

รายการอ้างอิง

- (1) Dirksen LC. Plastic teeth : Their adventages, disadvantages and limitations. J Am Dent Assoc. 1952;44:265-8
- (2) Sweeney WT, Yost EL, Fee JG. Physical properties of plastic teeth. J Am Dent Assoc. 1958;56:833-41
- (3) Suzuki S, Sakoh M, Shiba A. Adhesive bonding of denture base resin to plastic denture teeth. J Biomed Mat Res. 1990;24:1091-103.
- (4) Phillips RW. Skinner,s science of dental materials. Philadelphia: W.B.Saunders Company; 1991.
- (5) Jagger DC, Harrison A and Jandt KD. The reinforcement of dentures. J Oral Rehabil. 1999;26:185-194
- (6) Cunningham JL. Bond strength of denture teeth to acrylic bases. J Dent. 1993;21:274-80.
- (7) Fontijn-Tekamp FA, Slagter AP, Bilt AVD, Hof MAVT, Witter DJ, Kalk W, et al. Biting and chewing in Overdentures, Full Dentures, and Natural Dentitions. J Dent Res. 2000;79(7):1519-24.
- (8) Fontijn-Tekamp F.A., et al. Bite Forces with Mandibular Implant-retained Overdentures. J Dent Res. 1998;77(10):1832-9.
- (9) Allen PF, McMillan AS, Smith DG. Complication oral maintenance requirements of implant-supported prostheses provided in a UK dental hospital. Br Dent J. 1997;182(8):298-302.
- (10) Cardash HS, et al. Effect of retention grooves in acrylic resin teeth on tooth-denture base bond. J Prosthet Dent. 1990;55:526-8
- (11) Vallittu PK. Bonding of resin teeth to the polymethyl methacrylate denture base material. Acta Odontol Scand. 1995;53:99-104
- (12) Fletcher AM, et al. A method of improving the bonding between artificial teeth and PMMA. J Dent. 1985;13:102-8.

- (13) Sorensen SE, Fjeldstad E. Bonding of plastic to acrylic resin denture base materials. J Dent Res. 1961;776.
- (14) Rupp.N.W., Bowen RL, Paffenbarger GC. Bonding cold-curing denture base acrylic resin to acrylic resin teeth. J Am Dent Assoc. 1971;83:601-6.
- (15) Morrow RW, et al. Bonding of plastic teeth to two heat-curing denture base resins. J Prosthet Dent. 1978;565-8.
- (16) Paffenbarger GC, Sweeney WT, Bowen RL. Bonding porcelain teeth to acrylic resin denture base. J Am Dent Assoc. 1969;78:1018-23.
- (17) พีรานุช ประนัยดทรพย. การยึดติดระหว่างฟันปลอมสำเร็จกับพื้นผิวด้วยสารไฮเลนกับอะคริลิกซูราฟันฟันปลอมชนิดบ่มด้วยความร้อน. วิทยานิพนธ์ในหลักสูตรปริญญาโท สาขานักกรรมประดิษฐ์ คณะทันตแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย 2549
- (18) Mohsen NM, Craig RG. Hydrolytic stability of silanated zirconia-silica-urethane dimethacrylate composites. J Oral Rehabil. 1995;22:213-20.
- (19) Matinlinna JP, V.J.Lassila L, Ozcan M, Yli-Urpo A, K.Valittu P. An Introduction to Silanes and Their Clinical Applications in Dentistry. Int J Prosthodont. 2004;17(2):155-64.
- (20) Thorne K, Vittori G. Chemically Enhanced Denture Acrylics. 0-7803-3869-3/97 10.00c 1997 IEEE:210-213
- (21) Vallittu PK. Curing of a silane coupling agent and its effect on the transverse strength of autopolymerizing polymethylmethacrylate-glass fibre composite. J of Oral Rehabil. 1997;24:124-130
- (22) Anusavice KJ. Phillip's science of dental materials. Philadelphia: W.B.Saunders Company; 2003.
- (23) O'Brien WJ. Dental materials and their selection. Chicago: Quintessence Publishing Co, Inc.; 1997.
- (24) เจน.ร. ทันตวัสดุศาสตร์. กรุงเทพมหานคร: โรงพิมพ์ไทยวัฒนาพาณิช; 2533.
- (25) The Glossary of Prosthodontic Terms, eighth edition; 2005.

