REFERENCES

Al-Ehaideb, A., and Mohammed, H. Shear bond strength of 'one bottle' dentin adhesives. The Journal of Prosthetic Dentistry 84 (2000): 408-412.

Armstrong, S. R., Boyer, D. B., and Keller, J. Microtensile bond strength testing and failure analysis of two dentin adhesives. Dental Materials 14 (1998): 44-50.

Armstrong, S. R., Vargas, M. A., Fang, Q., and Laffoon, J. E. Microtensile bond strength of a total-etch 3-step, total-etch 2-step, self-etch 2-step, and a self-etch 1-step dentin bonding system through 15-month water storage. Journal of Adhesive Dentistry 5 (2003): 47-56.

Atash, R., and Van Den Abbeele, A. Bond strengths of eight contemporary adhesives to enamel and to dentin: An *in vitro* study on bovine primary teeth. International Journal of Paediatric Dentistry 15 (2005): 264-273.

Bayne, S. C. Bonding to dental substrates. Restorative dental materials. 11th ed. St. Louis: Mosby, 2002.

Benderli, Y., Gokc, K., and Buyukgokcesu, S. *In vitro* shear bond strength of adhesive to normal and fluoridated enamel under various contaminated conditions. Quintessence International 30 (1999): 570-575.

Buonocore M. G. A simple method of increasing the adhesion of acrylic filling materials to enamel surfaces. Journal of Dental Research 34 (1955): 849-853.

Burrow, M. F., Takakura, H., Nakajima, M., Inai, N., Tagami, J., and Takatsu, T. The influence of age and depth of dentin on bonding. Dental Materials 10 (1994): 241-246.

Cardoso, P. E. C., Braga, R. R., and Carrilho, M. R. O. Evaluation of micro-tensile, shear and tensile tests determining the bond strength of three adhesive systems. Dental Materials 14 (1998): 394-398.

Cardoso, P. E. C., Sadek, F. T., Placido, E., and Santos, J. F. F. Microtensile bond strength of current adhesive systems when compared to cohesive strength of sound dentin and a resin-bases composite. Materials Research 7 (2004): 575-581.

Carr, M. P., and Horton, J. E. Clinical evaluation and comparison of 2 topical anesthetics for pain caused by needle sticks and scaling and root planning. Journal of Periodontology 72 (2001): 479-484.

Chiba, Y., Miyazaki, M., Rikuta, A., and Moore, B. K. Influence of environmental conditions on dentin bond strengths of one-application adhesive systems. Operative Dentistry 29 (2004): 554-559.

Craig, R. G., and Powers, J. M. Restorative dental materials. 11th ed. St. Louis: Mosby, 2002.

Craig, R. G., Powers, J. M., and Wataha, J. C. Dental materials: Properties and manipulation. 8th ed. St. Louis: Mosby, 2004.

De Munck, J., Vargas, M., Iracki, J., Van Landuyt, K., Poitevin, A., Lambrechts, P., and Van Meerbeek, B. One-day bonding effectiveness of new self-etch adhesives to bur-cut enamel and dentin. Operative Dentistry 30 (2005): 39-49.

Donovan, T. E., Gandara, B. K., and Nemetz, H. Review and survey of medicaments used with gingival retraction cords. Journal of Prosthetic Dentistry 53 (1985): 525-531.

Fazekas, A., Csempesz, F., Csabai, Z. S., and Vag, J. Effects of pre-soaked retraction cords on the microcirculation of the human gingival margin. Operative Dentistry 27 (2002): 343-348.

Ferrari, M., Cagidiaco, M. C., Kugel, G., and Davidson, C. L. Dentin infiltration by three adhesive systems in clinical and laboratory conditions. American Journal of Dentistry 9 (1996): 240-244.

Frankenberger, R., Kramer, N., and Petschelt, A. Technique sensitivity of dentin bonding: Effect of application mistakes on bond strength and marginal adaptation. Operative Dentistry 25 (2000): 324-330.

Frankenberger, R., Perdiao, J., Rosa, B. T., and Lopes, M. 'No bottle' VS 'multi-bottle' dentin adhesives: A micro-tensile bond strength and morphological study. Dental Materials 17 (2001): 373-380.

Friskopp, J., Nilsson, M., and Isacsson, G. The anesthetic onset and duration of a new lidocaine/prilocaine gel intra-pocket anesthetic (Oraqix®) for periodontal scaling/root planning. Journal of Clinical Periodontology 28 (2001): 453-458.

