

## Publications and Other Scholarly Output

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### a) Selected Full-length Journal Articles

\*indicates contributing as the first and/or corresponding author

- 1- Alsayed EZ, Hariri I, Nakashima S, Shimada Y, Bakhsh TA, Tagami J, Sadr A\*, Effects of Coating Materials on Nanoindentation Hardness of Enamel and Adjacent Areas. **Dent Mater** (in press).
- 2- Yoshikawa T, Morigami M, Sadr A, Tagami J. Environmental SEM and dye penetration observation on resin-tooth interface using different light curing method. **Dent Mater J**. 2016;35(1):89-96.
- 3- Tezuka H, Shimada Y, Matin K, Ikeda M, Sadr A, Sumi Y, Tagami J. Assessment of cervical demineralization induced by Streptococcus mutans using swept-source optical coherence tomography. **J Med Imaging** (Bellingham). 2016;3(1):014504.
- 4- Bista B, Nakashima S, Nikaido T, Sadr A, Takagaki T, Romero MJ, Sato T, Tagami J. Adsorption behavior of methacryloyloxydecyl dihydrogen phosphate on an apatite surface at neutral pH. **Eur J Oral Sci**. 2016;124(2):195-203.
- 5- Han SH, Sadr A, Tagami J, Park SH. Non-destructive evaluation of an internal adaptation of resin composite restoration with swept-source optical coherence tomography and micro-CT. **Dent Mater**. 2016;32(1):e1-7.
- 6- Makishi P, Pacheco RR, Sadr A, Shimada Y, Sumi Y, Tagami J, Giannini M. Assessment of Self-Adhesive Resin Composites: Nondestructive Imaging of Resin-Dentin Interfacial Adaptation and Shear Bond Strength. **Microsc Microanal**. 2015;21(6):1523-1529.
- 7- Kitasako Y, Sadr A, Burrow MF, Tagami J. Thirty six-month clinical evaluation of a highly-filled flowable composite for direct posterior restorations. **Aust Dent J**. in press doi: 10.1111/adj.12387.
- 8- Islam MS, Khunkar SJ, Nakashima S, Sadr A, Nikaido T, Tagami J. Comparative study of demineralized collagen degradation determined by Hydroxyproline assay and Microscopic depth measurement. **J Dent**. In press doi: 10.1016/j.jdent.2016.01.001
- 9- Nakamura M, Kitasako Y, Nakashima S, Sadr A, Tagami J. Impact of toothpaste on abrasion of sound and eroded enamel: An in vitro white light interferometer study. **Am J Dent**. 2015;28(5):268-72.
- 10- Giannini M, Takagaki T, Bacelar-Sá R, Vermelho PM, Ambrosano GM, Sadr A, Nikaido T, Tagami J. Influence of resin coating on bond strength of self-adhesive resin cements to dentin. **Dent Mater J**. 2015;34(6):822-7.
- 11- Turkistani A, Shimada Y, Nakashima S, Tagami J, Sadr A\*. Microgaps and lesion progress evaluated by optical coherence tomography. **J Dent Res**. 2015 Aug;94(8):1070-7.
- 12- Nikaido T, Nurrohman H, Takagaki T, Sadr A, Ichinose S, Tagami J. Nanoleakage in Hybrid Layer and Acid-Base Resistant Zone at the Adhesive/Dentin Interface. **Microsc Microanal** 2015;21(5):1271-7.
- 13- Shimada Y, Sadr A, Sumi Y, Tagami J. Application of Optical Coherence Tomography (OCT) for Diagnosis of Caries, Cracks, and Defects of Restorations. **Curr Oral Health Rep**. 2015;2(2):73-80. Review.
- 14- Ibusuki T, Kitasako Y, Sadr A, Shimada Y, Sumi Y, Tagami J. Observation of white spot lesions using swept source optical coherence tomography (SS-OCT): in vitro and in vivo study. **Dent Mater J**. 2015;34(4):545-52.
- 15- Oshima M, Hamba H, Sadr A, Nikaido T, Tagami J. Effect of polymer-based desensitizer with sodium fluoride on prevention of root dentin demineralization. **Am J Dent**. 2015;28(3):123-7.
- 16- Nikaido T, Inoue G, Takagaki T, Takahashi R, Sadr A, Tagami J. Resin Coating Technique for Protection of Pulp and Increasing Bonding in Indirect Restoration. **Curr Oral Health Rep**. 2015;2(2):81-86. Review.
- 17- Majkut P, Shimada Y, Tagami J, Sumi Y, Sadr A\*. Validation of Optical Coherence Tomography against Micro-computed Tomography for Evaluation of Remaining Coronal Dentin Thickness. **J Endod**. 2015 Aug;41(8):1349-52.
- 18- Yoshimine Y, Shimada Y, Tagami J, Sadr A\*. Interfacial Adaptation of Composite Restorations Before and After Light Curing: Effects of Adhesive and Filling Technique. **J Adhes Dent**. 2015;17(4):329-36.
- 19- Makishi P, Thitthaweerat S, Sadr A, Shimada Y, Sumi Y, Tagami J, Giannini M. Assessment of current adhesives in class I cavity: nondestructive imaging using optical coherence tomography and microtensile bond strength. Revised for **Dent Mater**. 2015 Sep;31(9):e190-200.
- 20- Romero MJ, Nakashima S, Nikaido T, Ichinose S, Sadr A, Tagami J. Inhibition of hydroxyapatite growth by casein, a potential salivary phosphoprotein homologue. **Eur J Oral Sci**. 2015 Aug;123(4):288-96.
- 21- Bagheri G H, Sadr A, Espigares J, Hariri I, Nakashima S, Hamba H, Shafiei F, Moztaarzadeh F, Tagami J. Study on the influence of leucine-rich amelogenin peptide (LRAP) on the remineralization of enamel defects via micro-focus x-ray computed tomography and nanoindentation. **Biomed Mater**. 2015 Jun 4;10(3):035007.
- 22- Bakhsh TA, Sadr A, Tagami J. In situ characterization of resin-dentin interfaces using conventional vs. cryofocused ion-beam milling. Revised for **Dent Mater**. 2015 Jul;31(7):833-44.
- 23- Alsayed EZ, Hariri I, Sadr A\*, Bakhsh TA, Shimada Y, Nakashima S, Tagami J, Sumi Y. Optical coherence tomography for evaluation of enamel and protective coatings. **Dent Mater J** 2015;34(1):98-107.
- 24- Espigares J, Sadr A\*, Hamba H, Shimada Y, Otsuki M, Tagami J, Sumi Y. Assessment of Natural Enamel Lesions with Optical Coherence Tomography in Comparison to X-ray Tomography. **J Med Imag**. 2015; 2(1), 014001.

