry, Chonnam National Univ., Gwangju, Korea, [2]Biologic & Materials Sciences, School of Dentistry, University of Michigan, Ann Arbor, USA)

Metal

P1-Met01 Metastable Phase Formation by Miscibility Limit of Ag-Cu System in an Au-Ag-Cu-Pd Alloy during Aging Process.
*Lee SH, Lim IS, Pyo AR, Cho SY, Kwon YH, Seol HJ, Kim HI
(Pusan National Univ., Yangsan, Korea)

P1-Met02 Bioactivity of Precalcified Nanotubular TiO_2 Layer on Ti-6Al-4V Alloy.
*Oh HJ[1)], Ji JH[1)], Park IS[1)], Yoon DJ[2)], Kim BI[2)], Lee MH[1)], Bae TS[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2] Sunchon National Univ., Suncheon, Korea)

P1-Met03 XAFS Analysis of TiO_2 Nanotube Formed on Pure Titanium Surface.
*Uo M[1)], Nitani H[2)], Abe S[1)], Akasaka T[1)], Lee MH[3)], Park IS[3)], Bae TS[3)], Watari F[1)]
([1]Hokkaido Univ., Sapporo, Japan, [2]High Energy Accel. Res. Org., Tsukuba, Japan, [3]Chonbuk Univ., Jeonju, Korea

P1-Met04 Corrosion and Cyto-toxicity Properties of Anodized Mg Alloys.
*Kim YK[1)], Jang YS[1)], Park IS[1)], Park HH[1)], Yun YH[2)], Bae TS[1)], Lee MH[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2]North Carolina Agricultural & Technical State Univ., Greensboro, USA)

P1-Met05 Effect of AOT-assisted Multi-walled Carbon Nanotubes on Antibacterial Activity.
*Bai Y[1)], Neupane MP[1)], Park IS[1)], Kim YK[1)], Watari F[2)], Uo M[2)], Bae TS[1)], Lee MH[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2] Hokkaido Univ., Sapporo, Jaan)

P1-Met06 Effects of Cold-rolling on Microstructure and Magnetic Susceptibilities of Zr-14Nb Alloy.
*Kondo R[1)], Shimizu R[2)], Suyalatu[1)], Nakagawa S[2)], Doi H[1)], Tsutsumi Y[1)], Noda K[2)], Nomura N[1)], Hanawa T[1)]
([1]Tokyo Medical and Dental Univ., Tokyo, Japan, [2]Shibaura Institute of Technology, Tokyo, Japan)

P1-Met07 Bioactivity of Precalcified Nanotubular TiO_2 Layer on Titanium Mesh.
*Song JJ[1)], Ji JH[2)], Park IS[2)], Park HH[2),] Lee MH[2)], Bae TS[2)]
([1]Chongam Univ., Suncheon, Korea, [2]Chonbuk National Univ., Jeonju, Korea)

P1-Met08 Effects of Heat Treatment on Magnetic Susceptibility and Mechanical Properties of Zr-3Mo Alloy That Prevents the MRI Artifacts.
*Suyalatu, Kondo R, Tsutsumi Y, Doi H, Nomura N, Hanawa T
(Tokyo Medical and Dental Univ., Tokyo, Japan)

P1-Met09 Surface Characterization of Titanium Alloys Immersed in Denture Cleanser.
*Takemoto S, Hattori M, Ichikawa H, Yoshinari M, Kawada E, Oda Y
(Tokyo Dental College, Chiba, Japan)

P1-Met10 Microstructure of MRI Compatible Au-Pt-8Nb Alloy for Biomedical Application.
*Uyama E, Inui S, Hamada K, Honda E, Asaoka K
(Institute of Health Biosciences, the University of Tokushima, Tokushima, Japan)

P1-Met11 Castability of MRI Compatible Au Alloy for Biomedical Application.
*Inui S, Uyama E, Hamada K, Honda E, Asaoka K
(Institute of Health Biosciences, the University of Tokushima, Tokushima, Japan)

P1-Met12 Calcium Phosphate Formation on Zr with Micro-arc Oxidation and Chemical Treatments.
*Tsutsumi Y[1)], Ha JY[2)], Doi H[1)], Nomura N[1)], Kim KH[2)], Hanawa T[1)]
([1]Tokyo Medial and Dental Univ., Tokyo, Japan, [2]Kyungpook National Univ., Daegu, Korea)

P1-Met13 Antibacterial Properties of Titanium Castings Modified by Experimental Mold Materials.
*Zhang ZT[1)], Ding N[1)], Ren L[1)], Li JL[1)], Tamaki Y[2)] and Miyazaki T[2)]
([1]Capital Medical Univ., School of Stomatology, Beijing, China, [2]Showa Univ., Tokyo, Japan)

P1-Met14 An Evaluation Method with Radiographic Image Quality Indicator for Internal Defects of Dental Casting Crown
*Li Y, Zheng G, Lin H
([1]Dental Materials Laboratory, Peking Univ. School and Hospital of Stomatology, Beijing, China)

P1-Met15 Application to Telescopic Dentures of Non-precious Alloys: Evaluation of Static Frictional Coefficients in Dental Alloys.
*Ohida M, Nomura N, Hanawa T, Igarashi Y
(Tokyo Medical and Dental Univ., Tokyo, Japan)

P1-Met16 The Interrelated Study of Chemical Composition and Corrosion Resistance of Dental Casting Base Alloys.
*Bai W, Lin H, Zhang D, Zheng G
(Dental Materials Laboratory, Peking Univ. School and Hospital of Stomatology, Beijing, China)

P1-Met17 Microstructures and Mechanical Properties of Co-29Cr-6Mo Alloy Fabricated by Selective Laser Melting Process.
*Takaichi A[1)], Suyalatu[1)], Nomura N[1)], Nakamoto T[2)], Doi H[1)], Tsutsumi Y[1)], Kurosu S[3)], Chiba A[3)], Hanawa T[1)], Wakabayashi N[1)], Igarashi Y[1)]
([1]Tokyo Medical and Dental Univ., Tokyo, Japan, [2]Technology Research Institute of Osaka Prefecture, Osaka, Japan, [3]Tohoku Univ., Sendai, Japan.)

P1-Met18 Synthesis of Silver Incorporated Hydroxyapatite Coating on Anodic TiO_2 Nanotubes under Magnetic Field.
*Rautray TR[1)], Kwon TY[2)], Kim KH[2)]
([1]BK 21 Project and [2]Department of Dental Biomaterials, School of Dentistry, Kyungpook National Univ., Daegu, Korea)

P1-Met19 Synthesis of Mg^{2+} Incorporated Hydroxyapatite by Ion Implantation and Their Cell Response.
Rautray TR, Kwon TY, *Kim KH
(Department of Dental Biomaterials and BK 21 Project, School of Dentistry, Kyungpook National Univ., Daegu, Korea)

P1-Met20 Improvement in Sag Resistance and Color of Noble Alloy for Metal -ceramic Restoration.
*Doi Y[1)], Imai Y[1)], Oda Y[2)]
([1]Ishifuku Metal Industry Co., Ltd., Soka, Japan, [2]Tokyo Dental College, Chiba, Japan)

P1-Met21 Effect of Cr and N Contents on the Mechanical Properties of Co-Cr-Mo Alloys for Dental Applications.
*Yoda K[1)], Nomura N[1)], Chiba A[2)], Hanawa T[1)], Igarashi Y[1)]
([1]Tokyo medical and dental Univ., Tokyo, Japan, [2]Tohoku Univ., Sendai, Japan)

P1-Met22 Electronic Structures of the L-cysteine Film on Dental Gold-silver-copper-palladium Alloys.
*Tsujibayashi T[1)], Kakimoto K[2)], Toyoda K[1)], Komasa Y[2)]
([1]Dept. of Physics, [2]Dept. of Geriatric Dentistry, Osaka Dental Univ., Hirakata, Japan)

P1-Met23 Effect of Cu Content and Heat Treatment on Hardness and Corrosion Resistance in Ag-Pd-Au-Cu Alloys.
*Kawashima I[1)], Koiso K[1)], Ryukata I[1)], Berzins DW[2)], Kumakura M[1)]
([1]Ohu Univ., Koriyama, Japan, [2]Marquette Univ., Milwaukee, USA)