Fusayama, T. A simple pain-free adhesive restorative system by minimal reduction and total etching. Tokyo: Ishiyaku EuroAmerica, 1993.

Goracci, C., Sadek, F. T., Monticelli, F., Cardoso, P. E. C., and Ferrari, M. Microtensile bond strength of self-etching adhesives to enamel and dentin. Journal of Adhesive Dentistry 6 (2004): 313-318.

Gurney, B. F. Topical anesthetics: Oil soluble. Dental Digest (1966a): 512-513.

Gurney, B. F. Topical anesthetics: Water soluble. Dental Digest (1966b): 558-559.

Heymann, H. O., and Bayne, S. C. Current concepts in dentin bonding: Focusing on dentinal adhesion factors. Journal of American Dental Association 124 (1993): 27-36.

Hiraishi, N., Kitasako, Y., Nikaido, T., Nomura, S., Burrow, M. F., and Tagami, J. Effect of artificial saliva contamination on pH value change and dentin bond strength. Dental Materials 19 (2003): 429-434.

Holst, A., and Evers, H. Experimental studies of new topical anaesthetics on the oral mucosa. Swedish Dental Journal 9 (1985): 185-191.

Joynt, R. B., Davis, E. L., Wieczkowski, G., and Yu, X. Y. Dentin Bonding agents and the smear layer. Operative Dentistry 16 (1991): 186-191.

Kanca, J. A method for bonding to tooth structure using phosphoric acid as a dentin-enamel conditioner. Quintessence International 22 (1991): 285-290.

Kanca, J. Resin bonding to wet substrate. I. Bonding to dentin. Quintessence International 23 (1992): 39-41.

Kanemura, N., Sano, H., and Tagami, J. Tensile bond strength to and SEM evaluation of ground and intact enamel surfaces. Journal of Dentistry 27 (1999): 523-530.

Kaneshima, T., Yatani, H., Kasai, T., Watanabe, E. K., and Yamashita, A. The influence of blood contamination on bond strengths between dentin and adhesive resin cement. Operative Dentistry 25 (2000): 195-201.

Kidd, E. A. M., Smith, B. G. N., and Watson, T. F. Pickard's manual of operative dentistry. 8th ed. New York: Oxford University Press, 2003.

Kiremitci, A., Yalcin, F., and Gokalp, S. Bonding to enamel and dentin using self-etching adhesive systems. Quintessence International 35 (2004): 367-370.

Lopes, G. C., Marson, F. C., Vieira, L. C. C., De Andrada, M. A. C., and Baratieri, L. N. Composite bond strength to enamel with self-etching primers. Operative Dentistry 29 (2004): 424-429.

Milgrom, P., Coldwell, S. E., Getz, T., Weinstein, P., and Ramsay, D. S. Four dimensions of fear of dental injections. Journal of the American Dental Association 128 (1997): 756-766.

Miyazaki, M., Onose, H., and Moore, B. K. Effect of operator variability on dentin bond strength of two-step bonding systems. American Journal of Dentistry 13 (2000): 101-104.

Moll, K., Park, H. J., and Haller, B. Bond strength of adhesive/composite combinations to dentin involving total- and self-etch adhesives. Journal of Adhesive Dentistry 4 (2002): 171-180.

Nakabayashi, N., and Pashley, D. H. Hybridization of dental hard tissues. Chicago: Quintessence Publishing, 1998.

Nikaido, T., Kunzelmann, K. H., Ogata, M., Harada, N., Yamaguchi, S., Cox, C. F., Hickel, R., and Tagami, J. The *in vitro* dentin bond strengths of two adhesive systems in class I cavities of human molars. Journal of Adhesive Dentistry 4 (2002): 31-39.

Park, J., and Lee, K. C. The influence of saliva contamination on shear bond strength of dentin adhesive systems. Operative Dentistry 29 (2004): 437-442.

Pashley, D. H. Dynamics of the pulpo-dentin complex. Critical Reviews in Oral Biology and Medicine 7 (1996): 104-133.

Pashley, D. H., and Carvalho, R. M. Dentin permeability and dentin adhesion. Journal of Dentistry 25 (1997): 355-372.