- 25- Turkistani A, Sadr A\*, Shimada Y, Nikaido T, Sumi Y, Tagami J. Sealing performance of resin cements before and after thermal cycling: evaluation by optical coherence tomography. **Dent Mater.** 2014 Sep;30(9):993-1004.
- 26- Mandurah MM, Sadr A\*, Bakhsh TA, Shimada Y, Sumi Y, Tagami J. Characterization of transparent dentin in attrited teeth using optical coherence tomography. **Lasers Med Sci.** 2014; 30 (4), 1189-1196.
- 27- Marghalani HY, Bakhsh T, Sadr A, Tagami J. Ultra-structural characterization of enamel–resin interface using FIB-TEM technology. **J Adhesion Sci Tech** 2014; 28(11),1005-1019.
- 28- Bakhsh T, Sadr A, Tagami J. Focused ion beam processing for transmission electron microscopy of composite/adhesive interfaces. **J Adhesion Sci Tech** 2015; 29(3), 232-243.
- 29- Bista A, Sadr A\*, Nazari A, Shimada Y, Sumi Y, Tagami J. Non-destructive Assessment of Current One-step Self-etch Dental Adhesives using Optical Coherence Tomography. **J Biomed Opt.** 2013 Jul;18(7):76020.
- 30- Moosavi H, Hariri I, Sadr A\*, Thitthaweerat S, Tagami J. Effects of curing mode and moisture on nanoindentation mechanical properties and bonding of a self-adhesive resin cement to pulp chamber floor. **Dent Mater.** 2013 Jun;29(6):708-17.
- 31- Mandurah M, Sadr A\*, Shimada Y, Kitasako Y, Nakashima S, Bakshsh TA, Sumi Y. Monitoring Remineralization of Enamel Subsurface Lesions by Optical Coherence Tomography. **J Biomed Opt.** 2013;18(4):46006.
- 32- Sadr A\*, Mandurah M, Shimada Y, Tagami J, Sumi Y. Monitoring of enamel lesion remineralization by optical coherence tomography: An alternative approach towards signal analysis. **Proc SPIE** 2013;8566: 856602.
- 33- Hariri I, Sadr A\*, Nakashima S, Shimada Y, Tagami J, Sumi Y. Estimation of enamel and dentin mineral content from refractive index. **Caries Res.** 2013;47:18–26. (*featured as journal cover*)
- 34- Nazari A, Sadr A\*, Saghiri MA, Campillo-Funollet M, Hamba H, Shimada Y, Tagami J, Sumi Y. Non-destructive characterization of voids in six flowable composites using swept-source optical coherence tomography. **Dent Mater.** 2013;29(3):278-86.
- 35- Bakhsh TA, Sadr A\*, Shimada Y, Mandurah M, Hariri I, Alsayed EZ, Tagami J, Sumi Y. Concurrent evaluation of composite internal adaptation and bond strength in a class-I cavity. **J Dent.** 2013;41(1):60-70.
- 36- Nazari A, Sadr A\*, Shimada Y, Tagami J, Sumi Y. 3D assessment of void and gap formation in flowable resin composites using optical coherence tomography. **J Adhes Dent.** 2013 Jun;15(3):237-43.
- 37- Kitasako Y, Sadr A\*, Hamba H, Ikeda M, Tagami J. Gum containing calcium fluoride reinforces enamel subsurface lesions in situ. **J Dent Res.** 2012;91:370-5.
- 38- Nazari A, Sadr A\*, Nakashima S, Shimada Y, Tagami J. Effect of Hydration on Assessment of Early Enamel Lesion using Swept-source Optical Coherence Tomography. **J Biophotonics.** 2013;6(2):171-7.
- 39- Hariri I, Sadr A\*, Shimada Y, Tagami J, Sumi Y. Effects of structural orientation of enamel and dentin on light attenuation and local refractive index: an optical coherence tomography study. **J Dent.** 2012;40:387-96.
- 40- Emamieh S, Sadr A\*, Ghasemi A, Torabzadeh H, Akhavanzanjani V, Tagami J. Effects of solvent drying-time and water storage on ultimate tensile strength of adhesives. **J Invest Clin Dent.** 2014 Feb;5(1):51-7.
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- 42- Sadr A\*, Nikaido T, Takagaki T, Hariri I, Nazari A, Tagami J. Ultra-morphological and Nanomechanical Characterization of Reinforced Enamel and Dentin by Self-etch Adhesives: The Super Tooth. **J Nano Res.** 2012;16:131-140.
- 43- Sadr A\*, Nakashima S, Shimada Y, Tagami J, Sumi Y. Longitudinal assessment of subsurface artificial root caries lesions by optical coherence tomography in comparison with transverse microradiography. **Proc. SPIE** 2012 8208:16.
- 44- Hariri I, Sadr A\*, Shimada Y, Nakashima S, Sumi Y, Tagami J. Relationship between Refractive Index and Mineral Content of Enamel and Dentin Using SS-OCT and TMR. **Proc. SPIE** 2012;8208:21.
- 45- Natsume Y, Nakashima S, Sadr A\*, Shimada Y, Tagami J, Sumi Y. Estimation of lesion progress in artificial root caries by Swept Source Optical Coherence Tomography in comparison to transverse microradiography. **J Biomed Opt.** 2011;16(7):071408.
- 46- Cho E, Sadr A\*, Inai N, Tagami J. Evaluation of resin composite polymerization by three dimensional micro-CT imaging and nanoindentation. **Dent Mater.** 2011;27(11):1070-8.
- 47- Bakhsh TA, Sadr A\*, Shimada Y, Tagami J, Sumi Y. Non-invasive quantification of resin-dentin interfacial gaps using optical coherence tomography. **Dent Mater.** 2011;27(9):915-25.
- 48- Sadr A\*, Shimada Y, Mayoral JR, Hariri I, Bakhsh TA, Sumi Y, Tagami J. Swept Source Optical Coherence Tomography for Quantitative and Qualitative Assessment of Dental Composite Restorations. **Proc. SPIE** 2011;7884:11.
- 49- Ansari ZJ, Sadr A\*, Moezizadeh M, Aminian R, Ghasemi A, Shimada Y, Tagami J, Ansari SJ, Moayedi S. Effects of one-year storage in water on bond strength of self-etching adhesives to enamel and dentin. **Dent Mater J.** 2008;27:266-72.
- 50- Sadr A\*, Shimada Y, Lu H, Tagami J. The viscoelastic behavior of dental adhesives: a nanoindentation study. **Dent Mater.** 2009;25:13-9.

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- 53- Nurrohman H, Nakashima S, Takagaki T, Sadr A, Nikaido T, Asakawa Y, Uo M, Marshall SJ, Tagami J. Immobilization of phosphate monomers on collagen induces biomimetic mineralization. **Biomed Mater Eng**. 2015;25(1):89-99.
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- 55- Matsui N, Takagaki T, Sadr A, Ikeda M, Ichinose S, Nikaido T, Tagami J. The role of MDP in a bonding resin of a two-step self-etching adhesive system. **Dent Mater J**. 2015;34(2):227-33.
- 56- Khunkar SJ, Utaka S, Hariri I, Sadr A, Ikeda M, Nakashima S, Nikaido T, Tagami J. Formation and characterization of hypermineralized zone beneath dentine lesion body induced by topical fluoride in-vitro. **Arch Oral Biol**. 2015; 10;60(4):574-581.
- 57- Wada I, Shimada Y, Ikeda M, Sadr A, Nakashima S, Tagami J, Sumi Y. Clinical assessment of non carious cervical lesion using swept-source optical coherence tomography. **J Biophotonics** (in press).
- 58- Lodha E, Hamba H, Nakashima S, Sadr A, Nikaido T, Tagami J. Effect of different desensitizers on inhibition of bovine dentin demineralization: micro-computed tomography assessment. **Eur J Oral Sci**. 2014 Dec;122(6):404-10.
- 59- Marghalani H, Bakhsh T, Sadr A, Tagami J. Ultramorphological Assessment of Dentin-Resin Interface After Use of Simplified Adhesives. **Oper Dent**. 2015 Jan-Feb;40(1):E28-39.
- 60- Imamura Y, Otsuki M, Sadr A. Effect of CPP-ACP and sodium fluoride on prevention of re-staining after bleaching **Asian-Pacific J Dent: APJD**; 2013;13(2), 47-55.
- 61- Moosavi H, Darvishzadeh F, Sadr A, Salary S. In vitro effects of different moisture level and curing method on microleakage of resin cements to pulp chamber dentine. **Eur J Prosthodont Restor Dent**. 2014 ;22(1):43-7.
- 62- Yoshikawa T, Morigami M, Sadr A, Tagami J. Effects of light curing method and resin composite composition on composite adaptation to the cavity wall. **Dent Mater J**. 2014;33(4):499-503.
- 63- Nakashima S, Sadr A, Tagami J. A Theoretical Consideration on Critical pH in Enamel Demineralization- Why the Critical pH is Estimated to be Around 5.3. **Jpn J Conserv Dent**. 2014;57(2):111-120.
- 64- Joves GJ, Inoue G, Sadr A, Nikaido T, Tagami J. Nanoindentation hardness of intertubular dentin in sound, demineralized and natural caries-affected dentin. **J Mech Behav Biomed Mater**. 2014;32:39-45.
- 65- Nakajima Y, Shimada Y, Sadr A, Wada I, Miyashin M, Takagi Y, Tagami J, Sumi Y. Detection of occlusal caries in primary teeth using swept source optical coherence tomography. **J Biomed Opt**. 2014;19(1):16020.
- 66- Kikuchi K, Akiba N, Sadr A, Sumi Y, Tagami J, Minakuchi S. Evaluation of the marginal fit at implant-abutment interface by optical coherence tomography. **J Biomed Opt**. 2014;19(5):55002.
- 67- Jamleh A, Sadr A, Nomura N, Ebihara A, Yahata Y, Hanawa T, Tagami J, Suda H. Endodontic instruments after torsional failure: Nanoindentation test. Scanning. 2014 Jul;36(4):437-43.
- 68- Kuribayashi M, Kitasako Y, Sadr A, Tagami J. Caries Activity Assessment Using Fiber Optic and Ion-sensitive Field Effect Transistor pH Micro Sensors versus Pen-type Laser Fluorescence Device: An in vitro Comparison. **Jpn J Conserv Dent**. 2013;56(1):55-62.
- 69- Yoshikawa T, Morigami M, Sadr A, Tagami J. Acceleration of curing of resin composite at the bottom surface using slow-start curing methods. **Dent Mater J**. 2013;32(6):999-1004
- 70- Emamieh S, Sadr A, Ghasemi A, Torabzadeh H, Akhavanzanjani V, Tagami J. Effects of solvent drying time on mass change of three adhesives. **J Conserv Dent**. 2013;16: 418.
- 71- Thanatvarakorn O, Nakashima S, Sadr A, Prasansuttiorn T, Thitthaweerat S, Tagami J. Effect of a calcium-phosphate based desensitizer on dentin surface characteristics. **Dent Mater J**. 2013;32(4):615-21.
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- 75- Shimada Y, Nakagawa H, Sadr A, Wada I, Nakajima M, Nikaido T, Otsuki M, Tagami J, Sumi Y. Noninvasive cross-sectional imaging of proximal caries using swept-source optical coherence tomography (SS-OCT) in vivo. **J Biophotonics** (in press).
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- 81- Nurrohman H, Nikaido T, Takagaki T, Sadr A, Ichinose S, Tagami J. Apatite crystal protection against acid-attack beneath resin-dentin interface with four adhesives: TEM and crystallography evidence. **Dent Mater**. 2012;28:e89-98.
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- 83- Hamba H, Nikaido T, Sadr A, Nakashima S, Tagami J. Enamel Lesion Parameter Correlations between Polychromatic Micro-CT and TMR. **J Dent Res**. 2012;91:586-591.
- 84- Inoue G, Nikaido T, Sadr A, Tagami J. Morphological categorization of acid-base resistant zones with self-etching primer adhesive systems. **Dent Mater J**. 2012;31:232-8.
- 85- Nazari A, Shimada Y, Sadr A, Tagami J. Pre-etching vs. grinding in promotion of adhesion to intact enamel using self-etch adhesives. **Dent Mater J**. 2012;31:394-400.
- 86- Tano E, Otsuki M, Kato J, Sadr A, Ikeda M, Tagami J. Effects of 405 nm Diode Laser on Titanium Oxide Bleaching Activation. **Photomed Laser Surg**. 2012;30:648-54.
- 87- Shimada Y, Sadr A, Nazari A, Nakagawa H, Otsuki M, Tagami J, Sumi Y. 3D evaluation of composite resin restoration at practical training using swept-source optical coherence tomography (SS-OCT). **Dent Mater J**. 2012;31:409-17.
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- 90- Nurrohman H, Nikaido T, Takagaki T, Sadr A, Waidyasekera K, Kitayama S, Ikeda M, Tagami J. Dentin Bonding Performance and Ability of Four MMA-based Adhesive Resins to Prevent Demineralization Along the Hybrid Layer. **J Adhes Dent**. 2012;14(4):339-48.
- 91- Ichikawa C, Nikaido T, Inoue G, Sadr A, Tagami J. Ultramorphological Evaluation of the Dentin Acid-Base Resistant Zone of Two-step Self-etching Systems After Long-term Storage in Water. **J Adhes Dent**. 2012;14(3):207-13.
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- 103- Kimyai S, Savadi-Oskoe S, Ajami AA, Sadr A, Asdagh S. Effect of three prophylaxis methods on surface roughness of giomer, **Med Oral Patol Oral Cir Bucal**. 2011;16:e110-4.
- 104- Kimyai S, Lotfipour F, Pourabbas R, Sadr A, Nikazar S, Milani M. Effect of two prophylaxis methods on adherence of *Streptococcus mutans* to microfilled composite resin and giomer surfaces. **Med Oral Patol Oral Cir Bucal**. 2011;16:e561-7.

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- 106- Tsujimoto M, Nikaido T, Inoue G, Sadr A, Tagami J. Ultrastructural observation of the acid-base resistant zone of all-in-one adhesives using three different acid-base challenges. **Dent Mater J**. 2010;29(6):655-60.
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- 117- Ansari G, Vahid Golpaygani M, Sadr A. Comparison of fluoride uptake level by enamel from Iranian school brand and standard NaF mouthrinses. **J Dent Res Dent Clin Dent Prospect**. 2009;3:1-6.
- 118- Wei S, Shimada Y, Sadr A, Tagami J. Effect of double-application of three single-step self-etch adhesives on dentin bonding and mechanical properties of resin-dentin area. **Oper Dent**. 2009;34:716-24.
- 119- He Z, Otsuki M, Sadr A, Tagami J. Acid resistance of dentin after erbium:yttrium-aluminum-garnet laser irradiation. **Lasers Med Sci**. 2009;24:507-13.
- 120- He Z, Shimada Y, Sadr A, Ikeda M, Tagami J. The effects of cavity size and filling method on the bonding to Class I cavities. **J Adhes Dent**. 2008;10:447-53.
- 121- Wei S, Sadr A, Shimada Y, Tagami J. Effect of caries-affected dentin hardness on the shear bond strength of current adhesives. **J Adhes Dent**. 2008;10:431-40.
- 122- Bakry AS, Sadr A, Inoue G, Otsuki M, Tagami J. Effect of Er:YAG laser treatment on the microstructure of the dentin/adhesive interface after acid-base challenge. **J Adhes Dent**. 2007;9(6):513-20.
- 123- Yuan Y, Shimada Y, Ichinose S, Sadr A, Tagami J. Effects of dentin characteristics on interfacial nanoleakage. **J Dent Res**. 2007;86:1001-6.
- 124- Bakry AS, Sadr A, Takahashi H, Otsuki M, Tagami J. Analysis of Er:YAG lased dentin using attenuated total reflectance Fourier transform infrared and X-ray diffraction techniques. **Dent Mater J**. 2007;26(3):422-8.
- 125- Shimada Y, Sattabanasuk V, Sadr A, Yuan Y, He Z, Tagami J. Shear bond strength of tooth-colored indirect restorations bonded to mid-coronal and cervical dentin. **Dent Mater J**. 2006;25(1):7-12.

### **b) Invited Contributions/Special Lectures**

- 1- Sadr A. A non-invasive method to control the quality of composite restorations. Invited Speaker, *University of Sao Paulo and Campinas Dental Society*, Sao Paulo, Brazil. June 18, 2016 (planned).
- 2- Sadr A. Role of Saliva in Maintenance and Repair of Tooth Enamel Invited Speaker, 2015. *North American Saliva Symposium*, Seattle, WA, USA. December 6, 2015.

- 3- Sadr A. Creating Gap-free Composite Fillings: Incremental vs. Bulk-filled Composites. Invited Speaker, 2015. *Annual Meeting of the Academy of Biomimetic Dentistry*, Philadelphia, PA, USA. October 18, 2015.
- 4- Sadr A. Non-destructive Evaluation of Bonded Interfaces. Invited Speaker, 2015 *Biennial Meeting of International Academy for Adhesive Dentistry*, Orlando, FL, USA. September 11, 2015.
- 5- Sadr A. Overcoming microleakage in composite restorations: the missing links. *The 55th Annual International Congress and General Meeting of the Iranian Dental Association, IDA*, Tehran, Iran. May 10, 2015.
- 6- Sadr A. Real-time Imaging of Composites by Optical Coherence Tomography. *Lunch and Learning Program, IADR/AADR General Meeting*, Boston, MA, USA. March 12, 2015.
- 7- Sadr A. Advanced Dental Composites: Technology-driven Esthetics and Performance. Invited Speaker, *Philippine Society of Periodontology*, Manila, Philippine. February 24, 2015.
- 8- Sadr A. Gold standard self-etch adhesives: Beyond MDP. Keynote Address at *IAD Post-congress Meeting*, Mahidol University, Bangkok, Thailand. February 2, 2015.
- 9- Sadr A. Adhesives, Polymerization Shrinkage and Sealing: The Missing Link. Invited Speaker, *The 6<sup>th</sup> International Congress on Adhesive Dentistry*, Mahidol University, Bangkok, Thailand. February 1, 2015.
- 10- Sadr A. Minimally Invasive Esthetic Restorative Dentistry: Science Meets Practice, *2015 Meeting of Iranian General Dentists Association*, Tehran, Iran. January 15, 2015.
- 11- Sadr A. Optical coherence tomography as a new tool for evaluation of dental materials and caries. Invited Speaker, *University of Washington School of Dentistry*, Seattle, WA. August 20, 2014.
- 12- Sadr A. Direct composite restorations: an update. Invited Speaker, *Mashhad School of Dentistry*, Mashhad, Iran. August 4, 2014.
- 13- Sadr A. Recent dental composites; can we eventually bulk-fill? Invited Speaker, *The Master Course on Composite Restorations, Tokuyama Dental*, Tokyo, Japan. May 23, 2014.
- 14- Sadr A. Evaluation of composite restorations in vitro by OCT and its clinical relevance. Invited Speaker, *Continuing Education Course of Dental Alumni Association, Tokyo Medical and Dental University*, Tokyo, Japan. May 18, 2014.
- 15- Sadr A., Takagaki T. Layering technique for esthetic restoration of anterior teeth by supra-nano filled dental composites, Joint Workshop Speaker, *The 54th Annual International Congress and General Meeting of the Iranian Dental Association, IDA*, Tehran, Iran. May 8, 2014.
- 16- Sadr A. New advancements in the management of dental caries, Invited Speaker, *The 54th Annual International Congress and General Meeting of the Iranian Dental Association, IDA*, Tehran, Iran. May 7, 2014.
- 17- Sadr A. Optical Coherence Tomography (OCT), a Unique Technique for Evaluation of Composite Restorations, Invited Speaker, *Dean's Research Seminar Series, University of Florida*, Gainesville, FL. March 25, 2014.
- 18- Sadr A. Non-ionizing In-depth Dental Imaging by Optical Coherence Tomography: A Benchtop to Chairside Development Story, Invited Speaker, *TMDU International Summer Program (ISP 2013)*, Tokyo, Japan, August 27, 2013.
- 19- Sadr A. Time-resolved and Quantitative Analysis of Dental Structures by OCT, Invited Speaker, *1<sup>st</sup> International Symposium on Optical Coherence Tomography in Dentistry*, Tokyo, Japan, June 20, 2013.
- 20- Sadr A. Factors affecting the success of bulk-filled composites, Invited R&D Seminar, *Dentsply Caulk, Milford, DE*, June 13, 2013.
- 21- Sadr A. Optical Coherence Tomography from Basic Research to Clinical Applications, Invited Speaker, *Continuing Education Program (accredited), University of Southern California*, Los Angeles, CA, United States, September 19, 2012.
- 22- Sadr A. Optical Coherence Tomography for Diagnosis and Monitoring of Caries Lesions, Invited Speaker, *Faculty Development Program, University of British Columbia*, Vancouver, Canada, May 23, 2012.
- 23- Sadr A. The utility of SS-OCT for research and development of new composite materials. Invited Seminar, *Tsukuba Dental R&D Center, Tokuyama Corp.*, Tokyo, Japan, December 12, 2011.
- 24- Sadr A. Innovative research on the characterization of dental restorative composite materials, *89th Open Seminar of Tooth and Bone GCOE, IRCMSTBD, Tokyo Medical and Dental University*, Tokyo, Japan, November 14, 2011.
- 25- Sadr A. Ultra-morphological and Nanomechanical Characterization of Reinforced Enamel and Dentin by Self-etch Adhesives: The Super Tooth, Invited Speaker, *7th International Conference on Diffusion in Solids and Liquids*, Algarve, Portugal, June 24, 2011.
- 26- Sadr A. Optical properties of enamel and dentin, *65th Open Session of the Tooth and Bone GCOE, IRCMSTBD, Tokyo Medical and Dental University*, Tokyo, Japan, November 15, 2011.
- 27- Sadr A. Optical Coherence Tomography in Dentistry. *TMDU-UIC Restorative Dentistry Pre-IADR Symposium*, Barcelona, Spain, July 14, 2010.
- 28- Sadr A. Optical Coherence Tomography (OCT): Non-invasive Diagnosis for Dentistry, *33rd Open Session of Tooth and Bone GCOE, IRCMSTBD, Tokyo Medical and Dental University*, Tokyo, Japan July 6, 2009.
- 29- Sadr A. Bonding; new findings and principles of a successful restoration. *The 49th Annual International Congress and General Meeting of the Iranian Dental Association, IDA*, Tehran, Iran. May 7, 2009.
- 30- Sadr A. Material Testing in Dentistry, School of Mechanical and Aerospace Engineering, Oklahoma State University, Stillwater, OK, USA. March 20, 2007.

c) Selected Conference Abstracts

- 1- Sadr A, Sorensen J. Evaluation of CAD/CAM Restorations by Optical Coherence Tomography. **AADR/CADR Annual Meeting & Exhibition, Los Angeles, CA, March 16-19, 2016.**
- 2- Sadr A, Kitasako Y, Shimada Y, Tagami J, Kobayashi T, Tanaka T, Kamasaka H, Tagami J. Application of Optical Coherence Tomography for Clinical Remineralization by POs-Ca and Fluoride Chewing Gum. **140th Meeting of the Japanese Society for Conservative Dentistry (JSCD), Shiga, Japan, June 2014, Abstract no. A16.**
- 3- Sadr A, Bista B, Bakhsh TA, Shimda Y, Sumi Y, Tagami J. Comparison of Tomographic Techniques for Assessment of Marginal and Internal Microgaps of Composites. **2013 Academy of Dental Materials Meeting (ADM), Vancouver, BC, Canada, October 2013, Abstract no. 113.**
- 4- Sadr A, Shimda Y, Bista B, Makishi P, Sumi Y, Tagami J. Non-destructive Non-staining 3D Analysis of Marginal and Internal Microgaps. **The 5th International Conference on Adhesive Dentistry (IAD), Philadelphia, PA, June 2013, Abstract no. 84.**
- 5- Sadr A, Hariri I, Shimada Y, Nakashima S, Tagami J, Sumi Y. Association between Enamel Lesion Parameters and Surface Layer Characteristics. **91st General Session of IADR, Seattle, WA, March 2013, Abstract no. 2547.**
- 6- Sadr A, Nakashima S, Shimada Y, Tagami J, Sumi Y. Longitudinal assessment of subsurface artificial root caries lesions by optical coherence tomography in comparison with transverse microradiography. **Lasers in Dentistry XVIII, BiOS SPIE Photonics West, San Francisco, CA, January 2012, Abstract no. 820816.**
- 7- Sadr A, Shimada Y, Tagami J, Sumi Y. Real-time two-dimensional tomographic imaging of flowable resin base placement in Class I cavities using OCT. **135th Meeting of the Japanese Society for Conservative Dentistry (JSCD), Osaka, Japan, October 2011, Abstract no. A24.**
- 8- Sadr A, Shimada Y, Tagami J, Sumi Y. Innovative Composite Evaluation Method: Cavity Adaptation Combined with Bond Strength. **59th Meeting of the Japanese Association for Dental Research, Hiroshima, Japan, October 2011, Abstract no. 23.**
- 9- Sadr A, Mandurah M, Tagami J. Mechanical characterization of two flowable resin composites used as base in a deep cavity by nanoindentation. **134th Meeting of the Japanese Society for Conservative Dentistry (JSCD), Chiba, Japan, June 2011, Abstract no. B12.**
- 10- Sadr A, Bartakova S, Parchar P, Hariri I, Nazari A, Shimada Y, Tagami J, Sumi Y. Adhesion of Flowable Composite in Class I Cavities: Combination of SS-OCT Imaging and Microtensile Bond Strength. **The 4th International Conference on Adhesive Dentistry (IAD), Seoul, South Korea, April 2011, Abstract no. OP07.**
- 11- Sadr A, Shimada Y, Makishi P, Hariri I, Bakhsh TA. Swept source optical coherence tomography for quantitative and qualitative assessment of dental composite restorations, **Lasers in Dentistry XVII, BiOS SPIE Photonics West, San Francisco, CA, January 2011, Abstract no. 78840C.**
- 12- Sadr A, Hariri I, Bakhsh TA, Shimada Y, Nakashima S, Sumi Y, Tagami J. Demineralization affects refractive indices of human enamel and dentin. **88th General Session of IADR, Barcelona, Spain, July 2010, Abstract no. 2606.**
- 13- Sadr A, Tagami J, Nakashima S, Shimada Y, Cho E. A comparison between SS-OCT and micro-CT in evaluation of resin composite restorations. **132nd Meeting of the Japanese Society for Conservative Dentistry (JSCD), Kumamoto, Japan, June 2010, Abstract no. P102.**
- 14- Sadr A, Mayoral Molina J, Shimada Y, Bakhsh TA, Cho E, Tagami J. Real-time tomographic monitoring of composite restoration placement using SS-OCT. **39th General Session of AADR, Washington, DC, March 2010, Abstract no. 1501.**
- 15- Sadr A, Shimada Y, Tagami J, Sumi Y. Assessment of Enamel and Dentin Thickness and Refractive Index by OCT. **131st Meeting of the Japanese Society for Conservative Dentistry (JSCD), Sendai, Japan, October 2009, Abstract no. P15.**
- 16- Sadr A, Tagami J, Shimada Y, Sumi Y. Optical Coherence Tomography for in-vivo assessment of class III composite restoration. **87th General Meeting of IADR, Miami, USA, April 2009, Abstract no. 1106.**
- 17- Sadr A, Shimada Y, Tagami J. Microleakage of class V inlays using an experimental self-adhesive resin cement. **86th General Session of IADR, Toronto, ON, Canada, July 2008, Abstract no. 0404.**
- 18- Sadr A, Shimada Y, Yang Y, Ansari ZJ, Aminian R, Moezizadeh M, Tagami J. Micro-shear bond strength and mechanical properties of self-etching materials during one-year storage. **International Federation of Esthetic Dentistry 5th World Congress, IFED, Seoul, South Korea, May 2007, Abstract no. P15.**
- 19- Sadr A, Lu H, Shimada Y, Tagami J. Nanoindentation to evaluate the mechanical properties of adhesive layers. **85th General Session of IADR, New Orleans, LA, March 2007, Abstract no. 0234.**