P1-Met24 Microstructure Analysis of Cast Titanium Surface Modified by Nd:YAG Laser.
*Watanabe I[1)], Poulon-Quintin A[2)], Bertrand C[2)], McBride M[3)], Shiraishi T[1)], Watanabe E[1)]
([1]Nagasaki Univ., Nagasaki, Japan, [2]Université de Bordeaux, ICMCB, Pessac, France, [3]Baylor College of Dentistry, Dallas, USA)

P1-Met25 Electrochemical Impedance Analysis of Silicon-Hydroxyapatite Coatings on the Ti-35Nb-xZr Alloy.
Jeong YH[1,2)], Kim YJ [1)], Ko YM[1)], *Choe HC[1)]
([1]School of Dentistry, Chosun Univ., Gwangju, Korea, [2]College of Dentistry, The Ohio State Univ., Columbus, USA)

P1-Met26 Corrosion Behavior of Si/HA/Ti Film on Porous Ti-29Nb-xZr Alloy Surface.
Kim EJ[1)], Jeong YH[1,2)], Ko YM[1)], *Choe HC[1)]
([1]School of Dentistry, Chosun Univ., Gwangju, Korea, [2]College of Dentistry, The Ohio State Univ., Columbus, USA)

P1-Met27 Electrochemical Behavior of Sillicon-doped Hydroxyapatite Film on Femtosecond Laser Textured Ti-35Ta-xHf Alloys.
Moon BH[1)], Jeong YH[1,2)], Ko YM[1)], Eun SW[3)], *Choe HC[1)]
([1]School of Dentistry, Chosun Univ., Gwangju, Korea, [2]College of Dentistry, The Ohio State Univ., Columbus, USA, [3]Department of Applied Advanced Materials, Korea Polytechnic V Colleges, Gwangju, Korea)

P1-Met28 Grain Interior Precipitation and Related Lamellar-forming Grain Boundary Reaction in an Ag-Pd-Cu-Au-Zn Alloy.
*Cho MH[1)], Cho SY[2)], Kwon YH[2)], Seol HJ[2)], Kim HI[2)]
([1]Wonkwang Health Science Univ., Iksan, Korea, [2]Pusan National Univ., Yangsan, Korea)

P1-Met29 The Effect of Recasting of Precious Metal Ceramic Alloy with Oxygen-propane Torch on the Compositions of Alloy Elements and Shear Bond Strength.
*Cho YJ, Lim HN
(Department of Dental Materials, Division of Dentistry, Graduate School, Kyung Hee Univ., Seoul, Korea)

P1-Met30 Evaluation of Experimental Paste Type Phosphate-bonded Investments using Sol-gel Reaction.
*Yamaki R[1)], Yagi S[1)], Chou H-C[1)], Osawa K[1)], Hotta Y[1)], TamakiY[1)], Zhang Z[2)]
and Miyazaki T[1)]
([1]Showa Univ., Tokyo, Japan, [2]School of Stomatology Capital Medical Univ., Beijing, China)

P1-Met31 Soda-lime Glass Can Be Available for the Binder Material of the Experimental Reusable Investment for Dental Castings.
*Yagi S[1)], Chou H-C[1)], AidaY[1)], Tamaki Y[1)], Hotta Y[1)], Zhang Z[2)] and Miyazaki T[1)]
([1]Showa Univ., Tokyo, Japan, [2]Capital Medical Univ., School of Stomatology, Beijing, China)

P1-Met32 Microstructural and Physical Property Changes of Titanium by Alloying with Varying Amounts of Gold.
*Park YJ, Lee YR, Kim JY, Kim MK, Park KH, Song HJ
(Department of Dental Materials, School of Dentistry, Chonnam National Univ., Gwangju, Korea)

P1-Met33 Effects of Alloying Element Mn on the Microstructure and Physical Properties of Ti-Mn Alloys.
*Kim JW, Kim MK, Cho JH, Lee EB, Lim JB, Song HJ, Park YJ
(Department of Dental Materials, School of Dentistry, Chonnam National Univ., Gwangju, Korea)

Biocompatibility

P1-Bio01 Evaluation of Ion Releasing and Uptake Properties of a Prototype S-PRG Filler-containing Endodontic Material.
*Han L, Okiji T.
(Niigata Univ, Niigata, Japan)

P1-Bio02 Bioactivity and Histologic Response to a Novel Calcium Phosphate/Calcium Silicate/Bismutite Cement for Dental Pulp Capping.
*Sun J, Shen QY
(Shanghai Biomaterials Research & Testing Center, Shanghai Key Laboratory of Stomatology, Ninth People's Hospital, Shanghai Jiaotong Univ., Shanghai, China)

P1-Bio03 Carbon Nanotube-coated Silicone as a Flexible Biomedical Material.
*Matsuoka M[1)], Akasaka T[1)], Hashimoto T[2)] Totsuka Y[1)] Watari F[1)]
([1]Hokkaido Univ., Sapporo, Japan, [2]Meijo Nano Carbon Co., Ltd., Nagoya, Japan)

P1-Bio04 Fabrication of Spherical Hydroxyapatite Granules with Interconnected Pore Channels using Camphene by Emulsion Method.
*Yang JH[1)], Kim KH[1,2)], Kwon TY[1,2)]
([1]Department of Medical & Biological Engineering, Graduate School, Kyungpook National Univ., Deagu, Korea, [2]School of Dentistry, Kyungpook National Univ., Deagu, Korea)

P1-Bio05 Histological and TEM Observation of Subcutaneous Tissues Exposed to Particulate Pure Metals.
*Saitoh S, Sasaki K, Nezu T, Taira M
(Iwate Medical Univ., Morioka, Japan)

P1-Bio06 Development of an *in vitro* Embryotoxicity Screening System Include the Human Metabolic Factor.
*Imai K[1)], Takashima M[2)], Tanoue A[3)], Nakamura K[3)], Takeda S[1)]
([1]Osaka Dental Univ., Osaka, Japan, [2]Hatano Res. Inst., FDSC, Kanagawa, Japan, [3]National Res. Inst. for Child Health and Development, Tokyo, Japan)

P1-Bio07 Involvement of Fenton Reaction in Cytotoxicity of TEGDMA and HEMA.
*Zhu TT, Kim NR, Son KM, Park HC, Lim BS, Yang HC
(Seoul National Univ., Seoul, Korea)

P1-Bio08 Self-assembling Peptide Scaffolds and Dedifferentiated Fat Cells for Bone Tissue Engineering.
*Hashimoto Y[1)], Kishimoto N[1)], Momota Y[1)], Omasa T[2)], Kotani J[1)], Takeda S[1)]
([1]Osaka Dent Univ., Osaka, Japan, [2]Tokushima Univ., Tokushima, Japan)

P1-Bio09 Photocatalytic Activity of Synthetic Oxyapatite.
*Kamemizu H, Komada Y, Iijima M, Wakamatsu N, Adachi M, Shibutani T, Doi Y
(Asahi Univ., Gifu, Japan)

P1-Bio10 Effects of Genistein on the Proliferation and Differentiation in Rat Dental Pulp Cells.
*Hayashi K, Handa K, Koike T, Polan MA, Saito T
(Division of Clinical Cariology and Endodontology, Department of Oral Rehabilitation, School of Dentistry, Health Sciences University of Hokkaido, Tobetsu, Japan)

P1-Bio11 Application of High Frequency Radio Wave Generator in Direct Pulp Capping.
*Handa K, Koike T, Hayashi K, Saito T (Division of Cariology and endodontology, Department of oral rehabilitation, School of Dentistry, Health Sciences University of Hokkaido, Tobetsu, Japan)

P1-Bio12 Micro Morphological Study of Reparative Dentin Induced by Phosphophoryn in Rats.
*Koike T, Handa K, Hayashi K, Polan MA, Saito T
(Division of Clinical Cariology and Endodontology, School of Dentistry, Health Sciences University of Hokkaido, Tobetsu, Japan)