- (26) McCabe JF, Basker RM. Tissue sensitivity to acrylic resin. Br Dent J. 1976;140:347-50.
- (27) Dogan A, Bek B, Cevik NN, Usanmaz A. The effect of preparation conditions of acrylic denture base materials on the level of residual monomer, mechanical properties and water adsorption. J Dent. 1995;23:313-8.
- (28) Smith DC, Bain MED. Residual methyl methacrylate in the denture base and its relation to denture sore mouth. Br Dent J. 1955;18:55-58.
- (29) Craig RG. Restorative dental materials. St.Louis: Mosby-Year Book, Inc.; 1993.
- (30) Austin AT, Basker RM. Residual monomer levels in denture bases. (The effects of varying short curing cycles). Br Dent J. 1982;149:281-6.
- (31) Sadamori S, Genefiyanti T, Hamada T, Arima T. Influence of thickness and location on the residual monomer content of denture base cured by three processing methods. J Prosthet Dent. 1994;72:19-22.
- (32) Smith DC. The acyclic denture base-Some effects of residual monomer and peroxide. Br Dent J. 1959;106:331-6.
- (33) Lung CYK, Darvell BW. Minimization of the inevitable residual monomer in denture base acrylic. Dent Mater. 2005;21:1119-28.
- (34) Moradian S, Fletcher AM, Amin WM, Purnaveja S, Ritchie GM, Dodd AW. Some mechanical properties including the repair strength of two self-curing acrylic resins. J Dent. 1982;10:271-80.
- (35) Polyzois GL, Dahl JE. Bonding of synthetic resin teeth to microwave or heat activated denture base resin. Eur J Prosthodont Res Dent. 1993;2:41-4.
- (36) Schneider RL, Curtis ER, Clancy JMS. Tensile bond strength of acrylic resin denture teeth to a microwave- or heat-processed denture base. J Prosthet Dent. 2002;88(2):145-50

- (37) Yunus N, Harrison A, Huggett R. Effect of microwave irradiation on the flexural strength and residual monomer levels of an acrylic resin repair material. J Oral Rehabil. 1994;21(6):641-8.
- (38) Firtell DN, Harman LL. Porosity in boilable acrylic resin. J Prosthet Dent. 1983;49(1):133-4.
- (39) Clancy JM, Boyer DB. Comparative bond strengths of light-cured,heat-cured, and autopolymerizing denture resin to denture teeth. J Prosthet Dent. 1989;61:457-62.
- (40) Clancy JM, Hawkins LF, Keller JC, Boyer DB. Bond strength and failure analysis of light-cured denture resin bonded to denture teeth. J Prosthet Dent. 1991;65:315-24.
- (41) Caswell CW, Norling BK. Comparative study of the bond strengths of three abrasion-resistant plastic denture teeth bonded to a cross-linked denture base material. J Prosthet Dent. 1986;55:701-8.
- (42) Kawara M, Carter JM, Ogle RE, Johnson RR. Bonding of plastic teeth to denture base resins. J Prosthet Dent. 1991;66:566-71.
- (43) Whitman DJ, McKinney JE, Hinman RW, Hesby RA, Pelleu GB. In vitro wear rates of three types of commercial denture tooth materials. J Prosthet Dent. 1987;57:243-6.
- (44) Thean HPY, Chew C, Goh KI. Shear bond strength of denture teeth to base : A comparative study. Quint Int. 1996;27:425-8.
- (45) Anderson JN. The stength of the joint between plain and copolymer acrylic teeth and denture base resin. Br Dent J. 1958;6:317-20.
- (46) Vallittu PK, Ruyter JE. The swelling phenomenon of acrylic resin polymer teeth at the interface with denture base polymer. J Prosthet Dent. 1997;78:194-9.
- (47) Chung WRC, Clark RKF, Darrell BW. The bonding of cold-cured acrylic resin to acrylic denture teeth. Aus Dent J. 1995;40:241-5.