- 20- Sadr A, Shimada Y, Tagami J. Effects of storage temperature on the shelf-life of self-etching systems. **83rd General session of IADR, Brisbane, Australia**, June 2006, Abstract no. 0535.
- 21- Sadr A, Okada H, Shimada Y, Tagami J. Micro shear bond strength and morphological analyses of three new one-step self-etching adhesives. **The 2nd International Congress on Adhesive Dentistry (IAD), Tokyo, Japan**, April 2005, Abstract no. P065.
- 22- Sadr A, Shimada Y, Tagami J. Bond strengths of two adhesives and effects of application methods. **82nd General Session of IADR, Baltimore, MD**, March 2005, Abstract no. 0150.

#### **d) Books**

- From Toothpicks to the World: Insight into History and Culture via Toothpicks. Osamu Inaba, Alireza Sadr (Editor). October 2014, Koiesha Ltd., Osaka, Japan. (190 pages, E-book ASIN: B00N0000S2, Print ISBN 978-4-9907967-0-9)

#### **e) Patents**

- Ellipsometric characterization of tooth surface through refractive index. (JP Patent filed, pend.)

#### **f) Software and website development**

- 1- Sadr A, Analytics Japan Co., Ltd. Gap Analyzer: OCT signal processor for dental composites defect analysis (ImageJ plugin, see related publications)
- 2- Sadr A, Analytics Japan Co., Ltd. DEM Analyzer: OCT signal processor for clinical and in vitro de/remineralization analysis (ImageJ plugin, see related publications)
- 3- Sadr A, Nakashima S. TMReckon: analysis for transverse microradiography of dental hard tissue (VBA, Excel, see related publications)
- 4- Nakashima S, Sadr A, Tim Wilkinson. Revesk: analysis of ion concentrations and degree of saturation of calcium phosphate solutions (VBA, Excel, see related publication)
- 5- Cho E, Sadr A, Ratoc Engineering. Filler trace: analysis of dental composite shrinkage vectors by filler tracing (TRI/3D Bone plugin, see related publication)
- 6- Sadr A, Laboratory equipment management and publication auto-archiving online system; <http://www.tmdu.net>
- 7- Sadr A, Society homepage, online membership database and payment tool for IAAD; <http://www.adhesivedentistry.org>

**Biography:** <https://dental.washington.edu/people/alireza-sadr/>  
**Google Scholar:** <http://bit.ly/alirezasadr>