P1-Bio13 Cell Proliferation on Carbon Nanotubes Coated Dishes in Different Cell Lines.
*Akasaka T, Abe S, Uo M, Watari F
(Hokkaido Univ., Sapporo, Japan)

P1-Bio14 *In vitro* and *in vivo* Evaluation of Biocompatibility of Partially Stabilized Zirconia.
*Choi YR[1,2)], Odontuya DORJ[3)], Lee YK[4)], Koh YH[4)], Kim KN[1,2)], Kim KM[1,2)]
([1]Reserch Center for Orofacial Hard Tissue Regeneration, Seoul, Korea, [2]Yonsei Univ., Seoul, Korea, [3]Mongolia National Univ., Ulaanbaator, Mongolia, [4]Korea Univ., Seoul, Korea)

P1-Bio15 Osteoinduction with Non-sintered Porous Carbonate Apatite in Dog Dorsal Muscle.
*Shibatsuji A, Kanayama K, Takagi M, Shiraki M, Kitago M, Shibutani T, Doi Y
(Asahi Univ., Gifu, Japan)

P1-Bio16 Chemical Deposition of Carbonate-containing Apatite after Introducing Various Functional Groups to the SAM-processed Ti Surface.
*Adachi M, Yamaguchi Y, Kamemizu H, Wakamastu N, Iijima M, Horiguchi T, Doi Y
(Asahi Univ., Gifu, Japan)

P1-Bio17 Effect of Multi-walled Carbon Nanotubes and Saliva on Streptococcus Mutans Biofilm Formation.
*Kim GR[1)], Yu B[1)], Park IS[1)], Jeon WY[2)], Akasaka T[3)] Uo M[3)], Watari F[3)], Lee MH[1)], Bae TS[1)]
([1]Chonbuk National Univ., Jeonju, Korea, [2]Gwangyang Health College, Gwangyang, Korea, [3] Hokkaido Univ. Sapporo, Japan)

P1-Bio18 Influence on Osteogenesis of Titanium Immobilized with Heparin-coated Hydroyapatite particles.
Yang DH, Bae MS, Lee WJ, Kim JE, Park HN, *Kwon IK,
(Dept. of Maxillofacial Biomedical Engineering, School of Dentistry, Kyung Hee Univ., Seoul, Korea)

P1-Bio19 An *in vitro* Assessment of BMP-2 and GDF-5 Loaded Photo-crosslinkable Hydrogel Conjugated with Zirconium Surface for Enhanced Osseointergration.
*Bae MS, Moon HJ, Yang DH, Kim JH, Lee JB, Kwon IK
(Dept. of Maxillofacial Biomedical Engineering, School of Dentistry, Kyung Hee Univ., Seoul, Korea)

P1-Bio20 Biodistribution of Micro-/Nano-sized Particles and Their Cytotoxicity.
*Abe S, Iwadera N, Ishikawa K, Itoh S, Akasaka T, Uo M, Yawaka Y, Kuboki Y, Yonezawa T, and Watari F
(Hokkaido Univ., Sapporo, Japan)

P1-Bio21 Hard Tissue Compatibility on GRGDS Peptide Immobilized on Titanium through Electrodeposited NH_2-PEG-COOH.
*Oya K[1)], Tsutsumi Y[2)], Doi H[2)], Nomura N[2)], Hanawa T[2)]
([1]Kogakuin Univ., Tokyo, Japan, [2]Tokyo Med. and Dent. Univ., Tokyo, Japan)

P1-Bio22 Controlled $CaCO_3$ Formation using Biomimetic Macromolecules.
*Abe S[1)], Fujii Y[1)], Kusuhara A[1)], Yamatoya E[1)], Ishida T[1)], Akasaka T[1)], Uo M[1)], Watari F[1)], Hayashi D[2)], Takada T[2)]
([1]Hokkaido Univ., Sapporo, Japan, [2]Asahikawa Natl College Tech., Asahikawa, Japan)

P1-Bio23 Formation of Hydroxyapatite Film on TiO_2 Nano-network.
Lee K, Lee SJ, Kim BH, *Ko YM
(Department of Dental Materials, School of dentistry, MRC center, Chosun Univ., Gwangju Korea)

P1-Bio24 Immobilization of Hyaluronic Acid and Carboxymethyl Chitosan onto Functionalized Titanium Surfaces.
*Kim BH
(Department of Dental Materials, School of Dentistry, Chosun Univ., Gwangju Korea)

P1-Bio25 Hyaluronic Acid Immobilization on the Plasma-modified TiO_2 Nano-network Surface.
Shim JW, Lee WG, Kim BH, *Ko YM
(Department of Dental Materials, School of Dentistry, MRC Center, Chosun Univ., Gwangju Korea)

P1-Bio26 Influence of Mg Ions on Hydroxyapatite Formation to the TiO_2 Nano-network Surface.
*Ko YM, Kim BH, Lim SS, Park JH
(Department of Dental Materials, School of Dentistry, MRC Center, Chosun Univ., Gwangju Korea)

P1-Bio27 Electrochemical Deposited Hydroxyapatite Film on the Anodized Titanium.
Kwon SS, Park CH, Kim BH, *Ko YM
(Department of Dental Materials, School of Dentistry, MRC Center, Chosun Univ., Gwangju Korea)

P1-Bio28 The Biocompatibility of RGD Peptide onto the Plasma-modified Acrylic Acid (AA) Surfaces.
Ko JH, Seo KW, Kim BH, *Ko YM
(Department of Dental Materials, School of Dentistry, MRC Center, Chosun Univ., Gwangju Korea)

P1-Bio29 Effect of Periosteum and Absorbable Membrane on Resorption of Iliac Bone Graft in Rabbit Calvarium.
*Yang JW[1)], Jeoung YW[1)], Kim KR[1)], Park YJ[2)], Kook MS[1)]
([1]Department of Oral & Maxillofacial Surgery, [2]Department of Dental Materials, School of Dentistry, Chonnam National Univ., Gwangju, Korea)

P1-Bio30 Cytocompatibility Evaluation of Ti-based Alloys and Fourteen Kinds of Alloying Elements.
*Song YH, Jung YH, Han OS, Choi HR, Song HJ, Park YJ
(Department of Dental Materials, School of Dentistry, Chonnam National Univ., Gwangju, Korea)

Poster Presentation II: Saturday, May 28, 04:00 pm – 05:00 pm, Seminar Room 2-3

Ceramics

P2-Cer01 UV Irradiation Effect of TiO_2 Nanotubes on the Osteogenic Differentiateon of Human Mesenchymal Stem Cells.
*Moon KS, Bae JM, Oh SH
(Department of Dental Biomaterials, College of Dentistry, Wonkwang Univ., Iksan, Korea)

P2-Cer02 The Effect of Surface Treatment on the Shear Bonding Strength between Zirconia Core and Veneering Ceramic.
*Jung SH, Bae JM, Oh SH
(Dept. of Dental Biomaterials, Wonkwang Univ, Iksan, Korea)

P2-Cer03 Effect of Abrasive and Fiber Component in Medium on Occlusal Wear of Antagonist and Porcelain.
*Kakuta K, Ogura H
(Nippon Dental Univ., Niigata, Japan)

P2-Cer04 The Application of Zirconia to the Major Connector
Part 3. The Influence of Water on Maximum Load.
*Sanaoka S, Iwahori M, Sawada T, Goto T, Miyao M
(Asahi Univ., Gifu, Japan)

P2-Cer05 Influence of Vacuum Ultra-violet Irradiation on the Bond Strength of Zirconia Ceramics to Resin Composites.
*Yamaguchi Y, Hata U, Hotta M, Fujiwara S, Doi Y
(Asahi Univ., Gifu, Japan)

P2-Cer06 Toughening of Dental Ceramics by Silver Carbonate Paste.
*Uno M, Ito T, Nonogaki R, Kurachi M, Wakamatsu N, Doi Y
(Asahi Univ., Gifu, Japan)