Pashley, D. H., Sano, H., Ciucchi, B., Yoshiyama, M., and Carvalha, R. M. Adhesion testing of dentin bonding agents: A review. Dental Materials 11 (1995): 117-125.

Pashley, D. H., and Tay, F. R. Aggressiveness of contemporary self-etching adhesives Part II: Etching effects on unground enamel. Dental Materials 17 (2001): 430-444.

Perdigao, J., May, K. N. Jr., Wilder, A. D., and Lopes, M. The effect of depth of dentin demineralization on bond strengths and morphology of the hybrid layer. Operative Dentistry 25 (2000): 186-194.

Powers, J. M., Finger, W. J., and Xie, J. Bonding of composite resin to contaminated human enamel and dentin. Journal of Prosthodontics 4 (1995): 28-32.

Prati, C., Chersoni, S., Mongiorgi, R., and Pashley, D. H. Resin-infiltrated dentin layer formation of new bonding systems. Operative Dentistry 23 (1998): 185-194.

Roghani, S., Duperon, D. F., and Barcohana, N. Evaluating the efficacy of commonly used topical anesthetics. Pediatric Dentistry 21 (1999): 197-200.

Sano, H., Shono, T., Sonoda, H., Takatsu, T., Ciucchi, B., Carvalho, R., and Pashley, D. H. Relationship between surface area for adhesion and tensile bond strength-Evaluation of a micro-tensile bond test. Dental Materials 10 (1994): 236-240.

Sattabanasuk, V., Shimada, Y., and Tagami, J. The bond of resin to different dentin surface characteristics. Operative Dentistry 29 (2004): 333-341.

Say, E. C., Koray, F., Tarim, B., Soyman, M., and Gulmez, T. *In vitro* effect of cavity disinfectants on the bond strength of dentin bonding systems. Quintessence International 35 (2004): 56-60.

Say, E. C., Nakajima, M., Senawongse, P., Soyman, M., Ozer, F., Ogata, M., and Tagami, J. Microtensile bond strength of a filled VS Unfilled adhesive to dentin using self-etch and total-etch technique. Journal of Dentistry (2005): 1-9.

Schreiner, R. F., Chappell, R. P., Glaros, A. G., and Eick, J. D. Microtensile testing of dentin adhesives. Dental Materials 14 (1998): 194-201.

Shillingburg, H. T., Hobo, S., Whitsett, L., Jacobi, R., and Brackett, S. E. Fundamentals of fixed prosthodontics. 3rd ed. Chicago: Quintessence Publishing Inc., 1997.

Sonoda, H., Banerjee, A., Sherriff, M., Tagami, J., and Watson, T. F. An *in vitro* investigation of microtensile bond strengths of two dentin adhesives to caries-affected dentin. Journal of Dentistry 33 (2005): 335-342.

Sturdevant, C. M., Roberson, T. M., Heymann, H. O., and Sturdevent, J. R. The art and science of operative dentistry. 5th ed. St. Louis: Mosby, 2002.

Sung, E. C., Tai, E. T., Chen, T., and Caputo, A. A. Effect of irrigation solutions on dentin bonding agents and restorative shear bond strength. Journal of Prosthetic Dentistry 87 (2002): 628-32.

Swift, E. J., Perdiagao, J., and Heymann, H. O. Bonding to enamel and dentin: A brief history and state of the art. Quintessence International 26 (1995): 95-110.

Tay, F. R., Gwinnett, J. A., and Wei, S. H. Y. Micromorphological spectrum from overdrying to overwetting acid-conditioned dentin in water-free, acetone-based, single-bottle primer/adhesives. Dental Materials 12 (1996): 236-244.

Tay, F. R., and Pashley, D. H. Aggressiveness of contemporary self-etching systems I: Depth of penetration beyond dentin smear layers. Dental Materials 17 (2001): 296-308.

The Glossary of Prosthodontic Terms 81 (1999): 49.

Tjan, A. H. L., Castelnuovo, J., and Liu, P. Bond strength of multi-step and simplified-step systems. American Journal of Dentistry 9 (1996): 269-272.

Tulga, F., and Mutlu, Z. Four types of topical anaesthetic agents: Evaluation of clinical effectiveness. Journal of Clinical Pediatric Dentistry 23 (1999): 217-220.

Unemori, M., Matsuya, Y., Akashi, A., Goto, Y., and Akamine, A. Composite resin restoration and postoperative sensitivity: Clinical follow-up in an undergraduate program. Journal of Dentistry 29 (2001): 7-13.

Van Landuyt, K. L., De Munck, J., Snauwaert, J., Coutinho, E., Poitevin, A., Yoshida, Y., Inoue, S., Peumans, M., Suzuki, K., Lambrechts, P., and Van Meerbeek, B. Monomer-solvent phase separation in one-step self-etch adhesives. Journal of Dental Research 84 (2005): 183-188.

Van Meerbeek, B., De Munck, J., Toshida, Y., Inoue, S., Vargas, M., Vijay, P., Van Landuyt, K., Lambrechts, P., and Vanherle, G. Adhesion to enamel and dentin: Current status and future challenges. Operative Dentistry 28 (2003): 215-235.

Van Meerbeek, B., Vargas, M., Inoue, S., Yoshida, Y., Peumans, M., Lambrechts, P., and Vanherle, G. Adhesives and cements to promote preservation dentistry. Operative Dentistry 26 (2001), Suppl 6: 119-144.

Van Meerbeek, B., Willems, G., Celis, J. P., Roos, J. R., Braem, M., Lambrechts, P., and Vanherle, G. Assessment by nano-indentation of the hardness and elasticity of the resin-dentin bonding area. Journal of Dental Research 72 (1993): 1434-1442.

Vickers, E. R., and Punnia-Moorthy, A. A clinical evaluation of three topical aneasthetic agents. Australian Dental Journal 37 (1992): 266-270.

Xie, J., Powers, J. M., and Mc Guckin, R. S. *In vitro* bond strength of two adhesives to enamel and dentin under normal and contaminated conditions. Dental Materials 9 (1993): 295-299.

Yoshida, Y., Nagakane, K., Fukuda, R., Nakayama, Y., Okazaki, M., Shintani, H., Inoue, S., Tagawa, Y., Suzuki, K., De Munck, J., and Van Meerbeek, B. Comparative study on adhesive performance of functional monomers. Journal of Dental Research 83 (2004): 454-458.

Zheng, L., Pereira, P. N. R., Nakajima, M., Sano, H., and Tagami, J. Relationship between adhesive thickness and microtensile bond strength. Operative Dentistry 26 (2001): 97-104.

APPENDICES

APPENDIX A

Bond Strengths and Failure Modes of Clearfil Protect Bond

(Control)

No.	X(mm)	Y(mm)	area	load(KgF)	Mpa	F.M.
1	0.9	0.93	0.84	5.469	64.1	3
2	0.95	0.91	0.86	5.767	65.44	3
3	0.93	0.94	0.87	5.778	64.84	3
4	0.96	0.95	0.91	5.816	62.56	3
5	0.93	0.91	0.85	5.724	66.35	3
6	0.93	0.92	0.86	5.609	64.31	3
7	0.93	0.94	0.87	5.395	60.54	3
8	0.92	0.93	0.86	5.982	68.59	3
9	0.91	0.93	0.85	5.767	66.85	3
10	0.9	0.92	0.83	5.349	63.37	3
11	0.94	0.9	0.85	4.313	50.01	3
12	0.92	0.94	0.86	3.946	44.76	4
13	0.94	0.92	0.86	3.943	44.73	3
14	0.93	0.97	0.93	4.265	46.38	4
15	0.92	0.94	0.86	5.405	61.31	3
16	0.93	0.95	0.88	5.602	62.2	4
17	0.99	0.92	0.91	4.65	50.08	4
18	0.92	1	0.92	5.367	57.23	4
19	1.02	0.95	0.97	5.556	56.25	3
20	0.94	0.95	0.89	4.576	50.27	3
				Mean	58.51	
				SD	7.9	

X = width of a specimen, Y = thickness of a specimen,

Area = XY (mm^2), MPa = load/area

F.M. = failure mode; 1 = adhesive, 2 = cohesive in dentin,

3 = cohesive in adhesive resin, 4 = mixed,

5 = cohesive in resin composite

Bond Strengths and Failure Modes of Clearfil Protect Bond

(Experiment)