- (48) Buyukyilmaz S, Ruyter IE. The effects of polymerization temperature on the acrylic resin denture base-tooth bond. Int J Prosthodont. 1997;10(1):49-54.
- (49) Darbar UR, Huggett R, Harrison A, Williams K. The tooth-denture base bond : Stress analysis using the finite element method. Eur J Prosthodont Res Dent. 1993;1:117-20.
- (50) Huggett R, John G, Jagger RG, Bates JF. Strength of the acrylic denture base tooth bond. Br Dent J. 1982;153:187-90.
- (51) Zuckerman GR. A reliable method for securing anterior denture teeth in denture bases. J Prosthet Dent. 2003;89(6):603-7.
- (52) Ruyter IE, Svendsen SA. Flexural properties of denture base polymers. J Prosthet Dent. 1980;43:95-104.
- (53) Darbar UR, Huggett R, Harrison A, Williams K. Finite element analysis of stress distribution at the tooth-denture base interface of acrylic resin teeth debonding from the denture base. J Prosthet Dent. 1995;74(6):591-4.
- (54) Cunningham JL, Benington IC. A new technique for determining the denture tooth bond. J Oral Rehabil. 1996;23:202-9.
- (55) Schoonover IC, Fischer TE, Serio AF, Sweeney WT. Bonding of plastic teeth to heat-cured denture base resin. J Am Dent Assoc. 1952;44:285-7.
- (56) Spratley MH. An investigation of the adhesion of acrylic resin teeth to dentures. J Prosthet Dent. 1987;58:389-92.
- (57) Catterin RK, Plummer KD, Gulley ME. Effect of tinfoil substitute contamination on adhesive of resin denture tooth to its denture base. J Prosthet Dent. 1993;69:57-9.
- (58) Civjan S, Huget EF, de Simon LB. Modifications of the fluid resin technique. J Am Dent Assoc. 1972;85:109-12
- (59) Gerrts GAVM, Jooste CH. A comparison of the bond strengths of microwave-and water bath-cured denture material. J Prosthet Dent. 1993;70:406-9.

- (60) Cardash HS, Liberman R, Helft M. The effect of retention grooves in acrylic resin teeth on tooth denture-base bond. *J Prosthet Dent.* 1986;55:701-8.
- (61) Singh Judge GSH. Silanes: Chemistry and applications. *JIPS* 2006;6(1):14-18.
- (62) Antonucci JM. Chemistry of Silanes: Interfaces in Dental Polymers and Composites. *J Res Natl Inst Stand Technol* 2005;110:541-558
- (63) Arksornnukit M, Takahashi H, Nishiyama N, Pavasant P. Effects of Heat and pH in silanization process on flexural properties and hydrolytic durabilities of composite resin after hot water storage. *Dent Mater J.* 2004;23(2):175-9.
- (64) van Ooij WJ, D.Q Z, Prasad G, Jayaseelan S, Fu Y, Teredesai N. Silane based chromate replacements for corrosion control, paint adhesion, and rubber bonding. *Surface Eng.* 2000;16:386-96.
- (65) Nishiyama N, Ishizaki T, Horie K, Tomari M, Someya M. Novel polyfunctional silanes for improved hydrolytic stability at the polymer-silica interface. *J Biomed Mat Res.* 1991;25:213-21.
- (66) Umemoto K, Kurata S. Effects of mixed silane coupling agent on porcelain tooth material and various dental alloys. *Dent Mater J.* 1995;14:135-42.
- (67) Barreto MT, Bottaro BF. A practical approach to porcelain repair. *J Prosthet Dent.* 1982;48:349-51.
- (68) Tjan AHL, Nemetz HA. A comparison of the shear bond strength between two composite resins and two etched ceramic materials. *Int J Prosthodont.* 1988;1:73-9.
- (69) Bowen RL. Use of epoxy-resins in restorative materials. *J Dent Res.* 1956;35:361-9.
- (70) Plueddemann EP. *Silane Coupling Agents*. New York: Plenum; 1991.
- (71) Arksornnukit M, Takahashi H, Nishiyama N. Effects of silane coupling agent amount on mechanical properties and hydrolytic durability of composite resin after hot water storage. *Dent Mater J.* 2004;23(1):31-6.
- (72) Horn HR. Porcelain laminate veneers bonded to etched enamel. *Dent Clin North Am.* 1983;27:671-84.