P2-Cer07 Influence of Silver Carbonate Slurry on the Strength of Dental Ceramics.
*Ito T, Fujieda T, Uno M, Kurachi M, Wakamatsu N, Doi Y
(Asahi Univ., Gifu, Japan)

P2-Cer08 Deposit Behavior of Calcium Phosphate on Titanium Plate under Anodic and Cathodic Electrolysis.
*Okawa S, Ito K, Kaneko H, Yamaga Y, Watanabe K, Kanatani M
(Niigata Univ., Niigata, Japan)

P2-Cer09 Porosity of Dental Gypsum Products during Setting and Heating Process.
*Bae J-Y[1, 2)], Hamada K[1)], Lee H-H[2)], Asaoka K[1)]
([1]Tokushima Univ., Tokushima, Japan, [2]Dankook Univ., Cheonan, Korea)

P2-Cer10 Analysis of Bonding Interface in Veneering Porcelain/ Zirconia Composite.
*Ozawa M[1)], Aoyagi H[1)], Kazama M[1)], Ueda K[2)], Watanabe F[1)]
([1]The Nippon Dental Univ. School of Life Dentistry at Niigata, Niigata, Japan, [2]The Nippon Dental Univ. Niigata Hospital, Niigata, Japan)

P2-Cer11 Effect of Various Crystals and It's Supernatant on Hardening of Dental Plaster.
*Umemoto K, Aoyagi Y, Kurata S, Yamada M, Nakahara S
(Kanagawa Dental College, Yokosuka, Japan)

P2-Cer12 Effect of Soluble Ions Released from OCP on Osteoblastic Differentiation.
*Shiraishi N[1), 2)], Anada T[1)], Honda Y[1)], Sasaki K[2)], Suzuki O[1)]
([1]Division of Craniofacial Function Engineering, [2]Division of Advanced Prosthetic Dentistry, [1, 2] Tohoku Univ., Sendai, Japan)

P2-Cer13 Effect of Fiberglass Length on Diametral Tensile Strength of Calcium Phosphate Cement.
*Asakawa Y[1)], Takahashi H[1)], Kobayashi M[2)], Iwasaki N[1)], Shiozawa M[1)], Koottathape N[1)]
([1]Tokyo Medical and Dental Univ., Tokyo, Japan, [2]Chiba Institute of Technology, Chiba, Japan)

P2-Cer14 Comparison of Translucency of Ceramic Core Materials at Different Thickness.
*Wang F, Takahashi H, Yasue T, Iwasaki N, Shiozawa M, Asakawa Y, Zoljargal P, Koottathape N
(Tokyo Medical and Dental Univ., Tokyo, Japan)

P2-Cer15 Fracture Toughness of 3Y-TZP Ceramics Sintered by Microwave Furnace.
*Kim NS[1)], Choi BJ[1)], Park SB[2)], Asaoka K[3)], Lee HH[1)]
([1]Dankook Univ., Cheonan, Korea [2]SB-Dental Ceramic Co., Korea, [3]University of Tokushima, Tokushima, Japan)

P2-Cer16 Fracture Resistance of Ceramic MOD Inlays Machined from Three Dental CAD-CAM Ceramics.
*Choi BJ[1)], Kim NS[1)], Park JG[2)], Lee HH[1)]
([1]Dankook Univ., Cheonan, Korea, [2]Dankook Univ., Yongin, Korea)

P2-Cer17 Apatite Forming Ability *in vitro* of HA-containing Glass Powders for Coating on Zirconia.
*Noda M[1)], Okuda Y[1)], Tsuruki J[1)], Miyamoto M[1)], Ban S[2)]
([1]Kagoshima Univ., Kagoshima, Japan, [2]Aichi Gakuin Univ., Nagoya, Japan)

P2-Cer18 Change in the Stress Induced Transformation of Dental Zirconia with Firing Temperature.
*Okuda Y[1)], Noda M [1)], Tsuruki J [1)], Miyamoto M [1)], Ban S[2)]
([1]Kagoshima Univ., Kagoshima, Japan, [2]Aichi Gakuin Univ., Nagoya, Japan)

P2-Cer19 *In vitro* and *in vivo* Evaluation of Strontium-substituted Apatite Bone Cement.
*Sekine K, Hamada K, Uyama E, Yamashita K, Kawano F, Asaoka K
(The University of Tokushima Graduate School, Tokushima, Japan)

P2-Cer20 Evaluation of Silica-doped Y-TZP for Dental Restorations.
*Usami H[1)], Nakamura T[1)], Nishida H[2)], Sekino T[3)], Onishi H[4)], Takeuchi M[4)], Yatani H[1)]
([1]Osaka Univ., Osaka, Japan, [2]Osaka Dental Univ., Osaka, Japan
[3]Tohoku Univ., Sendai, Japan, [4]NIKKATO Co., Osaka, Japan)

P2-Cer21 Effect of Fluoride Dose in Calcium Phosphates Obtained from OCP Co-precipitation on Osteoblastic Cellular Response and Solubility.
*Shiwaku Y[1,2)], Anada T[2)], Honda Y[2)], Morimoto S[2)], Sasaki K[1)], Suzuki O[2)]
([1]Division of Advanced Prosthetic Dentistry, [2]Division of Craniofacial Function Engineering, Tohoku Univ., Graduate School of Dentistry, Sendai, Japan)

P2-Cer22 Examination of Porcelain Veneering Procedure for Zirconia-based Nanocomposites.
* Terui Y, Sato K, Kuriyama S, Kunii J, Hotta Y, Goto D, Miyazaki T
(Showa Univ., Tokyo, Japan)

CAD/CAM

P2-CAD01 Push-shear Bond Strength between CAD/CAM Zirconia Ceramic Core and Zirconia Veneering Ceramics.
*Lee JH[1)], Jung JH[1)], Kim YK[2)], Ji JH[2)], Park IS[2)], Lee MH[2)], Bae TS[2)] ([1]Gwang-Ju Health College, Gwangju, Korea, [2]Chonbuk National Univ., Jeonju, Korea)

P2- CAD 02 Clinical Application and Possibility of Nano Zirconia.
*Suese K
(Osaka Dental Univ., Osaka, Japan)

P2- CAD 03 Dental Implant Surgical Navigation System by Retinal Imaging Display.
*Yamaguchi S[1)], Yamanishi Y[1,2)], Ono S[1,2)], Yatani H[2)], Imazato S[1)]
([1]Dept. of Biomaterials Science, [2]Dept. of Fixed Prosthodontics, Osaka Univ. Graduate School of Dentistry, Osaka, Japan)

Miscellaneous

P2-Mis01 Changes of Crystallinity of Hydroxyapatite Powder and Structure of Enamel Treated with Several Concentrations of Ammonium Hexafluorosilicate.
*Suge T, Shibata S, Matsuo T
(University of Tokushima Graduate School, Tokushima, Japan)

P2-Mis02 Development of Tetracycline Loaded Dental Varnish and Antibacterial Effect.
*Park JY[1)], Choi KH[2)], Bae JM[1)], Oh SH[1)]
([1]Dept. of Dental Biomaterials, Wonkwang Univ., Iksan, Korea,
[2]Dept. of Oral microbiology, Wonkwang Univ., Iksan, Korea)

P2-Mis03 Light Transmittance and Reflectance Characteristics of Restorative Composite Resins.
*Arikawa H, Kanie T, Fujii K
(Kagoshima Univ., Kagoshima, Japan)

P2-Mis04 Metal Component Analyses of Metal-ceramic Crowns Circulated in Four Regions of the World.
*Yoshinari M[1)], Matsumoto N[1)], Abe S[2)], Igarashi T[2)]
([1]Tokyo Dental College, Chiba, Japan, [2]Kanagawa Dental College, Yokosuka, Japan)

P2-Mis05 Analyses of Stress Distributions and Fracture Strength of Pulpless Teeth Restored with Fiber Posts.
*Takeda Y[1)], Hayashi M[1)], Furuya Y [1)], Ebisu S [1)], Huang H[2)], Fok A[2)] ([1]Osaka Univ. Graduate School of Dentistry, Suita, Japan, [2]University of Minnesota, Minnesota, USA)

P2-Mis06 Development of Polydimethylsiloxane-based Three Dimensional Cell Culture Chip.
*Anada T, Suzuki O
(Tohoku Univ., Sendai, Japan)

P2-Mis07 Ability of CPP-ACP Paste and Arginine in Calcium Carbonate Toothpaste to Occlude Dentinal Tubules.
*Kanchanasantikul P , Hanirattisai C, Banomyong D
(Mahidol Univ., Bangkok, Thailand)

P2-Mis08 Surface Properties of Denture Base Resin after Several Disinfection Methods.
*Sawada T, Odagiri K, Hori N, Hoshi N, Hamada N, Kimoto K
(Kanagawa Dental College, Yokosuka, Japan)

P2-Mis09 The Physical Properties of Recycled Gypsum in Different Heating Processes.
*Sinlaparatsami S, Urapepon S
(Mahidol Univ., Bangkok, Thailand)

P2-Mis10 Dental Restorations Found in Food as Foreign Substances during Dining.
*Goto S[1)], Ohkuma K[1)], Ogura H[1)], Onozaki S[2)]
([1]Nippon Dental Univ., Niigata, Japan, [2]Zensho Co., Tokyo, Japan)

P2-Mis11 Influence of Whitening Material on Enamel to Hardness of Bovine Teeth.
*Zhang D, Lin H, Zheng G, Zheng R
(Dental Materials Laboratory, Peking Univ. School and Hospital of Stomatology, Beijing, China)

P2-Mis12 Influence of Conditioning Agents for a Resin-based Sealer on the Root Canal Wall.
*Ogura Y, Maeda M, Katsuumi I
(Nippon Dental Univ., Tokyo, Japan)

P2-Mis13 Diffusion of an Antimicrobial Acriflavine through a Concentrated Solution of Hyaluronic Acid as a Matrix Component of Biofilms.
*Nezu T, Sasaki K, Saitoh S, Taira M
(Iwate Medical Univ., Morioka, Japan)

P2-Mis14 Influence of Dentin and Enamel Porcelain Thickness on Layered All-ceramic Restoration Color.
*Ju SW[1)], Choi YS[2)], Kim MJ[2)], Ahn JS[1)]
([1]Seoul National Univ., Seoul, Korea, [2]Korea Univ., Seoul, Korea)

P2-Mis15 Evaluation of Behavior of Dust in Dental Clinic Office and Laboratory using Particle of Noble Metal Alloy as Marker.
*Kanatani M, Okawa S, Watanabe K, Kimura I, Kobayashi M, Ito K, Yamaga Y, Kaneko H
(Niigata Univ., Niigata, Japan)

P2-Mis16 Flexural Strength of Experimental HEMA-free Resin-modified Glass Ionomer.
*Hibino Y, Nagasawa Y, Omatsu J, Shimano I, Nakajima H
(Meikai Univ., Saitama, Japan)

P2-Mis17 Sr Enriched Teeth; Structural Analysis and Mechanical Properties.
*Uo M[1)], Asakura K[1)], Honda S[2)], Kogo Y[2)], Soga K[2)], Nakatsuka T[3)], Watari F[1)]
([1]Hokkaido Univ., Sapporo, Japan, [2]Tokyo Univ. Sci., Noda, Japan, [3] Shofu Inc., Kyoto, Japan)

P2-Mis18 Disinfection of Dental Stone Casts: Effect on Surface Morphology.
*Nishikiori R[1)], Watanabe K[2)], Nomura Y[1)], Hirata I[1)], Sawajiri M[1)], Okazaki M[1)]
([1]Graduate School of Biomedical Sciences, Hiroshima Univ., Hiroshima, Japan, [2]Faculty of Dentistry, Hiroshima Univ., Hiroshima, Japan)

P2-Mis19 Fluoride Release and Mechanical Properties of Restorative Glass Ionomer Cements.
*Shiozawa M, Takahashi H, Iwasaki N, Koottathape N, Asakawa Y, Zoljargal P, Wang F
(Tokyo Medical and Dental Univ., Tokyo, Japan)

P2-Mis20 In-office Power Bleaching Preserves the Microstructural Integrity of Enamel against Acidic Deterioration.
*Tanaka R, Shibata Y, Ogura K, Manabe A, Hisamitsu H, Miyazaki T
(Showa Univ., Tokyo, Japan)

P2-Mis21 Physical Properties Evaluation of Face Guard Materials
- Effect of Cushioning Materials on Shock Absorption.
*Churei H[1)], Abe K[1)], Kobayashi M[2)], Takahashi H[1)], Ueno T[1)]
([1]Tokyo Medical and Dental Univ., Tokyo, Japan, [2]Chiba Institute of Technology, Chiba, Japan)

P2-Mis22 Influence of Acidic and Slightly Acidic Electrolyzed Water on Dental Unit Components.
*Aoki H, Suzuki I, Maruta K, Miyasaka T
(Nippon Dental Univ., Tokyo, Japan)

P2-Mis23 S9 Fraction Broke Down Bis-GMA to Its Metabolites without Metabolic Activation.
*Hongo T[1)], Hikage S[2)], Takahashi H[1)]
([1]Tokyo Medical & Dental Univ., Tokyo, [2]Health Sciences University of Hokkaido, Ishikari-gun, Japan)

P2-Mis24 Effect of Helium Plasma Needle Treatment on Disinfection of Microorganisms Contaminated Surfaces. Han IH[1)], Lee DH[1)], Kim HY[1)], Kwon BJ[1,2)], Kang JK[1)], Lee MH[1,2)], Kim HH[1)], *Park JC[1,2)]
([1]Cellbiocontrol Laboratory, Department of Medical Engineering, [2]Brain Korea 21 Project for Medical Science, Yonsei Univ. College of Medicine, Seoul, Korea)

Devices

P2-Dev01 Comparison of Cutting Aspect of Stainless Steel Gates-Glidden Bur and Peeso Reamer.
*Maeda M, Ogura Y, Katsuumi I
(Nippon Dental Univ., Tokyo, Japan)

P2-Dev02 Effects of Self-ligation on Stainless Steel Archwires.
*Choi S, Joo HJ, Cheong Y, Lee SH, Kwon ER, Paek JH, Park YG, Park HK
(Kyung Hee Univ., Seoul, Korea)

P2-Dev03 Development of a Small Isotonic Ozone Water Generator.
*Arai K[1,3,4)], Hosoya M[2)], Sasao M[3)], Akashi Y[3)], Hirose H[3)], Yoneyama T[3)], Tamaki T[4)], Miyazaki T[4)], Ando N[5)]
([1]Nippon Makisen Kogyo, [2]Hosoya Dental Clinic, [3]Nihon Univ., [4]Showa Univ., [5]Nippon Dental Univ. at Tokyo, Japan)

P2-Dev04 A Method for Analyzing Alloy Composition of Metallic Restorations and Prostheses Placed in a Patient's Mouth by Sampling an Ultra Small Amount of Metal Powders.
*Nagano F, Ida Y, Hashimoto M, Ohno H, Endo K
(Health Sciences Univ., of Hokkaido, Ishikari-Tobetsu, Japan)

Poster Presentation III: Sunday, May 29, 10:30 pm – 11:30 am, Seminar Room 2-3

Adhesion

P3-Adh01 Water Resistance of Novel Silane having Hydrophobic and Polymerizable Group.
*Nihei T[1)], Kunzelmann KH[2)], Shimizu T[1)], Ohashi K[1)], Miyake K[1)], Kurata S[1)], Kondo Y[3)], Umemoto K[1)], Yoshino N[3)], Teranaka T[1)]
([1]Kanagawa Dental College, Kanagawa, Japan, [2]Dental School of LMU, Munich, Germany, [3]Tokyo University of Science, Tokyo, Japan)

P3-Adh02 Effect of HEMA in Bonding Agent on Adhesion of Resin to Enamel and Dentin.
*Hirabayashi S, Hayakawa T
(Tsurumi Univ., Yokohama, Japan)

P3-Adh03 Ag_2O-doped Bioglass as an Inhibitor of Matrix Metalloproteinases.
*Hashimoto M, Nagano F, Ida Y, Endo K
(Health Sciences University of Hokkaido, Ishikari-Tobetsu, Japan)