No.	X(mm)	Y(mm)	area	load(KgF)	Mpa	F.M.
1	0.92	0.91	0.84	6.6	77.34	3
2	0.94	0.91	0.86	3.612	41.42	3
3	0.96	0.94	0.9	5.456	59.31	3
4	0.99	0.91	0.9	5.005	54.5	3
5	0.91	0.97	0.88	4.908	54.55	3
6	0.99	0.94	0.93	6.75	71.16	3
7	0.95	0.94	0.89	5.622	61.76	3
8	0.89	0.94	0.84	5.931	69.55	3
9	0.95	0.93	0.88	4.632	51.43	3
10	0.98	0.9	0.88	4.887	54.36	3
11	0.94	0.99	0.93	5.239	55.23	3
12	0.92	0.91	0.84	4.869	57.05	3
13	0.91	0.95	0.86	5.288	60.01	3
14	0.94	0.96	0.9	4.232	46.01	3
15	0.92	0.99	0.91	5.074	54.65	3
16	0.94	1	0.94	4.196	43.79	4
17	0.95	0.9	0.86	5.058	58.03	3
18	0.92	1	0.92	4.783	51	4
19	0.93	0.97	0.9	4.502	48.96	3
20	0.93	1	0.93	4.326	45.63	3
				Mean	55.79	
				SD	9.2	

X = width of a specimen, Y = thickness of a specimen,

Area = XY (mm^2), MPa = load/area

F.M. = failure mode; 1 = adhesive, 2 = cohesive in dentin,

3 = cohesive in adhesive resin, 4 = mixed,

5 = cohesive in resin composite

APPENDIX B

Bond Strengths and Failure Modes of Clearfil Tri-S Bond

(Control)

No.	X(mm)	Y(mm)	area	load(KgF)	MPa	F.M.
1	0.89	0.89	0.79	3.841	47.57	4
2	0.89	0.87	0.77	4.252	53.87	3
3	0.91	0.91	0.83	3.665	43.42	4
4	0.91	0.89	0.81	4.329	52.44	4
5	0.91	0.91	0.83	4.612	54.64	3
6	0.9	0.93	0.84	5.306	62.19	3
7	0.89	0.92	0.82	3.367	40.34	3
8	0.91	0.9	0.82	4.204	50.36	4
9	0.93	0.92	0.86	3.265	37.44	3
10	0.92	0.96	0.88	6.076	67.49	4
11	0.94	0.94	0.88	4.489	49.84	4
12	0.94	0.89	0.84	6.18	72.47	3
13	0.89	0.96	0.85	3.933	45.16	4
14	0.85	0.89	0.76	3.163	41.02	3
15	0.87	0.91	0.79	5.262	65.2	4
16	0.91	0.85	0.77	4.678	59.33	4
17	0.9	0.92	0.83	4.42	52.37	4
18	0.9	0.92	0.83	4.755	56.34	4
19	0.84	0.9	0.76	3.989	51.76	4
20	0.92	0.92	0.85	3.895	45.14	4
				Mean	52.42	
				SD	9.40	

X = width of a specimen, Y = thickness of a specimen,

Area = XY (mm^2), MPa = load/area

F.M. = failure mode; 1 = adhesive, 2 = cohesive in dentin,

3 = cohesive in adhesive resin, 4 = mixed,

5 = cohesive in resin composite

Bond Strengths and Failure Modes of Clearfil Tri-S Bond

(Experiment)

No.	X	Y	area	load(KgF)	MPa	F.M.
1	0.88	0.91	0.8	4.668	57.18	4
2	0.98	0.94	0.92	5.051	53.79	4
3	0.91	0.98	0.89	3.943	43.37	3
4	0.98	0.9	0.88	5.142	57.19	4
5	0.91	0.99	0.9	4.242	46.19	4
6	1.01	0.93	0.94	4.846	50.61	4
7	0.98	0.9	0.88	4.482	49.85	3
8	0.87	0.92	0.8	4.058	49.74	3
9	0.86	0.95	0.82	3.699	44.42	4
10	0.93	0.97	0.9	4.441	48.29	4
11	0.96	0.92	0.88	4.992	55.45	3
12	0.97	0.92	0.89	5.724	62.92	4
13	0.92	0.89	0.82	5.52	66.13	3
14	0.93	0.95	0.88	5.446	60.47	3
15	0.92	0.94	0.86	4.992	56.63	1
16	0.91	0.99	0.9	5.165	56.24	3
17	0.94	0.9	0.85	5.436	63.03	1
18	0.89	0.97	0.86	5.744	65.27	3
19	0.95	0.94	0.89	5.436	59.72	4
20	0.91	0.97	0.88	5.449	60.56	1
				Mean	55.35	
				SD	6.87	

X = width of a specimen, Y = thickness of a specimen,

Area = XY (mm^2), MPa = load/area

F.M. = failure mode; 1 = adhesive, 2 = cohesive in dentin,

3 = cohesive in adhesive resin, 4 = mixed,

5 = cohesive in resin composite

APPENDIX C

Bond Strengths and Failure Modes of Single Bond Plus

(Control)

No.	X(mm)	Y(mm)	area	load(KgF)	MPa	F.M.
1	0.95	0.96	0.91	7.15	76.91	1
2	0.89	0.96	0.85	4.961	56.96	3
3	0.94	0.92	0.86	6.29	71.35	3
4	0.93	0.93	0.86	6.78	76.9	4
5	0.84	0.95	0.8	7.82	96.13	3
6	0.93	0.93	0.86	7.29	82.69	4
7	0.94	0.95	0.89	6.64	72.94	4
8	0.95	0.96	0.91	5.155	55.45	4
9	0.91	0.94	0.86	5.104	58.53	3
10	0.96	0.91	0.87	6.46	72.54	1
11	0.95	0.96	0.91	6.64	71.42	1
12	0.93	0.95	0.88	6.31	70.06	4
13	1.06	0.93	0.99	6.6	65.68	1
14	0.91	1.07	0.97	6.798	68.49	1
15	0.93	0.93	0.86	5.956	67.56	1
16	1.08	0.95	1.03	5.543	53	1
17	0.97	0.95	0.92	5.145	54.77	1
18	1.08	0.96	1.04	7.24	68.5	1
19	0.9	0.91	0.82	6.69	80.13	1
20	0.84	1.05	0.88	6.51	72.41	1
				Mean	69.62	
				SD	10.58	

X = width of a specimen, Y = thickness of a specimen,

Area = XY (mm^2), MPa = load/area

F.M. = failure mode; 1 = adhesive, 2 = cohesive in dentin,

3 = cohesive in adhesive resin, 4 = mixed,

5 = cohesive in resin composite

Bond Strengths and Failure Modes of Single Bond Plus

(Experiment)

No.	X(mm)	Y(mm)	area	load(KgF)	MPa	F.M.
1	0.98	0.91	0.89	4.824	53.07	3
2	0.93	0.98	0.91	6.9	74.27	1
3	0.93	0.94	0.87	6.045	67.84	1
4	0.98	0.95	0.93	6.29	66.28	1
5	0.97	0.93	0.9	3.497	38.03	3
6	0.92	0.98	0.9	6.053	65.86	1
7	0.92	0.98	0.9	4.778	51.99	4
8	1.01	0.94	0.95	8.36	86.38	4
9	0.93	1.04	0.97	5.841	59.24	4
10	0.9	1.03	0.93	4.79	50.69	1
11	0.91	1.03	0.94	8.9	93.15	4
12	1.01	0.89	0.9	7.29	79.56	1
13	0.93	0.92	0.86	6.48	74.3	1
14	1.01	0.93	0.94	5.943	62.07	1
15	0.92	0.91	0.84	5.451	63.87	4
16	0.91	0.92	0.84	7.61	89.17	1
17	0.94	0.95	0.89	6.043	66.39	4
18	0.95	0.97	0.92	6.92	73.67	1
19	0.95	0.95	0.9	6.89	74.89	1
20	0.9	0.95	0.86	7.11	81.58	4
				Mean	68.62	
				SD	13.96	

X = width of a specimen, Y = thickness of a specimen,

Area = XY (mm^2), MPa = load/area

F.M. = failure mode; 1 = adhesive, 2 = cohesive in dentin,

3 = cohesive in adhesive resin, 4 = mixed,

5 = cohesive in resin composite

BIOGRAPHY

Miss Lisa Anandana was born on the 11th October 1977 in Bangkok. After graduated from Chulalongkorn University, Faculty of Dentistry in 2000, she worked at Dental Division in U-thai thani Province, Chularat General Hospital, and Bumrungmeong Dental Clinic.

Works: Poster presentation in the 2nd International Congress on Adhesive Dentistry (2004) in Japan and the 45th Annual Meeting IADR (International Association for Dental Research) 2005 in New Zealand