- (73) Mohsen NM, Craig RG. Effect of silanation of fillers on their dispersability by monomer systems. J Oral Rehabil. 1995;22:183-9.
- (74) Solnit GS. The effect of methyl methacrylate reinforcement with silane-treated and untreated glass fibers. J Prosthet Dent. 1991;66:310-4.
- (75) Valittu PK. Comparison of two different silane compounds used for improving adhesion between fibers and acrylic denture base material. J Oral Rehabil. 1993;20:533-9.
- (76) Anagnostopoulos T, Eliades G, Palaghias G. Composition, reactivity and surface interactions of three dental silane primers. Dent Mater. 1993;9:182-90.
- (77) Ekstrand K, Ruyter IE, Oysaed H. Adhesion to titanium of methacrylate-based polymer materials. Dent Mater. 1988;4:111-5.
- (78) Robin C, Scherrer SS, Wiskott HWA, de Rijk WG, Belser UC. Weibull parameters of composite resin bond strengths to porcelain and noble alloy using Rocatec system. Dent Mater. 2002;18:389-95.
- (79) Cobb DS, Vargas MA, Fridrich TA, Bouschlicher MR. Metal surface treatment : Characterization and effect on composite-to-metal bond strength. Oper Dent. 2000;25:427-33.
- (80) May KB, Fox J, Razzoog ME, Lang BR. Silane to enhance the bond between polymethyl methacrylate and titianium. J Prosthet Dent. 1995;73:428-31.
- (81) Kanie T, Arikawa H, Fujii K, Inoue K. Physical and mechanical properties of PMMA resins containing γ -methacryloxypropyltrimethoxysilane. J Oral Rehabil. 2004;31:166-71.
- (82) Marchack BW, Yu Z, Zhao XY, White SN. Adhesion of denture tooth porcelain to heat-polymerized denture resin. J Prosthet Dent. 1995;74:242-9.
- (83) Barghi N, Berry T, Chung K. Effects of timing and heat treatment of silanated porcelain on the bond strength. J Oral Rehabil. 2000;27:407-412