P3-Adh04 Relationship between Thin-film Bond Strength and Indentation Hardness for One-step Bonding Agents.
*Kusakabe S, Hotta M
(Asahi Univ., Gifu, Japan)

P3-Adh05 Application of Various Lining Materials to Dental Hard Tissues Irradiated by Er:YAG Laser.
*Yasuo K, Yoshikawa K, Onda K, Zennyu K, Sunada K, Yamamoto K
(Department of Operative Dentistry, Osaka Dental Univ., Osaka, Japan)

P3-Adh06 Study of Newly-developed High Power LED Curing Light Unit - Influence on Bonding Resin.
*Ouchi S, Hatsuoka Y, Nishida H, Matsuda T, Inoue M, Yamamoto K
(Department of Operative Dentistry, Osaka Dental Univ., Osaka, Japan)

P3-Adh07 H_2O_2 Production from Different Types Metal Plates Adherent Human Polymorphoniclear Leukocytes.
*Moriguchi K[1)], Takahashi Y[2)], Kawai T[2)], Ohno N[1)]
([1]Oral Anatomy, [2]Dental Materials, Aichi-Gakuin Univ., Nagoya, Japan)

P3-Adh08 The Influence of Creep Properties and the Shear Bond Strength of Dental Resin Cement.
*Kim YZ, Oh MH
(Vericom CO., LTD., Anyang-Si, Korea)

P3-Adh09 Effect of Silane and Alkali Treatment on the Shear Bonding Strength between Alloys and PMMA Resin.
*Ha JY[1)], Kwon TY[1,2)], Kim KH[1,2)]
([1]Department of Medical & Biological Engineering, Graduate School, Kyungpook National Univ., Daegu, Korea [2]Department of Dental Biomaterials, School of Dentistry Kyungpook National Univ., Daegu, Korea)

P3-Adh10 An Evaluation of the Brazilian Disc Test for Bond Strength Measurement.
*Huang SH, Lin L, Fok A
(Minnesota Dental Research Center for Biomaterials and Biomechanics, School of Dentistry, University of Minnesota, Minneapolis, USA)

P3-Adh11 Adhesion of Putty Condensation Silicone and Light Body Addition Silicone.
*Aerarunchot S, Prunkngarmpun C, Amornporncharoen M, Julnithi A, Santipipat C
(Khon Kaen Univ., Khon Kaen, Thailand)

P3-Adh12 Development of One-step Bonding Agent.
*Nishiyama N, Iwai H, Fujita K, Tanimoto Y, Uchida R, Takahashi H, Yaguchi T, Teshima M, Ikemi T
(Nihon Univ., Matsudo, Japan)

P3-Adh13 Restoration of Vertically Fractured Teeth by Adhesion and Replantation - Adhesive Strength of Resin Cements for Root Dentin.
*Onda K, Hatsuoka Y, Yasuo K, Matsuda T, Yamamoto K
(Osaka Dental Univ., Osaka, Japan)

P3-Adh14 Bonding Characteristics of Orthodontic Adhesives to Experimental Zirconia Bracket Applied with Several Pre-treatments for the Bonding.
*Fujishima A, Tanabe S, Manabe A, Maki K, Miyazaki T
(Showa Univ., Tokyo, Japan)

P3-Adh15 A Study on Shear Bond Strength and Adhesive Durability of Self-adhesive Resin Cements According to Wet Conditions of Dentin Surface.
*Kim YH, Lim HN (Department of Dental Materials, Division of Dentistry, Graduate School, Kyung Hee Univ., Seoul, Korea)

P3-Adh16 Nanostructure Evaluation of Healthy and Fluorotic Dentin by AFM after Etching with Phosphoric Acid.
*Juan Pablo Loyola-Rodriguez[1)], Rafael Rene Aguilera-Flores[1)], Veronica Zavala-Alonso[1)], Nuria Patiño-Marin[1)], Gabriel A. Martinez-Castañon[1)], Kenneth J. Anusavice[2)]
([1]Advanced Education General Dentistry Program, San Luis Potosi Univ., Mexico, [2]Center for Dental Biomaterials, College of Dentistry, University of Florida, USA)

P3-Adh17 Tensile Bond Strength Evaluation of Bonded Molar Tubes on Fluorotic Enamel.
*Alejandra Loyola-Leyva, Erika Silva-Benitez, Veronica Zavala-Alonso, Alejandro Martiínez-Castañon, Juan Pablo Loyola-Rodriguez, Nuria Patiño-Marin, Irene Ortega-Pedrajo
(Advanced Education General Dentistry Program, San Luis Potosi Univ., Mexico)

Composite

P3-Com01 Effect of Thermal Cycling on the Bi-axial Flexural Strengths of Dental Nano-Filled Composite Resin.
*Kwon HM[1)], Kim GR[2)], Ji JH[2)], Park IS[2)], Jin GC[3)], Lee MH[2)] , Bae TS[2)]
([1]Hallym College., Chuncheon, Korea, [2]Chonbuk National Univ., Jeonju, Korea, [3]Binzhou Medical Univ., Yantan, China)

P3-Com02 Effect of Thermal Cycling on the Transverse Strength of Nano-filled Composite Resin for Dental Restoration.
*Kim KS[1)], Park JE[2)], Ji JH[2)], Park IS[2)], Jin GC[3)], Lee MH[2)], Bae TS[2)]
([1]Jeonju Kijeon College, Jeonju, Korea, [2]Chonbuk National Univ., Jeonju, Korea, [3] Binzhou Medical Univ., Yantan, China)

P3-Com03 Effect of Filler Particle Size and Morphology on the Mechanical Properties of Nanofiller Containing Resin Composites.
*LIN J[1)], Shinya A[1)], Gomi H[1)], Shinya A[1)], Zheng G[2)], Lin H[2)], Han JM [2)]
([1]The Nippon Dental Univ., Tokyo, Japan, [2]Dental Materials Laboratory, Peking Univ., Beijing, China)

P3-Com04 Depth of Cure of Light-activated Nanofiller Containing Resin Composites.
*Kanehira M[1)], Hoshino T[1)], Utterodt A[2)], Finger WJ[1)], Komatsu M[1)]
([1]Tohoku Univ., Graduate School of Dentistry, Sendai, Japan, [2]Heraeus Kulzer GmbH, Wehrheim, Germany)

P3-Com05 Effect of Different Core Stiffness on Fracture Resistance of Endodontically Treated Teeth with Flared Root .
*Varauboln C[1)], Takahashi H[2)], Arksornnukit M[1)]
([1]Faculty of Dentistry, Chulalongkorn Univ., Bangkok, Thailand, [2]Advanced Biomaterials, Graduate School, Tokyo Medical and Dental Univ., Tokyo, Japan)

P3-Com06 Comparative Study of Wear Resistance and Surface Roughness of the Nanofiller Containing Composites and Microhybrid Composites. Jianmin Han[1)], Hong Lin[1)],
*Gang Zheng[1)], Akiyoshi Shinya[2)], Harunori Gomi[2)], Akikazu Shinya[2)], Jie Lin[2)]
([1]Peking Univ., Beijing, China, [2]The Nippon Dental Univ., Tokyo, Japan)

P3-Com07 Color Stability of Resin Cements after Ultraviolet Artificial Aging.
*Lueangwattanakij R[1)], Takahashi H[2)] and Arksornnukit M[1)]
([1]Faculty of Dentistry, Chulalongkorn Univ., Bangkok, Thailand, [2] Advanced Biomaterials, Graduate School, Tokyo Medical and Dental Univ., Tokyo, Japan)

P3-Com08 Fracture Resistance of Endodontically Treated Teeth Restored with Different Fiber Reinforced Composite Post Lengths.
*Jiangkongkho P[1)], Takahashi H[2)] and Arksornnukit M[1)]
([1]Faculty of Dentistry, Chulalongkorn Univ., Bangkok, Thailand, [2] Advanced Biomaterials, Graduate School, Tokyo Medical and Dental Univ., Tokyo, Japan)

P3-Com09 Effect of Different Silane Coupling Agent Amounts Silanized on Alumina Filler on Flexural Strength of Methacrylate Denture Base.
*Chaijareenont P[1)], Takahashi H[2)] and Arksornnukit M[1)]
([1]Faculty of Dentistry, Chulalongkorn Univ., Bangkok, Thailand, [2]Advance Biomaterials, Graduate School, Tokyo Medical and Dental Univ., Tokyo, Japan)

P3-Com10 Optimum Design of Glass Fiber Reinforced Resin Bridge: Part1 Effect of Glass Fiber Reinforce for Flexural Strength.
*Gomi H[1)], Akikazu Shinya[1,2)], Yokoyama D[1)], Akihiro Shinya[1)], Akiyoshi Shinya[1)]
([1]Nippon Dental Univ., Tokyo, Japan, [2]University of Turku, Turku, Finland)

P3-Com11 Effect of Filler Particle Alloy of Magnetic Composite Resin and Magnet Type on Magnetic Attractive Force.
*Soma H, Miyagawa Y
(The Nippon Dental Univ., Niigata, Japan)

P3-Com12 Optical and Mechanical Properties of Poly (Methyl Methacrylate)/Montmorillonite Nanocomposites.
*Yamagata S, Akasaka T, Uo M, Iida J, Watari F
(Hokkaido Univ., Sapporo, Japan)

P3-Com13 Effect of Light Sources on Vickers Hardness of Resin Composites.
*Hasegawa M, Kita D, Okada I, Ishikawa A
(Nippon Dental Univ. Hospital, Tokyo, Japan)

P3-Com14 Flexural Behavior of Collagenous Matrix Consolidated by a Warm Isostatic Pressing.
*Iijima M, Wakamatu N, Kamemizu H, Adachi M, Doi Y
(Asahi Univ., Dental Materials and Science, Mizuho, Gifu 501-0296, Japan)

P3-Com15 Porous Zirconia/Hydroxyapatite Scaffolds for Bone Reconstruction Combined with Bone Regeneration.
*An SH [1)], Matsumoto T[1)], Miyajima H[1)], Kim KH[2)], Imazato S[1)]
([1]Osaka Univ., Osaka, Japan, [2]Kyungpook Univ., Daegu, Korea)

P3-Com16 Study of the Toothbrush Abrasion of Composite Resin.
*Komasa R, Yoshikawa K, Takeuchi O, Komasa N, Miki H, Yamamoto K
(Department of Operative Dentistry, Osaka Dental Univ., Osaka, Japan)

P3-Com17 Fatigue Strength of Filler Hybrid Type Resin Composite - Effect of Filler Size on Fatigue Strength.
*Nishikawa I[1)], Toyama T[1)], Takahashi H[2)]
([1]Osaka Inst. Tech., Osaka, Japan, [2]Tokyo Med. Dent. Univ., Tokyo, Japan)

P3-Com18 Effect of Chitosan Addition on the Mechanical Properties of Glass Ionomer Cement.
*Kim DA, Kim GR, Kim HH, Lee HH
(Dankook Univ., Cheonan, Korea)

P3-Com19 Correlation between Color Change of Resin Composites and Exposure Time to Xenon Lamp Radiation.
*Saito W, Ikejima I, Yamamoto T, Momoi Y
(Tsurumi Univ., Yokohama, Japan)

P3-Com20 Influence of the Home Whitening to the Discolored Resin Composite.
*Maseki T[1)], Itagaki Y[2)], Sakamoto M[2)], Shino W[2)], Sugawa Y[2)], Furumoto H[2)], Yamakawa D[2)]
([1]Dept of Endodontics and Operative Dentistry, Nippon Dental Univ., Tokyo, Japan, [2]Nippon Dental Univ., Tokyo, Japan)

P3-Com21 Study on Newly High Power LED Curing Light Unit - Influence of Curing of Composite Resins.
*Yokota K, Iwata N, Suzuki K, Yoshikawa K, Miyaji H, Yamamoto K
(Department of Operative Dentistry, Osaka Dental Univ., Osaka, Japan)

P3-Com22 Characteristics of Recent Veneering Composite Resins.
*Zoljargal P, Takahashi H, Masuda T, Koottathape N, Shiozawa M, Asakawa Y, Iwasaki N, Wang F
(Advanced Biomaterials, Graduate School of Medical and Dentistry, Tokyo Medical and Dental Univ., Tokyo, Japan)

P3-Com23 Development of New Hybrid Resins for Crown (Part 6): Impact Resistance.
*Kato T[1,2)], Saigo K[1)], Yamada B[2)], Yamauchi J[2)], Nagai M[2)], Yamamoto S[2)]
([1]Kochi University of Technology, Kochi, Japan, [2]Yamamoto Precious Metal Co., Ltd., Japan)

P3-Com24 Influence of Third Body Media on Wear of Composite Resins.
*Koottathape N[1)], Takahashi H[1)], Iwasaki N[1)], Finger WJ[2)], Angwarawong T[3)], Arksornnukit M[3)]
([1]Tokyo Medical and Dental Univ., Tokyo, Japan, [2]Tohoku Univ., Sendai, Japan, [3] Chulalongkorn Univ., Bangkok, Thailand)

P3-Com25 The Effect of Three Different Surface Treatments on the Retention of Composite Core Material on Prefabricated Post-heads.
*Youssef S. Al Jabbari
(Dental Biomaterials Research and Development Chair, College of Dentistry, King Saud Univ., Riyadh, Saudi Arabia)

Polymer

P3-Pol01 Influence of Sericin Powder on the Water Absorption Characteristics of Tissue Conditioners.
*Hong G[1)], Dillinur MS[1)], Sasaki K[1)], Hamada T[1)], Zhao XY[2)]
([1]Tohoku Univ., Sendai, Japan, [2]The Fourth Military Medical Univ., Xi'an, China)

P3-Pol02 Bone Regeneration Ability of Silk Fibroin Membrane for the Guided Bone Regeneration Technique.
*Song JY[1)], Kim SG[1)], Kweon HY[2)]
([1]Gangneung-Wonju National Univ., Gangneung, Korea, [2]RDA, Suwon, Korea)

P3-Pol03 Time-dependent Changes in the Hardness of Elastomeric Impression Materials.
*Im SY, Lee SB, Kim KM, Kim KN
(Department and Research Institute of Dental Biomaterials and Bioengineering and Research Center for Orofacial Hard Tissue Regeneration, College of Dentistry, Yonsei Univ., Seoul, Korea)

P3-Pol04 *In vitro* Wear Resistance of Artificial Denture Teeth.
*Suwannaroop P[1)], Chaijareenont P[1)], Koottathape N[1)], Takahashi H[2)] and Arksornnukit M[1)]
([1]Faculty of Dentistry, Chulalongkorn Univ., Bangkok, Thailand, [2]Advanced Biomaterials, Graduate School, Tokyo Medical and Dental Univ., Tokyo, Japan)

P3-Pol05 The Effect of Repairing Methods on Reinforcing Fractured Denture Base Resin.
*Park DR[1)], Bae JM[1)], Oh HJ[2)], Oh SH[1)]
([1]Dept. of Dental Biomaterials, Wonkwang Univ, Iksan, Korea, [2]Korean Food & Drug Administration, Chungbuk, Korea)

P3-Pol06 The Effect of Aramid Fiber Orientation on the Mechanical Properties of Denture Base Resin.
*Yu SH, Oh SH, Bae JM
(Dept. of Dental Biomaterials, Wonkwang Univ., Iksan, Korea)

P3-Pol07 Cell Viability and Tissues Response of DNA/Protamine Complexes with Different DNA Length.
*Mori N[1)], Shinozaki Y[1)] Ohno J[1)], Hayakawa T[2)], Mitarai M[3)], Sakagami R[1)], Fukushima T[1)]
([1]Fukuoka Dental College, Fukuoka, Japan, [2]Tsurumi Univ., Yokohama, Japan, [3]Maruha-Nichiro, Tsukuba, Japan)

P3-Pol08 Annealing Effect on the Mechanical Behaviour of PLA/TCP Composite.
*Kim DA, Kim GR, Kim NS, Kim HH, Lee HH
(Dankook Univ., Cheonan, Korea)

P3-Pol09 Mineralization of Biopolymer Scaffolds and Culturing of Bone Marrow Mesenchymal Stem Cells.
Oh SA[1,2)], Shin US[1,2)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, Cheonan, Korea, [2]Institute of Tissue Regeneration Engineering, Cheonan, Korea, [3]Dankook Univ., Cheonan, Korea)

P3-Pol10 Depth of Cure of Resin Composite Cured by Light through a Translucent Fiber Post.
*Urapepon S[1)], Ekgasit S[2)]
([1]Mahidol Univ., [2]Chulalongkorn Univ., Bangkok, Thailand)

P3-Pol11 Mechanical Properties of a New Hybrid Hard Resin for Crowns and Bridges.
*Izumida A, Ishibashi M, Inagaki R, Okuyama Y, Yoda M
(Tohoku Univ., Sendai, Japan)

P3-Pol12 Demineralization Resistance and Shear Bonding Strength of Light-cured Glass Ionomer Cement after the Addition of Nano Beta-Tricalcium Phosphate in Various Ratio.
*Kim J[1)], Kim HO[2)], Lee YK[3)], Choi HJ[1)]
([1]Pediatric Dentistry, Yonsei Univ. Dental Hospital, Seoul, Korea, [2]Graduate School, Yonsei Univ., Seoul, Korea, [3]College of Dentistry, Yonsei Univ., Seoul, Korea)

P3-Pol13 Radio-opacity and Sensitivity to Ambient Light Test of Polymer-based Restorative Materials.
*Kim KM[1,2)], Kim MJ[1,2)], Lee YK[1)], Roulet JF[3)], Kim KN[1,2)]
([1]Department and Research Institute of Dental Biomaterials & Bioengineering, [2]Research Center for Orofacial Hard tissue Regeneration, Yonsei Univ., Seoul, Korea, [3]Ivoclar-Vivadent Co., Lichtenstein)

P3-Pol14 Effects of Resin Cements on Hardness, Thickness and Bond Strength with Titanium Post: An Intraradicular Assessment.
*Reza F, Peng LS
(Universiti Sains Malaysia, Kubang Kerian, Malaysia)

P3-Pol15 Shear Bond Strength of Each Layer of Artificial Teeth to Denture Base Resin.
*Chun JN[1)], Ha JY[1)], Kwon TY[1,2)], Kim KH[1,2)]
([1]Department of Medical & Biological Engineering, Graduate School, Kyungpook National Univ., Daegu, Korea [2]Department of Dental Biomaterials, School of Dentistry, Kyungpook National Univ., Daegu, Korea)

P3-Pol16 The Flowability of the Light Body Silicone Impression Material Used by a Double-mix Technique, and the Hydrophilicity of the Light Body Impression Material.
Tsunooka M, Fukushima S, *Usuki D, Kamohara H, Sakuma T
(GC Corporation, Tokyo, Japan)

P3-Pol17 An Analysis of the Surface Properties of Orthodontic Plastic Bracket Materials by Plasma Irradiation at Atmospheric Pressure.
*Ueda N[1)], Miyazawa K[1)], Muraji N[2)], Masuda T[1)], Hida M[1)], Hata Y[1)], Mieki A[3)], Kataoka H[3)], Kawai T[3)], Tanaka Y[2)], Goto S[1)]
([1]Department of Orthodontics, [2]Department of emovable Prosthodontics and [3]Department of Dental Materials Science, School of Dentistry Aichi Gakuin Univ., Nagoya, Japan)

P3-Pol18 Tubular Calcium Phosphate Nanomaterials as a Drug Carrier for Bone and Tooth Repair.
Kim JJ[1,2)], Kim MK[1,2)], Lee HY[1,2)], Shin US[1,2)], Lee HH[1,3)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science School of Dentistry, Dankook Univ., Cheonan, Korea)

P3-Pol19 Novel Approach to Produce Nanofibrous Membranes of Biopolymers.
Lee HY[1,2)], Bang SH[1,2)],Dashnyam K[1,2)], Kim TH[1,2)], Shin US[1,2)], Lee HH[1,3)], Kim HW[1,2,3)]
([1]Department of Nanobiomedical Science & WCU Research Center, [2]Institute of Tissue Regeneration Engineering, [3]Department of Biomaterials Science School of Dentistry, Dankook Univ., Cheonan, Korea)

P3-Pol20 Surface Modification of PMMA by LEB Irradiation.
*Ito K[1)], Okawa S[1)], Kanatani M[1)], Yamaga Y[1)], Kaneko H[1)], Nomura A[2)], Nomura S[1)], Watanabe K [1)]
([1]Niigata Univ., Niigata, Japan, [2]Meirin College, Niigata, Japan)

P3-Pol21 Application of a Noble Metal Cluster for the Denture Base Resin.
*Aoyagi Y, Miyasaka T, Ando N, Nakayama M
(Nippon Dental Univ., Tokyo, Japan)

P3-Pol22 Effect of Nano Silver Acrylic Resin against Adhesion of Candida Albicans.
*Prunkngarmpun C, Vongpetch R, Ingpanjalap S, Kunchoun S
(Faculty of Dentistry, Khon Kaen Univ., Khon Kaen, Thailand)

P3-Pol23 Flexure Strengths of Acrylic Denture Resins Measured by Ring-on-Ring Biaxial Test.
*Kim GR[1)], Lee CJ[2)], Kim DA[1)], Lee HH[1)]
([1]Dankook Univ., Cheonan, Korea, [2]Shinheung College, Uijeongbu, Korea)

P3-Pol24 Evaluation on Physical Properties of Experimental Fluorinated, Acrylic-based, and Silicone Rubber-based Soft Lining Materials.
*Kasuga Y[1)], Takahashi H[2)], Inoue M[1)], Hoshino Y[1)], Minakuchi S[1)], Nakajima H[3)]
([1]Complete Denture Prosthodontics, Tokyo Medical & Dental Univ., Tokyo, Japan, [2]Advanced Biomaterials, Tokyo Medical & Dental Univ., Tokyo, Japan, [3]Dental Biomaterials Science, Meikai Univ., Sakado, Japan)

P3-Pol25 Assessment of Evolution of Resistance to Antibacterial Agents and an Antibacterial Monomer MDPB in Oral Bacteria.
*Kitagawa H[1)], Izutani N[1)], Imazato S[2)], Yoshikawa R[1)], Ebisu S[1)]
([1]Department of Restorative Dentistry and Endodontology, [2]Department of Biomaterials Science, Osaka Univ., Suita, Japan)

P3-Pol26 Flexural Properties of Thermo-polymerized PMMA/Ethylene Glycol Dimethacrylates Pastes.
*Tanaka J[1)], Stansbury JW[2)], Antonucci JM[3)], Suzuki K[1)]
([1]Okayama Univ., Okayama, Japan, [2]University of Colorado, Aurora, USA, [3]NIST, Gaithersburg, USA)

P3-Pol27 Dimensional Stability and Tensile Strength of the New Vinyl Polysiloxane Impression Material for Home-visit Dental Care.
*Aoyagi Y[1)], Umemoto K[1)], Takahashi H[2)], Iwasaki N[2)], Tanaka M[3)]
([1]Kanagawa Dental College, Yokosuka, Japan, [2]Tokyo Medical and Dental Univ., Tokyo, Japan, [3]Osaka Dental Univ., Hirakata, Japan)

P3-Pol28 Bond Strength and Viscoelasticity of MMA-based and Silicone-based Denture Liners.
*Iwasaki N, Kasuga Y, Takahashi H, Minakuchi S, Suzuki T
(Tokyo Medical and Dental Univ., Tokyo, Japan)

P3-Pol29 Effect of Buff Polishing on the Fundamental Properties of Commercial Thermoplastic Resins.
*Yamaguchi N, Yamaguchi M, Manabe A, Tamaki Y, Miyazaki T
(School of Dentistry, Showa Univ. , Tokyo, Japan)