- (84) Monticelli F, Toledano M, Osorio R, Ferrari M. Effect of temperature on the silane coupling agents when bonding core resin to quartz fiber posts. Dent Mater. 2006;22:1024-1028
- (85) Yoshino N, Yamamoto Y, Teranaka T. Surface modification of denture to provide contamination-free ability by using silane coupling agent containing fluorocarbon chain. Chem Lett. 1993;5:821-4.
- (86) Patil SB, Naveen BH, Patil NP. Bonding acrylic teeth to acrylic resin denture bases:a review. Gerodontology 2006;23:131-139.
- (87) Nakabayashi N, Watanabe A, Arao T. A tensile test to facilitate identification of defects in dentine bonded specimens. J Dent. 1998;26:379-85.
- (88) Witucki GL. A Silane Primer:Chemistry and Applications of Alkoxy Silanes. J of Coating Technology 1993;65(822):57-60
- (89) Dijkstra TW et al. Silsesquioxane Models for Geminal Silica Surface Silanol Sites. A Spectroscopic Investigation of Different Types of Silanols. J AM CHEM SOC. 2002;124:9856-9864
- (90) Norstrom A et al. Treatment of E-glass fibres with acid, base and silanes. Colloids and Surfaces A:Physicochem Eng. Aspects 2001;194:143-157
- (91) Watson H et al. Aqueous Amino Silane Modification of E-glass Surface. J of Colloid and Interface Science 2001;238:136-146
- (92) Soderholm K.J.M., Shang.S.W. Molecular orientation of silane at the surface of colloidal silica. J Dent Res. 1993;72(6):1050-4
- (93) Cunliffe AV et al. Optimum preparation of silanes for steel pre-treatment. Int J of Adhesion&Adhesives. 2001;21:287-296
- (94) Barnes AS, Pantano CG and Conzone SD. Controlling factors in the adhesion of polymer films to (rare-earth doped)sodium aluminophosphate glass. http://www.ems.psu.edu/BRIE/BEMR/barnes_ICOG.htm

- (95) Ozcan M et al. Effect of drying time of 3-methacryloxypropyl trimethoxysilane on the shear bond strength of a composite resin to silica-coated base/noble alloys. Dent Mater. 2004;20:586-590
- (96) Bona AD, Noort RV. Shear vs. Tensile bond strength of resin composite bonded to ceramic. J Dent Res. 1995;74(9):1591-6
- (97) ขัตรศิริ ปียะพิมลสิทธิ์. ไคสแควร์. <http://www.watpon.com>
- (98) Conner-Linton. Chi Square Tutorial J.
http://www.georgetown.edu/faculty/ballc/webtools/web_chi_tut.html

ประวัติผู้เขียนวิทยานิพนธ์

นายณัฐุณิ คุตตะเทพ เกิดเมื่อวันที่ 7 เดือนสิงหาคม พุทธศักราช 2517 ณ จังหวัดเชียงใหม่ จบมัธยมศึกษาจากโรงเรียนมงฟอร์ตวิทยาลัย สำเร็จการศึกษาทันตแพทยศาสตร์บัณฑิต จากมหาวิทยาลัยเชียงใหม่ ปีพุทธศักราช 2540 เข้ารับราชการในตำแหน่งทันตแพทย์ สังกัดสำนักงานสาธารณสุขจังหวัดน่าน ดำรงตำแหน่งหัวหน้าฝ่ายทันตสาธารณสุข โรงพยาบาลสันติสุข อำเภอสันติสุข จังหวัดน่าน เป็นเวลา 2 ปี หลังจากนั้นดำรงตำแหน่งทันตแพทย์ สังกัดโรงพยาบาลน่าน 1 ปี จึงลาศึกษาต่อในหลักสูตรประกาศนียบัตรวิทยาศาสตร์ทางคลินิก (ทันตกรรมประดิษฐ์) ที่มหาวิทยาลัยเชียงใหม่ พุทธศักราช 2544 เมื่อสำเร็จการศึกษาจึงกลับเข้ารับราชการต่อที่โรงพยาบาลน่าน เป็นเวลา 1 ปี จึงลาออกจากราชการ ต่อมาเข้าทำงานในคลินิกเอกชนในตำแหน่งทันตแพทย์ในจังหวัดเชียงใหม่ อีกทั้งดำรงตำแหน่งอาจารย์พิเศษ ภาควิชาทันตกรรมประดิษฐ์ คณะทันตแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่ เป็นเวลา 2 ปี จึงลาออกเพื่อศึกษาต่อในหลักสูตรปริญญาวิทยาศาสตร์มหบันฑิต สาขาวิชาทันตกรรมประดิษฐ์ คณะทันตแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย