

CURRICULUM VITAE

William A. Brantley

May 2002

PERSONAL INFORMATION

Office: Section of Restorative Dentistry, Prosthodontics and Endodontics
College of Dentistry, The Ohio State University
305 West 12th Avenue, #191
P.O. Box 182357
Columbus, Ohio 43218-2357
Telephone 614-292-0773
Fax 614-292-9422
E-mail brantley.1@osu.edu
wbrantle@columbus.rr.com

EDUCATION

B.S.	Metallurgical Engineering, North Carolina State University	1963
M.S.	Metallurgical Engineering, Carnegie Institute of Technology	1965
Ph.D.	Metallurgy and Materials Science, Carnegie-Mellon University	1968

PROFESSIONAL EXPERIENCE

Academic Positions

1989-present Professor, Section of Restorative Dentistry, Prosthodontics and Endodontics, College of Dentistry, The Ohio State University. Director, Graduate Program in Dental Materials. Ph.D. graduate faculty status in Oral Biology and Biomedical Engineering. M.S. graduate faculty status in Dentistry (highest degree offered). Adjunct Faculty, Department of Materials Science and Engineering.

1974-1989 Marquette University School of Dentistry:

- 1984-1989 Director of Dental Graduate Studies
- 1986-1989 Professor and Chairman, Department of Dental Materials
- 1980-1986 Associate Professor and Chairman, Department of Dental Materials
- 1979-1980 Associate Professor and Acting Chairman, Department of Dental Materials
- 1974-1979 Assistant Professor, Department of Dental Materials

Military Service

1968-1970 Active U.S. Army duty in Ordnance Corps. Assigned to U.S. Army Materials and Mechanics Research Center, Watertown, Massachusetts. Final rank: Captain.

Other Professional Positions

1970-1974 Member of the Technical Staff, Compound Semiconductor Materials Department, Bell Laboratories, Murray Hill, New Jersey.

1968-1970 Member of the Ceramics Research Laboratory, U.S. Army Materials and Mechanics Research Center, Watertown, Massachusetts. During second year, Group Leader, Mechanical Properties of Structural and Ballistic Ceramics.

1967-1968 Research Metallurgical Engineer and Lecturer, Department of Metallurgy and Materials Science, Carnegie-Mellon University.

Membership and Offices in Scientific and Professional Organizations

1998-present North American Thermal Analysis Society (NATAS).

1990-present Columbus Section, American Association for Dental Research (AADR).
President 1993-95. (1981-1989, Wisconsin Section, AADR)

1983-present Academy of Dental Materials.

1976-present Dental Materials Group, IADR/AADR.

1974-present International Association for Dental Research (IADR).

1963-present The Minerals, Metals and Materials Society (formerly The Metallurgical Society of AIME).

1962-present American Society for Metals.

Professional Honors and Honorary Organizations

- 1997 Stazen Research Award for Senior Faculty, College of Dentistry, The Ohio State University.
- 1982 Elected Honorary Member of Omicron Kappa Upsilon, Marquette University School of Dentistry. Membership transferred to The Ohio State University College of Dentistry in 1990.

SCHOLARLY, RESEARCH AND CREATIVE WORK

External Research Support

- 1998 Structure and Properties of High-Palladium Dental Alloys. National Institute of Dental and Craniofacial Research (NIDCR) Grant DE10147, awarded continuation funding for three-year period (9/30/98 to 7/31/01). Total award of \$895,548 with total direct costs of \$619,218. (PI) [Extended for a fourth year without additional funding by NIDCR. Direct costs funding available in budget as of July 16, 2001 was \$142,692.]
- 1997 Chemical Concepts for Improved Glass Ionomer Systems. NIDCR Grant DE11682, funded . 9/30/97 to 9/29/01. Associate PI with 5% release time [PI: Culbertson]. Total award \$633,781.
- 1994 Structure and Properties of High-Palladium Dental Alloys. National Institute of Dental Research (NIDR) Grant DE10147, funded for a three-year period (8/1/94 to 7/31/97). Extended for a fourth year until 7/31/98 without additional funding. Total award of \$451,579 with total direct costs award of \$312,924. (PI)
- 1991 Shear Strength Analysis of Ceramic Orthodontic Brackets. Funded \$1,120 by "A" Company. (PI)
- 1987 Sputtered Oxide for Dental Ceramic-Metal Bond. NIDR SBIR (Small Business Innovation Research Program) Phase I (R43) Grant DE08248, funded \$45,159 for July-December. PI at Marquette University. (Susan J. Mroczkowski, Grant PI, Midwest Thin Films, Division of Midwest Research Microscopy, Milwaukee, WI).
- 1985 Prosthodontics Research. Funded \$7,000 by AMIDEAST, Washington, DC to provide one-year support of postdoctoral expenses for Dr. Abdel Rauof El Hadary from Al Azhar University, Egypt. Co-PI with V.B. Dhuru, Marquette University School of Dentistry.
- 1985 Fracture Toughness Measurements on Cerestore and Other Dental Ceramics. Funded \$4,800 by Johnson and Johnson Dental Products Company for a one-year study. (PI)
- 1981 A Study Comparing Characteristics of the New Kerr K-Flex Endodontic Files with Six Other Endodontic Files. Funded \$3,840 by Sybron/Kerr Corporation for a one-year study. (PI)

1979 Improved Bending Analysis for Orthodontic Wires. NIDR (R01) Grant DE05226, funded \$14,470 for a one-year study and extended two years without additional funding. (PI)

Unfunded External Research Grant Applications

1993 Specialized Materials Science Research Center. Submitted October 1993 to NIDR with total direct costs of \$2,490,563 requested for five-year period. Center Director, with participating faculty from College of Dentistry, Department of Materials Science and Engineering (MSE), and Department of Chemistry.

1992 Structure and Properties of High-Palladium Dental Alloys. Submitted to NIDR with total direct costs of \$445,631 requested for a three-year study. (PI)

1991 Structure and Creep of High-Palladium Dental Alloys. Submitted to NIDR with total direct costs of \$348,972 requested for a three-year study. (PI)

1990 Research Training in Dental Materials. Submitted to NIDR with total direct costs of \$1,123,161 requested for a five-year Institutional National Research Service Award. Program Director, with participating faculty from the College of Dentistry and MSE.

1988 Sputtered Oxide for Dental Ceramic-Metal Bond. National Institute for Dental Research SBIR Phase II research grant submitted in 1988 with total direct costs of \$402,043 requested for a two-year study. PI at Marquette university with Susan J. Mroczkowski, Midwest Thin Films, grant application PI.

1985 An Instrumentation System for Studying New Dental Materials and Occlusal Relationships. Submitted to the DoD-University Research Instrumentation Program with a funding request of \$127,937. (PI)

1978 Asbestos Substitutes for Dental Casting Procedures. Submitted to National Institute of Occupational Safety and Health with a funding request of \$132,473 for a three-year investigation. Co-investigator with C.L. Myers (PI), Marquette University School of Dentistry.

1976 Alloys of Low Gold Content with Casting Techniques. Submitted to the National Institutes of Health with a funding request of \$255,500 for a five-year investigation. Co-investigator with C.L. Myers (PI).

1976 Bending Deformation Behavior of Orthodontic Wires. Submitted to the National Institutes of Health with a funding request of \$39,897 for a two-year investigation. (PI)

University Research Support (The Ohio State University)

- 1991 Research in Dental Materials Science for Prosthodontics. Funded \$2,500 in Winter Quarter by College of Dentistry Research Committee. (PI)
- 1991 Dental Materials Science Studies of High-Palladium Alloys. Funded \$2,500 in Summer Quarter by College of Dentistry Research Committee. (PI)
- 1990 Metallurgical Structure and Creep Behavior of High Palladium Dental Casting Alloys. Faculty Seed grant funded \$15,500 by The Ohio State University for 1990-1991 and extended through June 1993. (PI)
- 1990 Metallurgical Structures of High-Palladium Dental Casting Alloys. Funded \$2,500 in Winter Quarter by College of Dentistry Research Committee. (PI)

University Research Support (Marquette University)

- 1986 Fracture Toughness of Dental Ceramics. Funded \$1,650 for January 1986 - August 1987. (PI)
- 1981 Metallurgical Structure and Age Hardening Behavior of Reduced Gold Content Dental Casting Alloys. Funded \$1,150 for January 1981 - August 1982. Co-PI with Raymond A. Fournelle, College of Engineering.
- 1979 Age Hardening Mechanisms in Types III and IV Dental Gold Casting Alloys. Funded \$1,500 for January 1979 - August 1980. Co-PI with Raymond A. Fournelle.
- 1978 Improved Bending Analysis for Orthodontic Wires. Funded \$950 for January 1978- August 1979. (PI)
- 1977 Bending Deformation Behavior of Orthodontic Wires. Funded \$975 for January- December. (PI)

Program Development

- 1992 Developed a Track in Dental Materials for the Oral Biology Ph.D. Program at The Ohio State University.
- 1989 Developed a Master of Science Program in Dental Materials for The Ohio State University College of Dentistry.
- 1979 Developed a Master of Science Program in Dental Materials for Marquette University School of Dentistry.

Postdoctoral Research Supervision

Dr. Masahiro Iijima, Instructor, Department of Orthodontics, School of Dentistry, Health Sciences University of Hokkaido, Japan, from April 2000 – March 2002.

Dr. Wenhua Guo, Ph.D. in materials science through the Physics Department, Chinese University of Hong Kong, China, from September 1999 – August 2001.

Dr. Shigeki Miyake, Assistant Professor, First Department of Prosthetic Dentistry, Kyushu Dental College, Japan, from October 1990 - September 1991. Collaborative research projects on superelastic nickel-titanium wires for removable partial denture clasps.

Graduate Student Activities (The Ohio State University)

Ph.D. Students in Oral Biology Program

Advisor for Dongfa Li. Joined Program in Summer Quarter 2001. Dissertation research is tentatively focusing on fatigue testing of dental materials and fundamental study of metal-ceramic bond testing using interfacial fracture mechanics.

Advisor for Desheng Sun. Joined Program in Autumn Quarter 1999. Dissertation research is focusing on fundamental studies of corrosion behavior and interactions with cells for palladium-based dental casting alloys.

Advisor for Efstratios Papazoglou. Dissertation entitled: On porcelain bonding, oxidation, mechanical properties and high-temperature distortion of high-palladium dental casting alloys. Ph.D., June 1999.

Advisor for Eser Tufekci. Dissertation entitled: Microscopic, crystallographic and adherence properties of plasma-sprayed calcium phosphate coatings on Ti-6Al-4V. Ph.D., December 1998.

Advisor for Zhuo Cai. Dissertation entitled: Metallurgical structures, *in vitro* corrosion resistance and biocompatibility of high-palladium dental alloys. Ph.D., December 1996.

Member of Dissertation Committee for Qichun Wan (Ph.D., Summer 2000), Amer Tiba (Ph.D., Autumn 1998), James C. Ragain, Jr. (Ph.D., Spring 1998), and Dong Xie (Ph.D., Spring 1998).

Ph.D. Student in One-of-a Kind Program

John C. Mitchell (Co-Advisor). Dissertation entitled: A Bioactive Glass Material for the Delivery of Bone Morphogenetic Proteins: Synthesis by the Solution Sol-Gel Method, Physical and Chemical Analyses, and *In Vitro* Testing. Ph.D., Summer 1999.

Ph.D. Committee Member - Biomedical Engineering Program

Rakhi Jain. Dissertation Committee Member, Spring 2002.

Brett R. Forehand. Dissertation Committee Member, Spring 2000.
Candidacy Examination Committee Member, Summer 1996.

Tasos Karakostas. Candidacy Examination Committee Member, Autumn 1996.

Duran Yetkinler. Dissertation Committee Member, Autumn 1994.
General Examination Committee Member, Winter 1993.

Ching-Sung Weng. Dissertation Committee Member, Summer 1992.

Doctoral Committee Member - Graduate School Representative

Service on numerous Ph.D./D.M.A. Candidacy Examination or Final Oral Examination (dissertation defense) Committees for graduate students in: Chemistry; Evolution, Ecology and Organismal Biology; Materials Science and Engineering; Music; Systems Engineering.

M.S. Thesis Director

1. Satish Alapati, Dental Materials Science. Thesis research is focusing on study of the *in vitro* performance and fracture behavior of nickel-titanium endodontic instruments.
2. Mark R. Fiss, Orthodontics. Thesis entitled: Breaking Force of Ceramic Bracket Tie-Wings: A Comparative Study.
3. Jonathan G. Frankmann, Orthodontics. Thesis entitled Force Delivery Characteristics of Orthodontic Elastomeric Chains – A Comprehensive Product Comparison Study.
4. David S. Han, Dental Materials Science. Thesis entitled: Novel Method of Measuring Clamping Force and Heat Treatment Effects on UCLA Abutments. MS, Spring 2001.
5. Dongfa Li, Dental Materials Science. Thesis entitled: Fatigue Limits and Fracture Characteristics for Two High-Palladium Casting Alloys. MS, Spring, 2001.
6. James T. Eimer, Orthodontics. Thesis entitled: Force Delivery Properties of Pigmented Elastomeric Modules: An In Vitro Study. M.S., Spring 2000.
7. Giao (Robert) Ngoc Pham, Orthodontics. Thesis entitled: Fracture Characteristics, Hardness and Grain Size of Five Polycrystalline Alumina Orthodontic Brackets. M.S., Autumn, 1999.

8. Michele R. Renick, Orthodontics. Thesis entitled: Differential Scanning Calorimetric Determination of Glass Transition Temperatures in Orthodontic Elastomeric Chains, in vitro and in vivo. MS, Spring 1999.
9. Brian N. Hockenberger, Orthodontics. Thesis entitled: Evaluation of an Alginate versus an Alginate Substitute for Orthodontic Applications. M.S., Summer 1998.
10. Randa E. Shaker, Advanced General Dentistry. Thesis entitled: Differential Scanning Calorimetry, X-ray Diffraction and Scanning Electron Microscope Study of the Setting Reaction, Aging and Fracture Behavior of a Gallium Restorative Alloy. M.S., Autumn 1997.
11. Eric J. Ojala, Biomedical Engineering. Thesis entitled: Characteristics of the Corrosion Behavior of Four Palladium Dental Casting Alloys. M.S., Spring 1997.
12. Bruce P. McCoy, Orthodontics. Thesis entitled: Comparison of Compositions and Differential Scanning Calorimetric Analyses of the New Copper-Nickel-Titanium Wires with Existing Nickel-Titanium Orthodontic Wires. M.S., Summer 1996.
13. Qiang Wu, Dental Materials Science. Thesis entitled: Heat-Treatment Behavior for High-Palladium Dental Alloys. M.S., Spring 1996.
14. Thomas F. Tilson, Orthodontics. Thesis entitled: Evaluation of the Fracture Toughness of the Japanese Yttrium-stabilized Zirconia Orthodontic Brackets and Possible Clinical Implications. M.S., Spring, 1994.
15. Thomas Gerard Bradley, Orthodontics. Thesis entitled: A Differential Scanning Calorimetric Determination of Phase Transformation Temperature Ranges in Superelastic and Nonsuperelastic Nickel-Titanium Orthodontic Arch Wires. M.S., Summer 1993.
16. Theodore Eliades, Orthodontics. Thesis entitled: Degree of Double Bond Conversion and Residual Monomer Concentration in Light-Cured and Chemically-Cured Orthodontic Adhesive Resins Bonded to Ceramic and Stainless Steel Brackets. M.S., Summer 1993.
17. Thomas C. Sonneveld, Orthodontics. Thesis entitled: Evaluation of Bond Strengths Under Shear and Torsional Loads and Tie-Wing Breaking Forces Under Compressive Loads for Four Brands of Ceramic Orthodontic Brackets. M.S., Summer 1993.
18. Erik W. Hrabowy, Orthodontics. Thesis entitled: A Mechanical Property Study of Superelastic Nickel-Titanium Alloy Closed and Open Coil Springs. M.S., Spring 1993.

19. Paul A. Toplek, Orthodontics. Thesis entitled: Force Degradation of Orthodontic Elastomeric Chains: An In-Vitro Comparison Study. M.S., Spring 1993.
20. Eser Tufekci, Dental Materials Science. Thesis entitled: An Investigation of Surface and Interface Characteristics of Plasma-Sprayed Hydroxyapatite-Coated Titanium Dental Implants. M.S., Spring 1993.
21. Zhuo Cai, Dental Materials Science. Thesis entitled: A Metallurgical Study of As-Cast and Heat-Treated High-Palladium Dental Alloys. M.S., Spring 1992.
22. Lisa C. Butler, Orthodontics. Thesis entitled: Microstructure and Fracture Behavior of Four Brands of Alumina Orthodontic Brackets. M.S., Spring 1992.
23. Michael L. Fletcher, Orthodontics. Thesis entitled: An Evaluation of Bending Properties and Phase Transformations in Superelastic Nickel-Titanium Archwires. M.S., Spring 1992.
24. Dean J. Kiourtsis, Orthodontics. Thesis entitled: A Comparison of the Slot Dimensions and Prescribed Torque Angles Among Four Brands of Ceramic Brackets. M.S., Spring 1992.
25. Efstratios Papazoglou, Prosthodontics. Thesis entitled: Characterization of Bond Failures Between High-Palladium Alloys and Dental Porcelain. M.S., Autumn 1991.
26. Brian E. Crock, Orthodontics. Thesis entitled: Evaluation of Small Diameter Archwires. M.S., Summer 1991.

M.S. Thesis Committee Member

1. Dale Anne Featheringham, Orthodontics, M.S., Spring 2000.
2. Desheng Sun, Dental Materials Science, M.S., Spring 2000.
3. Minos Stavridakis, Prosthodontics, M.S., Spring 1998.
4. Suryanarayana Nitta, Materials Science and Engineering. M.S., Winter 1998.
5. Qichun Wan, Dental Materials Science. M.S., Summer 1997.
6. Marisol Chaves, Prosthodontics. M.S., Spring 1997.
7. Stephan Porter, Prosthodontics. M.S., Spring 1997.
8. Jigeng Xu, Dental Materials Science. M.S., Spring 1996.

9. Yongning Liu, Dental Materials Science. M.S., Summer 1995.
10. Lisa A. Knobloch. Prosthodontics. M.S., Summer 1994.
11. Amer Tiba, Dental Materials Science. M.S., Spring, 1994.
12. Dong Xie, Dental Materials Science. M.S., Summer 1993.
13. Aydogan Huseyin, Prosthodontics. M.S., Spring 1993.
14. Nora S. Hesse, Biomedical Engineering. M.S., Winter 1993.
15. Junjie Sang, Dental Material Science. M.S., Spring 1992.

Graduate Student Activities (Marquette University)

Ph.D. Thesis Co-Director (with Raymond A. Fournelle)

Salwa E. Khier, College of Engineering. Dissertation entitled: Structural Characterization, Biomechanical Properties, and Potentiodynamic Polarization Behavior of Nickel-Titanium Orthodontic Wire Alloys. Ph.D., 1988.

M.S. Thesis Director

1. Ching-Hau Su, Dental Materials. Thesis entitled: A Comparison of Two Porcelain-Metal Bond Strength Tests with Failure Analysis. M.S., 1990.
2. Francis Mante, Dental Materials. Thesis entitled: Fracture Toughness of Dental Ceramics. M.S., 1988.
3. James A. Urbaniak, Pediatric Dentistry (Children's Hospital). Thesis entitled: The *in vitro* Changes in Force Deliveries of the W Arch and Quad Helix Appliances as Functions of Appliance Size, Wire Diameter and Alloy Composition. M.S., 1986.
4. Harmeet Walia, Endodontics. Thesis entitled: Effect of Heat Treatment on the Clockwise and Counterclockwise Torsional Ductility of Endodontic Files. M.S., 1986.
5. Harmeet Walia, Dental Materials. Thesis entitled: Characterization of the Interfacial Wear of Tungsten Carbide Burs by Surface Analytical Techniques. M.S., 1986.

6. Donald P. Wolfert, Orthodontics. Thesis entitled: *In vitro* Comparison of Tensile Bond Strengths for Orthodontic Adhesives Following Enamel Etching at Various Times and Phosphoric Acid Concentrations. M.S., 1986.
7. Ronald Egan, Dental Materials. Thesis entitled: Basic Metallurgy and Cast Structures of Reduced Gold Dental Alloys. M.S., 1985.
8. John Robert Kelly, Dental Materials. Thesis entitled: Surface Structures of Etched Nickel-Based Dental Casting Alloys Characterized by Reflection Photometry. M.S., 1985.
9. Salwa E. Khier, Dental Materials. Thesis entitled: A Detailed Study of the Structure and Mechanical Properties of As-Received and Heat-Treated Stainless Steel Orthodontic Wires. M.S., 1985.
10. Gregory J. Tulachka, Prosthodontics. Thesis entitled: Investigation of the Potential Biohazards Associated with Handling of Ceramic Asbestos-Substitute Liners under Simulated Dental Casting Conditions. M.S., 1985.
11. Bruce L. Chenail, Endodontics. Thesis entitled: Clockwise Torsional Properties of Used Root Canal Files. M.S., 1984.
12. M. Kazem Asgharnia, Dental Materials. Thesis entitled: Refinements of the Bending Mechanics Analysis and Test Methods for Orthodontic Wires. M.S., 1983.
13. Chang Hsin-Fu, Orthodontics. Thesis entitled: An Investigation into Effects of Instantaneous Prestretching on Force Degradation Characteristics of Orthodontic Plastic Modules. M.S., 1983.
14. Jack Chia-Cheng Liu, Fixed Prosthodontics. Thesis entitled: An Investigation of Asbestos-Substitute Casting Ring Lining Materials. M.S., 1983.
15. David L. Olsen, Orthodontics. Thesis entitled: A Study of the Relationship of Ligation to Available Torque Delivery of Rectangular Archwires in Pretorqued and Standard Edgewise Brackets. M.S., 1983.
16. Thomas W.T. Campbell, Orthodontics. Thesis entitled: The Generation of Galvanic Currents in the Oral Cavity by Dissimilar Orthodontic Alloys. M.S., 1982.
17. Mark T. Donovan, Orthodontics. Thesis entitled: Further Investigations on the Weldability of Titanium Molybdenum Alloy Archwires. M.S., 1982.
18. Jeffrey D. Krupp, Endodontics. Thesis entitled: An Investigation of the Torsional and Bending Properties of Endodontic Files. M.S., 1982.

19. John G. Newman, Endodontics. Thesis entitled: A Study of the Cutting Efficiency of Seven Brands of Endodontic Files in Linear Motion. M.S., 1982.
20. John Sebanc, Orthodontics. Thesis entitled: An Investigation of the Change in Effective Root Torque with the Amount of Edge Bevel Existing on Orthodontic Wire. M.S., 1982.
21. Chin-Fwu Chen, Orthodontics. Thesis entitled: Effects of Surface Preparation and Treatments for Stainless Steel Orthodontic Bracket Bases on Tensile Bond Strength to Zinc Polycarboxylate and Glass Ionomer Cements. M.S., 1981.
22. John B. Frazier, Orthodontics. Thesis entitled: A Comparative Study of Two Alternative Methods of Prestretching Plastic Modules. M.S., 1981.
23. Mark E. Hixson, Orthodontics. Thesis entitled: An Investigation of the Change in Bracket Slot to Wire "Slop" or "Play" after Recycling Direct Bond Metallic Orthodontic Appliances. M.S., 1981.
24. John Jin-Jong Lin, Orthodontics. Thesis entitled: Weldability of Titanium Molybdenum Alloy Archwires. M.S., 1981.
25. Joseph J. Brenner, Orthodontics. Thesis entitled: A Comparison of Bending and Elastic Properties of Round Orthodontic Wires Subjected to Different Heat Treating Conditions. M.S., 1980.
26. Robert E. Blake, Orthodontics. Thesis entitled: A Comparison of the Stiffness and Transverse Bending Tests for Measurement of Elastic Deformation of Round Orthodontic Wires. M.S., 1979.
27. Samuel Salander, Orthodontics. Thesis entitled: An Investigation into Effects of Pre-stretching on Force Degradation Characteristics of Orthodontic Plastic Modules. M.S., 1978.
28. William S. Augat, Orthodontics. Thesis entitled: A Comparison of Alternative Techniques for Measurement of Stiffness and Bending Deformation Behavior of Orthodontic Wires. M.S., 1977.

M.S. Thesis Committee Member (Marquette University)

1. Lin-Her Leu, Mechanical Engineering. M.S., 1989.
2. William W. Johnson, Dental Materials. M.S., 1989.
3. Patrick M. Lloyd, Geriatric Dentistry (V.A. Center). M.S., 1989.
4. Jianzhong Xie, Mechanical Engineering. M.S., 1989.

5. Sam P. Ancheril, Dental Materials. M.S., 1988.
6. Jose F. Costas-Latoni, Endodontics. M.S., 1988.
7. Mark T. Hetzer, Dental Materials. M.S., 1987.
8. Mamle O. Mante, Dental Materials. M.S., 1987.
9. Kenneth Shay Geriatric Dentistry (V.A. Center). M.S., 1986.
10. Sharda S. Walia, Orthodontics. M.S., 1986.
11. Dennis J. Abere, Removable Prosthodontics. M.S., 1985.
12. Laurent M. Covo, Fixed Prosthodontics. M.S., 1985.
13. Bruno E. Schiffler, Fixed Prosthodontics. M.S., 1984.
14. Yosef Nahmias, Endodontics. M.S., 1983.
15. Susann B. Norwick, Pedodontics. M.S., 1982.
16. Carlos G. Quiroz, Fixed Prosthodontics. M.S., 1982.
17. M. Kazem Asgharnia, Orthodontics. M.S. 1981.
18. David P. Aulozzi, Endodontics. M.S., 1981.
19. Kevin M. Keating, Endodontics. M.S., 1981.
20. Charles J. Mears, Orthodontics. M.S., 1981.
21. Herbert I. Friedman, Endodontics. M.S., 1979.
22. Jon J. Sisulak, Orthodontics. M.S., 1979.
23. Ramesh C. Bhatheja, Removable Prosthodontics. M.S., 1975.

Publications

Published Articles (including manuscripts accepted for publication and articles in press)

1. Guo WH, Brantley WA, Clark WAT, Xiao JZ, Papazoglou E. Transmission electron microscopic studies of deformed Pd-Cu-Ga and Pd-Ga dental alloys. *Dent Mater* (accepted for publication).
2. Brantley WA, Iijima M, Grentzer TH. Temperature-modulated DSC study of phase transformations in nickel-titanium orthodontic wires. *Thermochimica Acta* (in press).
3. Brantley WA, Svec TA, Iijima M, Powers JM, Grentzer TM. Differential scanning calorimetric studies of nickel-titanium rotary endodontic instruments after simulated clinical use. *J Endod* (accepted for publication).
4. Brantley WA, Svec TA, Iijima M, Powers JM, Grentzer TH. Differential scanning calorimetric studies of nickel-titanium rotary endodontic instruments. *J Endod* (accepted for publication)
5. Brantley WA, Iijima M, Grentzer TH. Use of temperature-modulated DSC to investigate nickel-titanium orthodontic wire alloys. *NATAS Notes* 2002;34:5-8. [Invited article]
6. Sun D, Monaghan P, Brantley WA, Johnston WM. Electrochemical impedance spectroscopy study of high-palladium dental alloys. Part II. Behavior at active and passive potentials. *J Mater Sci: Mater Med* 2002;13:443-448.
7. Sun D, Monaghan P, Brantley WA, Johnston WM. Electrochemical impedance spectroscopy study of high-palladium dental alloys. Part I. Behavior at open-circuit potential. *J Mater Sci: Mater Med* 2002;13:435-442.
8. Guo WH, Brantley WA, Li D, Monaghan P, Clark WAT. Fatigue studies of high-palladium dental casting alloys: Part II. Transmission electron microscopic observations. *J Mater Sci: Mater Med* 2002;13:369-374.
9. Li D, Brantley WA, Mitchell JC, Daehn GS, Monaghan P, Papazoglou E. Fatigue studies of high-palladium dental casting alloys: Part I. Fatigue limits and fracture characteristics. *J Mater Sci: Mater Med* 2002;13:361-367.
10. Iijima M, Ohno H, Kawashima I, Endo K, Brantley WA, Mizoguchi I. Micro x-ray diffraction study of superelastic nickel-titanium orthodontic wires at different temperatures and stresses. *Biomaterials* 2002;23:1769-1774.
11. Sun D, Monaghan P, Brantley WA, Johnston WM. Potentiodynamic polarization study of the in vitro corrosion behavior of 3 high-palladium alloys and a gold-palladium alloy in 5 media. *J Prosthet Dent* 2002;87:86-93.

12. Tufekci E, Mitchell JC, Olesik JW, Brantley WA, Papazoglou E, Monaghan P. Inductively coupled plasma-mass spectroscopy measurements of elemental release from 2 high-palladium dental casting alloys into a corrosion testing medium. *J Prosthet Dent* 2002;87:80-85.
13. Papazoglou E, Brantley WA, Johnston WM. Evaluation of high-temperature distortion of high-palladium metal-ceramic crowns. *J Prosthet Dent* 2001;85:133-140.
14. Vickery JM, Brantley WA, Bardin TA. MDSC study of melting and glass transitions in elastomeric dental impression materials. *Thermochimica Acta* 2001;367-368:177-184.
15. Shaker RE, Brantley WA, Wu Q, Culbertson BM. Use of DSC for study of the complex setting reaction and microstructural stability of a gallium-based dental alloy. *Thermochimica Acta* 2001;367-368:393-400.
16. Cai Z, Watanabe I, Mitchell JC, Brantley WA, Okabe T. X-ray diffraction investigation of dental gold alloy-ceramic interfaces. *J Mater Sci: Mater Med* 2001;12:215-223.
17. Papazoglou E, Wu Q, Brantley WA, Mitchell JC, Meyrick G. Comparison of mechanical properties for equiaxed fine-grained and dendritic high-palladium alloys. *J Mater Sci: Mater Med* 2000;11:601-608.
18. Stavridakis MM, Papazoglou E, Seghi RR, Johnston WM, Brantley WA. Effect of different high-palladium metal-ceramic alloys on the color of opaque porcelain. *J Prosthodont* 2000;9:71-76.
19. Clelland NL, van Putten MC, Brantley WA, Knobloch LA. Adhesion testing of a denture base resin with 5 casting alloys. *J Prosthodont* 2000;9:30-36.
20. Xie D, Brantley WA, Culbertson BM, Wang G. Mechanical properties and microstructures of glass ionomer cements. *Dent Mater* 2000;16:129-138.
21. Eliades T, Brantley WA. The inappropriateness of conventional orthodontic bond strength assessment protocols. *Eur J Orthod* 2000;22:13-23.
22. Tufekci E, Brantley WA, Mitchell JC, Foreman DW, Georgette FS. Crystallographic characteristics of plasma-sprayed calcium phosphate coatings on Ti-6Al-4V. *Int J Oral Maxillofac Implants* 1999;14:661-672.
23. Nitta SV, Clark WAT, Brantley WA, Grylls RJ, Cai Z. TEM analysis of tweed structure in high-palladium dental alloys. *J Mater Sci: Mater Med* 1999;10:513-517.
24. Cai Z, Vermilyea SG, Brantley WA. *In vitro* corrosion resistance of high-palladium dental casting alloys. *Dent Mater* 1999;15:202-210.

25. Brantley WA, Wu Q, Cai Z, Vermilyea SG, Mitchell JC, Comerford MC. Effects of casting conditions and annealing on microstructures and Vickers hardness of dendritic Pd-Cu-Ga dental alloys. *Cells Mater* 1999;9:83-92.
26. Shaker RE, Brantley WA, Wu Q, Mitchell JC. X-ray diffraction and scanning electron microscopic analyses of a gallium-based dental restorative alloy. *Cells Mater* 1999;9:55-68.
27. Papazoglou E, Wu Q, Brantley WA, Mitchell JC, Meyrick G. Mechanical properties of dendritic Pd-Cu-Ga dental alloys. *Cells Mater* 1999;9:43-54.
28. Eliades T, Brantley WA. Friction: on the edge of fiction. A critique of bracket-archwire friction research protocols and their clinical significance. *Hellen Orthod Rev* 1999;2:17-29 (Greek and English).
29. Eliades T, Brantley WA. Empiricism, inductivism, and logical reasoning in orthodontic research. Part II: Formulating and testing a working hypothesis. *Hellen Orthod Rev* 1998;1:135-143 (Greek and English).
30. Eliades T, Brantley WA. Empiricism, inductivism, and logical reasoning in orthodontic research. Part I: Scientific progress mechanisms and the growth of knowledge. *Hellen Orthod Rev* 1998;1:63-69 (Greek and English).
31. Papazoglou E, Brantley WA. Porcelain adherence *vs* force to failure for palladium-gallium alloys: A critique of metal-ceramic bond testing. *Dent Mater* 1998;14:112-119. Also, Papazoglou E, Brantley WA. Response to 'Some remarks concerning the paper: "Porcelain adherence *vs*. force to failure for palladium-gallium alloys: a critique of metal-ceramic bond testing"', E. Papazoglou, W.A. Brantley (Dent. Mater. 14 (1998) 112-119). *Dent Mater* 1999;15:152.
32. Chaves M, Vermilyea SG, Papazoglou E, Brantley WA. Effects of three soldering techniques on the strength of high-palladium alloy solder joints. *J Prosthet Dent* 1998;79:677-684.
33. Kerber SJ, Barr TL, Mann GP, Brantley WA, Papazoglou E, Mitchell JC. The complementary nature of x-ray photoelectron spectroscopy and angle-resolved x-ray diffraction. Part I: Background and theory. *J Mater Eng Perform* 1998;7:329-333.
34. Kerber SJ, Barr TL, Mann GP, Brantley WA, Papazoglou E, Mitchell JC. The complementary nature of x-ray photoelectron spectroscopy and angle-resolved x-ray diffraction. Part II: Analysis of oxides on dental alloys. *J Mater Eng Perform* 1998;7:334-342.

35. Papazoglou E, Brantley WA, Johnston WM, Carr AB. Effects of dental laboratory processing variables and in vitro testing medium on the porcelain adherence of high-palladium casting alloys. *J Prosthet Dent* 1998;79:514-519.
36. Cai Z, Brantley WA, Clark WAT, Colijn HO. Transmission electron microscopic investigation of high-palladium dental casting alloys. *Dent Mater* 1997;13:365-371.
37. Wu Q, Brantley WA, Mitchell JC, Vermilyea SG, Xiao J, Guo W. Heat-treatment behavior of high-palladium dental alloys. *Cells Mater* 1997;7:161-174.
38. Knobloch LA, Kerby RE, Brantley WA, Laurell KA. Shear rebond strength of Rexillum III to enamel utilizing composite resin cements. *Int J Prosthodont* 1997;17:520-530.
39. Brantley WA, Cai Z, Mitchell JC, Vermilyea SG. Mechanism for formation of lamellar constituents in grain-refined Pd-Cu-Ga dental alloys. *Cells Mater* 1997;7:63-67.
40. Khier SE, Brantley WA. *In-vitro* corrosion measurements of Ni-Ti wrought alloys. *Saudi Dent J* 1997;9:14-16.
41. Tufekci E, Brantley WA, Mitchell JC, McGlumphy EA. Microstructures of plasma-sprayed hydroxyapatite-coated Ti-6Al-4V dental implants. *Int J Oral Maxillofac Implants* 1997;12:25-31.
42. Brantley WA, Cai Z, Vermilyea SG, Papazoglou E, Mitchell JC, Carr AB. Effects of solidification conditions and heat treatment on the microstructure and Vickers hardness of Pd-Cu-Ga dental alloys. *Cells Mater* 1996;6:127-135.
43. Vermilyea SG, Cai Z, Brantley WA, Mitchell JC. Metallurgical structure and microhardness of four new palladium-based alloys. *J Prosthodont* 1996;5:288-294.
44. Knobloch LA, Kerby RE, Brantley WA, Laurell KA. Shear bond strength of Rexillum III to enamel utilizing resin composite cements. *Int J Prosthodont* 1996;9:555-562.
45. Brantley WA, Cai Z, Papazoglou E, Mitchell JC, Kerber SJ, Mann GP, Barr TL. X-ray diffraction studies of oxidized high-palladium alloys. *Dent Mater* 1996;12:333-341.
46. Papazoglou E, Brantley WA, Mitchell JC, Cai Z, Carr AB. New high-palladium casting alloys. Studies of the interface with porcelain. *Int J Prosthodont* 1996;9:315-322.
47. Bradley TG, Brantley WA, Culbertson BM. Differential scanning calorimetry (DSC) analyses of superelastic and nonsuperelastic nickel-titanium orthodontic wires. *Am J Orthod Dentofac Orthop* 1996;109:589-597.

48. The Section of Restorative Dentistry, Prosthodontics and Endodontics at The Ohio State University [contributing author]. Summaries of clinically relevant studies of dental materials from the 1995 meeting of the American Association for Dental Research. *Gen Dent* 1996;44:250-266.
49. Carr AB, Brantley WA. Characterization of noble metal implant cylinders: as-received cylinders and cast interfaces with noble metal alloys. *J Prosthet Dent* 1996;75:77-85.
50. Cai Z, Chu X, Bradway SD, Papazoglou E, Brantley WA. On the biocompatibility of high-palladium dental alloys. *Cells Mater* 1995;5:357-368.
51. Brantley WA, Cai Z, Wu Q, Carr AB, Mitchell JC. Room temperature aging of Pd-Cu-Ga dental alloys. *Cells Mater* 1995;5:261-270.
52. Brantley WA, Cai Z, Foreman DW, Mitchell JC, Papazoglou E, Carr AB. X-ray diffraction studies of as-cast high-palladium alloys. *Dent Mater* 1995;11:154-160.
53. Eliades T, Eliades G, Brantley WA. Microbial attachment on orthodontic appliances. I. Wettability and early pellicle formation on bracket materials. *Am J Orthod Dentofac Orthop* 1995;108:351-360.
54. Eliades T, Eliades G, Brantley WA, Johnston WM. Residual monomer leaching from chemically cured and visible light-cured orthodontic adhesives. *Am J Orthod Dentofac Orthop* 1995;108:316-321.
55. Eliades T, Eliades G, Brantley WA, Johnston WM. Polymerization efficiency of chemically cured and visible light-cured orthodontic adhesives: Degree of cure. *Am J Orthod Dentofac Orthop* 1995;108:294-301.
56. Reisbick MH, Brantley WA. Mechanical property and microstructural variations for recast low-gold alloy. *Int J Prosthodont* 1995;8:346-350.
57. Vickery JM, Paulus, MW, Brantley WA, Culbertson BM, Johnston WM. Fundamental studies of maxillofacial materials. Part 1. Differential scanning calorimetric analyses of a heat-cured silicone. *Int J Prosthodont* 1995;8:221-227.
58. Luebke NH, Brantley WA, Sabri ZI, Luebke FL, Lausten LL. Physical dimensions, torsional performance, bending properties and metallurgical characteristics of rotary endodontic instruments. VI. Canal Master drills. *J Endod* 1995;21:259-263.

59. Clelland NL, Lee JK, Bimbinet OC, Brantley WA. A three-dimensional finite element stress analysis of angled abutments for an implant placed in the anterior maxilla. *J Prosthodont* 1995;4:95-100.
60. Brantley WA, Tufekci E, Mitchell JC, Foreman DW, McGlumphy EA. Scanning electron microscopy studies of ceramic layers and interfacial regions for calcium phosphate-coated titanium dental implants. *Cells Mater* 1995;5:73-82.
61. Brantley WA, Luebke NH, Luebke FL, Mitchell JC. Performance of engine-driven rotary endodontic instruments with a superimposed bending deflection. V. Gates Glidden and Peeso drills. *J Endod* 1994;20:241-245.
62. Eliades T, Lekka M, Eliades G, Brantley WA. Surface characterization of ceramic brackets: A multi-technique approach. *Am J Orthod Dentofac Orthop* 1994;105:10-18.
63. Mante F, Brantley WA, Dhuru VB, Ziebert GJ. Fracture toughness of high alumina core dental ceramics: The effect of water and artificial saliva. *Int J Prosthodont* 1993;6:546-552.
64. Clelland NL, Gilat A, McGlumphy EA, Brantley WA. A photoelastic and strain gage analysis of angled abutments for an implant system. *Int J Oral Maxillofac Implants* 1993;8:541-548.
65. Papazoglou E, Brantley WA, Carr AB, Johnston WM. Porcelain adherence to high-palladium alloys. *J Prosthet Dent* 1993;70:386-394.
66. Bridgeport DA, Brantley WA, Herman PF. Cobalt-chromium and nickel-chromium alloys for removable prosthodontics, Part 1. Mechanical properties of as-cast alloys. *J Prosthodont* 1993;2:144-150.
67. Lausten LL, Luebke NH, Brantley WA. Bending and metallurgical properties of rotary endodontic instruments. IV. Gates Glidden and Peeso drills. *J Endod* 1993;19:440-447.
68. Carr AB, Cai Z, Brantley WA, Mitchell JC. New high-palladium casting alloys: Part 2. Effects of heat treatment and burnout temperature. *Int J Prosthodont* 1993;6:233-241.
69. Johnson WW, Dhuru VB, Brantley WA. Composite microfiller content and its effect on fracture toughness and diametral tensile strength. *Dent Mater* 1993;9:95-98.
70. Brantley WA, Cai Z, Carr AB, Mitchell JC. Metallurgical structures of as-cast and heat-treated high-palladium dental alloys. *Cells Mater* 1993;3:103-114.
71. Carr AB, Brantley WA. Titanium alloy cylinders in implant framework fabrication: a study of the cylinder-alloy interface. *J Prosthet Dent* 1993;69:391-397.

72. Brantley WA, Kerby RE. Thermal diffusivity of glass ionomer cement systems. *J Oral Rehabil* 1993;20:61-68.
73. Papazoglou E, Kerby RE, Brantley WA. Thermal expansion of metal-reinforced glass ionomer cements. *Hellen Stomatol Rev* 1992;36:127-131 (Greek).
74. Luebke NH, Brantley WA, Sabri ZI, Luebke JH. Physical dimensions, torsional performance, and metallurgical properties of rotary endodontic instruments. III. Peeso drills. *J Endod* 1992;18:13-18.
75. Luebke NH, Brantley WA. Torsional and metallurgical properties of rotary endodontic instruments. II. Stainless steel Gates Glidden drills. *J Endod* 1991;17:319-323.
76. Carr AB, Brantley WA. New high-palladium casting alloys: Part 1. Overview and initial studies. *Int J Prosthodont* 1991;4:265-275.
77. Khier SE, Brantley WA, Fournelle RA. Bending properties of superelastic and non-superelastic nickel-titanium orthodontic wires. *Am J Orthod Dentofac Orthop* 1991;99:310-318.
78. Luebke NH, Brantley WA. Physical dimensions and torsional properties of rotary endodontic instruments. I. Gates Glidden drills. *J Endod* 1990;16:438-441.
79. Toth JM, Hirthe WM, Hubbard WG, Brantley WA, Lynch KL. Determination of the ratio of HA/TCP mixtures by x-ray diffraction. *J Appl Biomater* 1990;2:37-40.
80. Miserendino LJ, Neiberger EJ, Walia H, Luebke N, Brantley W. Thermal effects of continuous wave CO₂ laser exposure on human teeth: An in vitro study. *J Endod* 1989;14:302-305.
81. Urbaniak JA, Brantley WA, Pruhs RJ, Zussman RL, Post AC. Effects of appliance size, arch wire diameter and alloy composition on the in vitro force delivery of the quad-helix appliance. *Am J Orthod Dentofac Orthop* 1988;94:311-316.
82. Miserendino LJ, Brantley WA, Walia HD, Gerstein H. Cutting efficiency of endodontic instruments. Part 4. Comparison of hybrid and traditional instrument designs. *J Endod* 1988;14:451-454.
83. Walia H, Brantley WA, Gerstein H. An initial investigation of the bending and torsional properties of nitinol root canal files. *J Endod* 1988;14:346-351.
84. Khier SE, Brantley WA, Fournelle RA. Structure and mechanical properties of as-received and heat-treated stainless steel orthodontic wires. *Am J Orthod Dentofac Orthop* 1988;93:206-212.

85. Brantley WA. Macroscopic creep. *Trans Acad Dent Mater* 1988;1:1-5.
86. Kelly JR, Brantley WA. Evaluation of biangular reflection photometry for quantitative study of etched alloy surface roughness. *J Dent Res* 1987;66:1350-1355.
87. Tulachka GJ, Brantley WA, McGivney GP, Ziebert GJ. An investigation of the potential biohazards associated with asbestos-substitute casting ring liners. *J Prosthet Dent* 1987;57:108-112.
88. Asgharnia MK, Brantley WA. Comparison of bending and tension tests for orthodontic wires. *Am J Orthod* 1986;89:228-236.
89. Chenail BL, Brantley WA, Gerstein H. Clockwise torsional properties of new and used root canal files. *J Endod* 1986;12:59-63.
90. Brantley WA, Liu JC, Kos WL, Ziebert GJ. Evaluation of four substitutes for asbestos in lining casting rings. *Oper Dent* 1986;11:25-32.
91. Schiffler BE, Ziebert GJ, Dhuru VB, Brantley WA, Sigaroudi K. Comparison of accuracy of multiunit one-piece castings. *J Prosthet Dent* 1985;54:770-776.
92. Krupp JD, Brantley WA, Gerstein H. An investigation of the torsional and bending properties of seven brands of endodontic files. *J Endod* 1984;10:372-380.
93. Sebanc J, Brantley WA, Pincsak JJ, Conover JP. Variability of effective root torque as a function of edge bevel on orthodontic arch wires. *Am J Orthod* 1984;86:43-51.
94. Donovan MT, Lin JJ, Brantley WA, Conover JP. Weldability of beta titanium arch wires. *Am J Orthod* 1984;85:207-216.
95. Newman JG, Brantley WA, Gerstein H. A study of the cutting efficiency of seven brands of endodontic files in linear motion. *J Endod* 1983;9:316-322.
96. Hixson ME, Brantley WA, Pincsak JJ, Conover JP. Changes in bracket slot tolerance following recycling of direct-bond metallic orthodontic appliances. *Am J Orthod* 1982;81:447-454.
97. Brantley WA, Myers CL. Measurement of bending deformation for small diameter orthodontic wires. *J Dent Res* 1979;58:1696-1700.
98. Brantley WA, Salander S, Myers CL, Winders RV. Effects of prestretching on force degradation characteristics of plastic modules. *Angle Orthod* 1979;49:37-43.

99. Myers CL, Drake JT, Brantley WA. A comparison of properties for zinc phosphate cements mixed on room temperature and frozen glass slabs. *J Prosthet Dent* 1978;40:409-412.
100. Brantley WA, Augat WS, Myers CL and Winders RV. Bending deformation studies of orthodontic wires. *J Dent Res* 1978;57:609-615.
101. Brantley WA, Keramidas VG, Schwartz B, Read MH, Petroff PM. Metallurgical structure of Be-Au and Si-Au ohmic contacts to GaP. *J Electrochem Soc* 1976;123:1582-1584.
102. Brantley WA. Comments on stiffness measurements for orthodontic wires. *J Dent Res* 1976;55:705.
103. Brantley WA, Schwartz B, Keramidas VG, Sinha AK, Kammlott GW. Modified contact metallizations for GaP to provide barrier action against gallium migration. *J Electrochem Soc* 1975;122:1152-1154.
104. Brantley WA, Lorimor OG, Dapkus PD, Haszko SE, Saul RH. Effect of dislocations on green electroluminescence efficiency in GaP grown by liquid phase epitaxy. *J Appl Phys* 1975;46:2629-2637.
105. Brantley WA, Schwartz B, Keramidas VG, Kammlott GW, Sinha AK. Gallium migration through contact metallizations on GaP. *J Electrochem Soc* 1975;122:434-435.
106. Brantley WA, Harrison DA. Localized plastic deformation of GaP and GaAs generated by thermocompression bonding. *J Electrochem Soc* 1973;120:1281-1284.
107. Brantley WA, Harrison DA. Degradation studies of diffused GaAs electroluminescent diodes subjected to mechanical stress. *Proc 1973 IEEE Reliability Physics Symposium*, pp. 267-274.
108. Brantley WA. Calculated elastic constants for stress problems associated with semiconductor devices. *J Appl Phys* 1973;44:534-535.
109. Brantley WA, Hwang CJ, Dawson LR, Queisser HJ. Shallow acceptor luminescence in GaAs grown by liquid phase epitaxy. *Solid State Commun* 1972;10:1141-1144.
110. Long WD, Brantley WA. Fractographic analyses of ceramics and glass-ceramics subjected to ballistic impact. *Amer Ceram Soc Bull* 1971;50:662-665.
111. Brantley WA, Bauer CL. Geometric analysis of charged dislocations in the fluorite structure. *Phys Stat Sol* 1970;40:707-715.

112. Bauer CL, Brantley WA. Effect of charged dislocations on ac dielectric and elastic properties. *Mater Sci Eng* 1969/70;5:295-297.
113. Brantley WA, Bauer CL. Electroacoustic investigations of charged dislocations in NaCl. *Phil Mag* 1969;20:441-454.
114. Brantley WA, Bauer CL. Effects of charged dislocations on dielectric, piezoelectric and elastic properties. *Mater Sci Eng* 1969;4:29-38.
115. Brantley WA, Bauer CL. The geometry of charged dislocations in the NaCl structure. *Phys Stat Sol* 1966;18:465-478.

Book Editor

Eliades T, Eliades G, Brantley WA, Watts DC, eds. *In vivo Aging of Dental Biomaterials*. Quintessence, Chicago. (Anticipated publication in 2002.)

Brantley WA, Eliades T, eds. *Orthodontic Materials: Scientific and Clinical Aspects*. Thieme, Stuttgart, 2001.

Book Chapters or Portions of Chapters (Including Submitted or in Preparation for Submission)

1. Papazoglou E, Brantley WA, McGlumphy EA. Characterization of retrieved implants: Ti, Ti alloys and HA coatings. In: Eliades T, Eliades G, Brantley WA, Watts DC (eds). *In vivo Aging of Dental Biomaterials*. Quintessence, Chicago. (*Anticipated publication in 2002*) [Manuscript in preparation]
2. Brantley WA. *In vivo* aging of alloys used in prosthodontics and restorative dentistry. In: Eliades T, Eliades G, Brantley WA, Watts DC (eds). *In vivo Aging of Dental Biomaterials*. Quintessence, Chicago. (*Anticipated publication in 2002*) [Manuscript in preparation]
3. Brantley WA. Portion of Chapter 3 (Physical properties of dental materials) on Corrosion. In: Anusavice KJ (ed). Phillips' Science of Dental Materials (11th ed). Saunders, Philadelphia. (*Anticipated publication in 2002*) [Manuscript accepted for publication]
4. Brantley WA. Chapter 5. Solidification and microstructure of cast dental alloys. In: Anusavice KJ. Phillips' Science of Dental Materials (11th ed). Saunders, Philadelphia. (*Anticipated publication in 2002*) [Manuscript accepted for publication]
5. Brantley WA. Chapter 6. Principles of alloy phase formation. In: Anusavice KJ (ed). Phillips' Science of Dental Materials (11th ed). Saunders, Philadelphia. (*Anticipated publication in 2002*) [Manuscript accepted for publication]
6. Brantley WA. Chapter 20. Wrought metals. In: Anusavice KJ (ed). Phillips' Science of Dental Materials (11th ed). Saunders, Philadelphia. (*Anticipated publication in 2002*) [Manuscript accepted for publication]
7. Eliades T, Eliades G, Brantley WA, Watts DC. *In vivo* aging of orthodontic utilities and auxiliaries: NiTi wires, stainless steel inner facebow wires, and elastomeric chains. In: Eliades T, Eliades G, Brantley WA, Watts DC (eds). *In vivo Aging of Dental Biomaterials*. Quintessence, Chicago. (*Anticipated publication in 2002*) [Manuscript accepted for publication]
8. Brantley WA. Orthodontic wires. In: O'Brien WJ (ed). *Dental Materials and Their Selection* (3rd ed). Quintessence, Chicago. (*in press*)
9. Brantley WA. Structures and properties of orthodontic materials. In: Brantley WA, Eliades T, eds. *Orthodontic Materials: Scientific and Clinical Aspects*. Thieme, Stuttgart 2001:1-25.
10. Brantley WA, Eliades T, Litsky AS. Mechanics and mechanical testing of orthodontic materials. In: Brantley WA, Eliades T, eds. *Orthodontic Materials: Scientific and Clinical Aspects*. Thieme, Stuttgart 2001:27-47.

11. Eliades G, Brantley WA. Instrumental techniques for study of orthodontic materials. In: Brantley WA, Eliades T, eds. *Orthodontic Materials: Scientific and Clinical Aspects*. Thieme, Stuttgart 2001:49-76.
12. Brantley WA. Orthodontic wires. In: Brantley WA, Eliades T, eds. *Orthodontic Materials: Scientific and Clinical Aspects*. Thieme, Stuttgart 2001:77-103.
13. Eliades T, Eliades G, Brantley WA. Orthodontic brackets. In: Brantley WA, Eliades T, eds. *Orthodontic Materials: Scientific and Clinical Aspects*. Thieme, Stuttgart 2001:143-172.
14. Eliades T, Eliades G, Watts DC, Brantley WA. Elastomeric ligatures and chains. In: Brantley WA, Eliades T, eds. *Orthodontic Materials: Scientific and Clinical Aspects*. Thieme, Stuttgart 2001:173-187.
15. Brantley WA, Laub LW. Metal selection. In: Rosenstiel SF, Land MF, Fujimoto J, eds. *Contemporary Fixed Prosthodontics* (3rd ed.). Mosby, St. Louis 2000:497-509, 511 and 512.
16. Brantley WA, Laub LW. Porcelain-alloy bonding. In: Rosenstiel SF, Land MF, Fujimoto J, eds. *Contemporary Fixed Prosthodontics* (3rd ed.). Mosby, St. Louis 2000:617-620, 641 and 642.
17. Brantley WA. Orthodontic wires. In: O'Brien WJ (ed). *Dental Materials and Their Selection* (2nd ed). Chicago: Quintessence Publishing Co., 1997, Chapter 20.
18. Brantley WA. Orthodontic wires. In: O'Brien WJ (ed). *Dental Materials: Properties and Selection*. Chicago: Quintessence Publishing Co., 1989, Chapter 20.
19. Katz RN, Brantley WA. Fractography of high boron ceramics subjected to ballistic loading. In Kriegel WW and Palmour H (eds). *Ceramics in Severe Environments*, Materials Science Research, Volume 5. New York: Plenum Press, 1971, pp 271-282.

Manuscripts Submitted for Publication or in Preparation for Submission

Clark WAT, Brantley WA, Guo W, Iijima M, Fraser HL. Mechanical properties and microstructures of two beta-titanium orthodontic wire alloys. In preparation for submission to *Dent Mater*.

Guo WH, Brantley WA, Clark WAT, Monaghan P, Mills MJ. Transmission electron microscopic investigation of a Pd-Ag-In-Sn dental alloy. *Biomaterials* (submitted April 2002)

Brantley WA, Iijima M, Grentzer TH. Temperature-modulated DSC provides new insight about transformations in nickel-titanium wires. *Am J Orthod Dentofac Orthop* (submitted March 2002).

Published IADR/AADR Abstracts (Presenter [*] or co-author of scientific presentations at annual meetings of the International/American Association for Dental Research)

1. Yamazaki T, Schricker SR, Brantley WA, Johnston WM, Culbertson BM. Effect of loading rate on strength of six glass-ionomer cements. *J Dent Res* 2002;81(Special Issue A):A-169, Abstract No. 1214. (IADR, San Diego)
2. Guo WH, Brantley WA, Clark WAT, Sun D. TEM investigation of the hardening mechanisms for a Pd–Ag–Sn alloy. *J Dent Res* 2002;81(Special Issue A):A-171, Abstract No. 1229. (IADR, San Diego)
3. Guo WH, Brantley WA, Clark WAT, Li D, Webb CS. TEM microstructural examination of a fatigued Pd–Ag dental alloy *J Dent Res* 2002;81(Special Issue A):A-171, Abstract No. 1232. (IADR, San Diego)
4. Guo WH, Iijima M, Brantley WA, Clark WAT, Wade AB. Comparison of tensile properties for two beta-titanium orthodontic wire alloys. *J Dent Res* 2002;81(Special Issue A):A-173, Abstract No. 1242. (IADR, San Diego)
5. Pagnotto MF, Monaghan P, Collins PC, Fraser HL, Brantley WA, Clark WAT, Seghi RR. Human gingival epithelial cell growth on laser-deposited Ti–6Al–4V. *J Dent Res* 2002;81(Special Issue A):A-173, Abstract No. 1244. (IADR, San Diego)
6. Brantley WA*, Guo WH, Clark WAT. Mechanism for grain refinement by ruthenium in palladium-based casting alloys. *J Dent Res* 2002;81(Special Issue A):A-309, Abstract No. 2451. (IADR, San Diego)
7. Clark WAT, Guo WH, Brantley WA. TEM analysis of mystery striation structure in a Pd–Ag alloy. *J Dent Res* 2002;81(Special Issue A):A-309, Abstract No. 2452. (IADR, San Diego)
8. Guo WH, Brantley WA, Clark WAT. TEM investigation of precipitation behavior of an annealed Pd–Ag alloy. *J Dent Res* 2002;81(Special Issue A):A-309, Abstract No. 2453. (IADR, San Diego)
9. Guo WH, Brantley WA, Mitchell JC. Vickers hardness and SEM microstructures of two annealed Pd–Ag alloys. *J Dent Res* 2002;81(Special Issue A):A-310, Abstract No. 2454. (IADR, San Diego)
10. Li D, Brantley WA, Mitchell JC, Guo WH, Monaghan P. Fatigue limits and fracture characteristics for a palladium-silver casting alloy. *J Dent Res* 2002;81(Special Issue A):A-310, Abstract No. 2455. (IADR, San Diego)

11. Peirce PL, Collins PC, Fraser HL, Clark WAT, Brantley WA, Monaghan P. Electrochemistry of Ti-6Al-4V from LENSTM technology and conventional titanium alloys. *J Dent Res* 2002;81(Special Issue A):A-310, Abstract No. 2457. (IADR, San Diego)
12. Vickery JM, Brantley WA, Grentzer TH. Effects of viscosity and time on DMA of two elastomers. *J Dent Res* 2002;81(Special Issue A):A-334, Abstract No. 2663. (IADR, San Diego)
13. Tufekci E, Merrill TE, Beyer JP, Pintado MR, Brantley W. Enamel loss associated with orthodontic adhesive removal on teeth with white-spot lesions. *J Dent Res* 2002;81(Special Issue A):A-464, Abstract No. 3791. (IADR, San Diego)
14. Brantley W, Svec T, Iijima M, Powers J, Grentzer T. Differential scanning calorimetry of new and used nickel-titanium rotary files. *J Dent Res* 2002;81(Special Issue A):A-472, Abstract No. 3854. (IADR, San Diego)
15. Alapati S, Brantley WA, Mitchell JC, Iijima M, Svec TA, Powers JM. SEM observations of new and used nickel-titanium rotary files. *J Dent Res* 2002;81(Special Issue A):A-472, Abstract No. 3859. (IADR, San Diego)
16. Brantley WA, Iijima M, Grentzer TH. Temperature-modulated DSC provides new insight about transformations in nickel-titanium wires. *J Dent Res* 2002;81(Special Issue A):A-486 (Abstract No. 3980). (IADR, San Diego)
17. Collins PC, Fraser HL, Brantley WA, Clark WAT, Monaghan P, Le LT. Laser deposition: A new technology for fabrication of titanium restorations. *J Dent Res* 2002;81(Special Issue A):A-487 (Abstract No. 3985). (IADR, San Diego)
18. Iijima M, Brantley WA, Mitchell JC, Wade AB, Frankmann JG. Bending performance, microstructures and x-ray diffraction of two beta-titanium wires. *J Dent Res* 2001;80(Special Issue):51, Abstract #128. (AADR, Chicago)
19. Lausten LL, Luebke NH, Brantley WA, Mitchell JC. Bending performance of nickel-titanium and stainless steel rotary endodontic instruments. *J Dent Res* 2001;80(Special Issue):52, Abstract #129. (AADR, Chicago)
20. Guo W, Brantley WA, Clark WAT, Iijima M. Transmission electron microscopic study of beta-titanium orthodontic wires. *J Dent Res* 2001;80(Special Issue):52, Abstract #130. (AADR, Chicago)
21. Guo W, Brantley WA, Clark WAT, Monaghan P. Transmission electron microscopic investigation of a Pd-Ag-In-Sn dental alloy. *J Dent Res* 2001;80(Special Issue):52, Abstract #132. (AADR, Chicago)

22. Guo W, Brantley WA,* Clark WAT, Li D, Monaghan P. TEM analysis of fatigue test specimens for high-palladium dental alloys. *J Dent Res* 2001;80(Special Issue):52, Abstract #133. (AADR, Chicago)
23. Mitchell JC, Brantley WA, Li D, Daehn GS, Monaghan P, Papazoglou E. SEM study of fractured fatigue test specimens for high-palladium alloys. *J Dent Res* 2001;80(Special Issue):52, Abstract #134. (AADR, Chicago)
24. Vickery JM, Brantley WA, Grentzer TH. Dynamic mechanical analysis provides new perspective for elastomeric impression materials. *J Dent Res* 2001;80(Special Issue):113, Abstract #617. (AADR, Chicago)
25. Sun D, Monaghan P, Brantley WA, Johnston WM, Frankel GS. Electrochemical impedance spectroscopy study of high-palladium alloys at open-circuit potential. *J Dent Res* 2001;80(Special Issue):136, Abstract #801. (AADR, Chicago)
26. Sun D, Monaghan P, Brantley WA, Frankel GS, Johnston WM. EIS study of high-palladium alloys at elevated corrosion potentials. *J Dent Res* 2001;80(Special Issue):136, Abstract #802. (AADR, Chicago)
27. Tufekci E, Mitchell JC, Olesik JW, Brantley WA, Monaghan P. ICP/MS measurement of elemental release from two palladium-based dental casting alloys. *J Dent Res* 2001;80(Special Issue):136, Abstract #803. (AADR, Chicago)
28. Sun D, Monaghan P, Brantley WA, Johnston WM, Knobloch LA. *In-vitro* corrosion of three high-palladium casting alloys in five media. *J Dent Res* 2001;80(Special Issue):147, Abstract #894. (AADR, Chicago)
29. Li D, Brantley WA, Mitchell JC, Daehn GS, Monaghan P, Papazoglou E. Fatigue limits and fracture characteristics for two high-palladium casting alloys. *J Dent Res* 2001;80(Special Issue):255, Abstract #1754. (AADR, Chicago)
30. Luebke NH, Lausten LL, Brantley WA, Mitchell JC. Torsional performance of nickel-titanium Gates Glidden drills with an applied bending deflection. *J Dent Res* 2001;80(Special Issue):255, Abstract #1755. (AADR, Chicago) *Presented by A.G. Gegauff.*
31. Kelly BS, Brantley WA, Holloway JA, Litsky AS, Mitchell JC, Li D. Fatigue fracture characteristics of two high-palladium dental casting alloys. *J Dent Res* 2000;79(Special Issue):188, Abstract #355. (IADR, Washington DC)

32. Kerber SJ, Barr TL, Mann, GP, Brantley WA,* Papazoglou E. XPS and angle-resolved XRD of an oxidized Pd-Cu-Ga alloy. *J Dent Res* 2000;79(Special Issue):363, Abstract #1758. (IADR, Washington DC) [*Poster presentation delivered by John Mitchell.*]
33. Guo W, Xiao J, Brantley WA, Clark WAT, Papazoglou E. Transmission electron microscopic studies of a deformed Pd-Cu-Ga alloy. *J Dent Res* 2000;79(Special Issue):363, Abstract #1759. (IADR, Washington DC)
34. Mitchell JC, Brantley WA, Tufekci E, Webb CS. X-ray diffraction analyses of cross-sectioned specimens of titanium-containing orthodontic wires. *J Dent Res* 2000;79(Special Issue):439, Abstract #2368. (IADR, Washington DC)
35. Pham GN, Brantley WA, Mitchell JC, Johnston WM, Webb CS. Fracture characteristics, hardness and grain size of five alumina brackets. *J Dent Res* 2000;79(Special Issue):548, Abstract #3236. (IADR, Washington DC)
36. Tufekci E, Mitchell JC, Olesik JW, Brantley WA, Papazoglou E, Monaghan P. ICP/MS measurement of elemental release from high-palladium dental casting alloys. *J Dent Res* 2000;79(Special Issue):595, Abstract #3616. (IADR, Washington DC)
37. Sun D, Brantley W, Monaghan P. Impedance spectroscopy of high-palladium alloys in a saliva simulat. *J Dent Res* 2000;79(Special Issue):596, Abstract #3618. (IADR, Washington DC)
38. Featheringham D, Kerby R, Knobloch L, Brantley WA, Lidral A. Bond strength of orthodontic cements utilizing various light curing systems *J Dent Res* 2000;79(Special Issue):615, Abstract #3771. (IADR, Washington DC)
39. Vickery JM, Mitchell JC, Brantley WA. X-ray diffraction and SEM studies of elastomeric impression materials. Part II. *J Dent Res* 2000;79(Special Issue):628, Abstract #3873. (IADR, Washington DC)
40. Brantley WA, Wu Q, Mitchell JC, Vermilyea SG. Remarkable composition-mechanical property dependence for two Pd-Cu-Ga dental alloys. *J Dent Res* 1999;78(Special Issue):112, Abstract #52. (IADR, Vancouver)
41. Shaker RE, Brantley WA, Wu Q, Culbertson BM. DSC analyses of a gallium-based restorative alloy. *J Dent Res* 1999;78(Special Issue):158, Abstract #423. (IADR, Vancouver)
42. Sun D, Monaghan P, Brantley W. Application of electrochemical impedance spectroscopy to high-palladium alloys. *J Dent Res* 1999;78(Special Issue):236, Abstract #1041. (IADR, Vancouver)

43. Renick MR, Brantley WA, Webb CS, Beck FM, Vig K, Culbertson BM. DSC studies of orthodontic plastic modules I. As-received products. *J Dent Res* 1999;78(Special Issue):320, Abstract #1718. (IADR, Vancouver)
44. Renick MR, Brantley WA, Webb CS, Beck FM, Vig K, Culbertson BM. DSC studies of orthodontic plastic modules II. *In-vitro* and *in-vivo* tests. *J Dent Res* 1999;78(Special Issue):320, Abstract #1719. (IADR, Vancouver)
45. Luebke N, Lausten L, Brantley W. Torsional performance of nickel-titanium rotary endodontic instruments with applied bending deflection. *J Dent Res* 1999;78(Special Issue):397, Abstract #2336. (IADR, Vancouver)
46. Tufekci E, Mitchell JC, Brantley WA, Foreman DW. Residual stress measurements for HA coatings using x-ray diffraction. *J Dent Res* 1999;78(Special Issue):409, Abstract #2430. (IADR, Vancouver)
47. Papazoglou E, Brantley WA, Johnston WM. High-temperature distortion of high-palladium metal-ceramic crowns. *J Dent Res* 1999;78(Special Issue):484, Abstract #3026. (IADR, Vancouver)
48. Vickery JM, Mitchell JC, Brantley WA. X-ray diffraction and SEM studies of elastomeric impression materials. *J Dent Res* 1999;78(Special Issue):550, Abstract #3559. (IADR, Vancouver)
49. Brantley W, Webb C, Soto U, Wu Q, Cassinelli A. X-ray diffraction and Vickers hardness of titanium-containing orthodontic wires. *J Dent Res* 1998;77(Special Issue A):108, Abstract #24. (AADR, Minneapolis)
50. Tufekci E, Brantley W, Foreman D, Soto U, Georgette F. Residual stress in hydroxyapatite coatings and implications for bond strength. *J Dent Res* 1998;77(Special Issue A):122, Abstract #129. (AADR, Minneapolis)
51. Vickery JM, Brantley WA, Weddle BJ, Gallagher PK. Modulated differential scanning calorimetric study of addition silicone impression materials. *J Dent Res* 1998;77(Special Issue A):125, Abstract #156. (AADR, Minneapolis)
52. Ojala EJ, Vermilyea SG, Brantley WA, Mitchell JC. Electrochemical behavior of four palladium-based dental casting alloys. *J Dent Res* 1998;77(Special Issue A):162, Abstract #453. (AADR, Minneapolis)
53. Nitta S, Clark W, Brantley W,* Grylls R, Cai Z. TEM analysis of tweed structure in high-palladium casting alloys. *J Dent Res* 1998;77(Special Issue A):165, Abstract #474. (AADR, Minneapolis)
Presented for S Nitta

54. Papazoglou E, Wu Q, Brantley WA, Mitchell JC, Meyrick G. Dependence of mechanical properties on microstructure for dendritic Pd-Cu-Ga alloys. *J Dent Res* 1998;77(Special Issue A):165, Abstract #475. (AADR, Minneapolis)
55. Shaker R, Brantley W,* Wu Q, Mitchell J. X-ray diffraction and SEM analyses of a gallium-based restorative alloy. *J Dent Res* 1998;77(Special Issue A):242, Abstract #1096. (AADR, Minneapolis) *Presented for R Shaker*
56. Brantley WA,* Mitchell JC, Papazoglou E, Kerber SJ. X-ray diffraction analyses of palladium oxides and palladium hydroxide. *J Dent Res* 1998;77(Special Issue A):299, Abstract #1548. (AADR, Minneapolis)
57. Papazoglou E, Brantley WA. Porcelain bond characterization vs. force to failure for Pd-Ga casting alloys. *J Dent Res* 1998;77(Special Issue A):299, Abstract #1549. (AADR, Minneapolis)
58. Chaves M, Vermilyea S, Papazoglou E, Brantley WA. Effect of soldering technique on high-palladium alloys. *J Dent Res* 1997;76(Special Issue):55, Abstract #331. (IADR, Orlando)
59. Wu Q, Brantley WA, Vermilyea SG, Mitchell JC. Discontinuous precipitation and other microstructural phenomena in heat-treated high-palladium alloys. *J Dent Res* 1997;76(Special Issue):79, Abstract #528. (IADR, Orlando)
60. Cai Z, Vermilyea SG, Brantley WA. *In vitro* corrosion resistance of high-palladium dental casting alloys. *J Dent Res* 1997;76(Special Issue):180, Abstract #1336. (IADR, Orlando)
61. Stavridakis M, Papazoglou E, Seghi RR, Brantley WA, Johnston WM. Effect of high-palladium alloys on color of opaque porcelain. *J Dent Res* 1997;76(Special Issue):181, Abstract #1339. (IADR, Orlando)
62. Brantley WA, Vickery JM, Ragain JC, Wan Q, Khandwala S, Culbertson BM. Differential scanning calorimetric analyses of elastomeric impression materials. *J Dent Res* 1997;76(Special Issue):182, Abstract #1348. (IADR, Orlando)
63. Tufekci E, Brantley W, Foreman D, Soto U, Georgette R. Crystallographic characteristics of plasma-sprayed calcium phosphate coatings. *J Dent Res* 1997;76(Special Issue):203, Abstract #1517. (IADR, Orlando)
64. McCoy BP, Brantley WA, Culbertson BM, Mitchell JC. DSC and EDS analyses of new Copper Ni-Ti orthodontic wires. *J Dent Res* 1997;76(Special Issue):400, Abstract #3096. (IADR, Orlando)

65. Brantley WA, Webb CS, Soto U, Cai Z, McCoy BP. X-ray diffraction analyses of Copper Ni-Ti orthodontic wires. *J Dent Res* 1997;76(Special Issue):401, Abstract #3097. (IADR, Orlando)
66. Kerber S, Mann G, Barr T, Brantley W,* Papazoglou E, Cai Z. X-ray photoelectron spectroscopic analyses of an oxidized Pd-Cu-Ga alloy. *J Dent Res* 1997;76(Special Issue):402, Abstract #3106. (IADR, Orlando)
67. Cai Z, Brantley W, Clark W, Colijn H. Transmission electron microscopic investigation of high-palladium dental casting alloys. *J Dent Res* 1997;76(Special Issue):402, Abstract #3107. (IADR, Orlando)
68. Papazoglou E, Brantley WA, Mitchell JC. Porcelain adherence and oxidation of Pd-Ga alloys. *J Dent Res* 1997;76(Special Issue):402, Abstract #3108. (IADR, Orlando)
69. Laggan B, Carr AB, Brantley WA. Influence of hardening heat treatment on implant cylinder hardness. *J Dent Res* 1997;76(Special Issue):427, Abstract #3305. (IADR, Orlando)
70. Cai Z, Brantley WA, Wolfinger EP, Vermilyea SG. X-ray diffraction investigations of five heat-treated palladium-based alloys. *J Dent Res* 1996;75(Special Issue):32, Abstract #117. (IADR, San Francisco)
71. Papazoglou E, Brantley WA, Mitchell JC, Johnston WM, Carr AB. Effect of several variables on porcelain adherence of high-palladium alloys. *J Dent Res* 1996;75(Special Issue):32, Abstract #118. (IADR, San Francisco)
72. Vickery JM, Brantley WA, Culbertson BM, Bardin TA, Grentzer TM. Modulated differential calorimetric studies of maxillofacial polymers. *J Dent Res* 1996;75(Special Issue):57, Abstract #318. (IADR, San Francisco)
73. Brantley WA, Wu Q, Cai Z, Vermilyea SG, Mitchell JC. Effects of casting conditions and annealing on dendritic Pd-Cu-Ga alloys. *J Dent Res* 1996;75(Special Issue):60, Abstract #339. (IADR, San Francisco)
74. Cai Z, Brantley WA, Wolfinger EP, Vermilyea SG. X-ray diffraction investigations of four as-cast palladium-based alloys. *J Dent Res* 1996;75(Special Issue):60, Abstract #340. (IADR, San Francisco)
75. Bradley TG, Mitchell JC, Brantley WA. Surface composition and microtopography of nickel-titanium orthodontic wires. *J Dent Res* 1996;75(Special Issue):61, Abstract #346. (IADR, San Francisco)

76. Vermilyea S, Benson S, Brantley W. Corrosion behavior of galvanically-coupled dental casting alloys. *J Dent Res* 1996;75(Special Issue):163, Abstract #1165. (IADR, San Francisco)
77. Papazoglou E, Brantley WA, Stavridakis M, Ramos E. Effect of oxidation procedures on porcelain adherence of high-palladium alloys. *J Dent Res* 1996;75(Special Issue):164, Abstract #1176. (IADR, San Francisco)
78. Mitchell JC, Bradley TG, Brantley WA. Elemental analyses of six commercial nickel-titanium orthodontic wires. *J Dent Res* 1996;75(Special Issue):168, Abstract #1205. (IADR, San Francisco)
79. Brantley WA, Cai Z, Wu Q, Carr AB, Mitchell JC. Characterization of low-temperature aging behavior of Pd-Cu-Ga alloys. *J Dent Res* 1996;75(Special Issue):366, Abstract #2786. (IADR, San Francisco)
80. Brantley WA,* Cai Z, Papazoglou E. X-ray diffraction investigations of oxidized Pd-Cu-Ga alloys. *J Dent Res* 1996;75(Special Issue):366, Abstract #2787. (IADR, San Francisco)
81. Ragain JC, Brantley WA, Wang G, Mitchell JC. Fracture strength and fractographic evaluation of Type V die stones. *J Dent Res* 1996;75(Special Issue):378, Abstract #2882. (IADR, San Francisco)
82. Lausten L, Luebke N, Brantley W. Bending properties of nickel-titanium rotary endodontic instruments. *J Dent Res* 1996;75(Special Issue):384, Abstract #2935. (IADR, San Francisco)
83. Foreman DW, Tufekci E, Brantley WA. X-ray diffraction studies of plasma-sprayed calcium phosphate coatings. *J Dent Res* 1996;75(Special Issue):398, Abstract #3043. (IADR, San Francisco)
84. Hagiwara Y, Igarashi T, McGlumphy EA, Brantley WA. Vibration analysis for external vs internal engagement of abutments. *J Dent Res* 1995;74(Special Issue):495, Abstract #759. (IADR, Singapore)
85. Holloway JA, Papazoglou E, McGlumphy EA, Brantley WA. SEM characterization of fatigue failure for clinically fractured implants. *J Dent Res* 1995;74(Special Issue):42, Abstract #241. (AADR, San Antonio)
86. Tilson TF, Brantley WA, Johnston WM. Fracture toughness of zirconia ceramic orthodontic brackets. *J Dent Res* 1995;74 (Special Issue):74, Abstract #501. (AADR, San Antonio)

87. Tilson TF, Foreman DW, Brantley WA,* Johnston WM. X-ray diffraction studies of zirconia ceramic orthodontic brackets. *J Dent Res* 1995;74 (Special Issue):74, Abstract #504. (AADR, San Antonio)
88. Tufekci E, Mitchell JC, Brantley WA. Quantitative ceramography of microstructures in calcium phosphate-coated implants. *J Dent Res* 1995;74 (Special Issue):111, Abstract #795. (AADR, San Antonio)
89. Mitchell JC, Tufekci E, Brantley WA. SEM/EDS studies of interdiffusion in calcium phosphate-coated implants. *J Dent Res* 1995;74 (Special Issue):111, Abstract #798. (AADR, San Antonio)
90. Hagiwara Y, McGlumphy EA, Brantley WA. Vibration analysis for implant abutments subjected to impact loading. *J Dent Res* 1995;74 (Special Issue):112, Abstract #803. (AADR, San Antonio)
91. Cai Z, Brantley WA, Carr AB, Mitchell JC. Effect of heat treatment temperature on Pd-Ga dental casting alloys. *J Dent Res* 1995;74 (Special Issue):220, Abstract #1667. (AADR, San Antonio)
92. Reisbick MH, Brantley WA. Mechanical property and microstructural variations for recast low-gold alloy. *J Dent Res* 1995;74 (Special Issue):220, Abstract #1668. (AADR, San Antonio)
93. Vermilyea S, Manogaran N, Brantley W. Electrochemical behavior of high palladium casting alloys. *J Dent Res* 1995;74 (Special Issue):237, Abstract #1806. (AADR, San Antonio)
94. Manogaran NK, Vermilyea SG, Brantley WA.* Electrochemical corrosion behavior of heat-treated palladium-based alloys. *J Dent Res* 1995;74 (Special Issue):241, Abstract #1833. (AADR, San Antonio) *Presented for NK Manogaran*
95. Vickery JM, Brantley WA, Culbertson BM, Bardin TA, Grentzer TM. Modulated differential scanning calorimetric studies of maxillofacial polymers. *J Dent Res* 1995;74 (Special Issue):242, Abstract #1841. (AADR, San Antonio)
96. Tufekci E, Brantley WA, Mitchell JC, Foreman DW, McGlumphy EA. Microstructures of plasma-sprayed calcium phosphate-coated titanium dental implants. *J Dent Res* 1994;73(Special Issue):138, Abstract #289. (IADR, Seattle, 1994)
97. Sonneveld TC, Brantley WA,* Kao EC, Johnston WM. Comparison of zirconia and alumina ceramic orthodontic brackets. *J Dent Res* 1994;73(Special Issue):198, Abstract #774. (IADR, Seattle)
98. Vermilyea SG, Cai Z, Brantley WA, Mitchell JC. Microhardness and metallurgical structure of four new high-palladium alloys. *J Dent Res* 1994;73(Special Issue):212, Abstract #882. (IADR, Seattle)

99. Culbertson BM, Brantley WA, Vickery JM, Tiba A, Grentzer T. Modulated differential scanning calorimetry investigation of composite resins. *J Dent Res* 1994;73(Special Issue):227, Abstract #1005. (IADR, Seattle)
100. Cai Z, Brantley WA, Vermilyea SG, Mitchell JC, Carr AB. Effect of solidification and heat treatment conditions on Pd-Cu-Ga alloys. *J Dent Res* 1994;73(Special Issue):408, Abstract #2450. (IADR, Seattle)
101. Vickery JM, Paulus MW, Brantley WA, Tiba A, Johnston WM, Keinle BH, Culbertson BM. Differential scanning calorimetric studies of heat-cured maxillofacial silicones. *J Dent Res* 1994;73(Special Issue):410, Abstract #2463. (IADR, Seattle)
102. Eliades T, Eliades G, Brantley WA, Johnston WM. Polymerization efficiency in light-cured (LC) vs. chemically-cured (CC) orthodontic adhesives. *J Dent Res* 1994;73(Special Issue):412, Abstract #2484. (IADR, Seattle)
103. Bradley TG, Brantley WA, Culbertson BM. Differential scanning calorimetric study of nickel-titanium orthodontic wires. *J Dent Res* 1994;73(Special Issue):414, Abstract #2496. (IADR, Seattle)
104. Eliades T, Eliades G, Brantley WA, Johnston WM. Unreacted methacrylate groups in light-cured orthodontic adhesives. *J Dent Res* 1994;72(Special Issue):176, Abstract #577.
105. Culbertson BM, Sang J, Brantley WA, Lo SK. New dental resins with improved creep resistance. II. *J Dent Res* 1993;72(Special Issue):178, Abstract #595. (IADR, Chicago)
106. Carr AB, Miller RB, Brantley WA. Mechanical evaluation of titanium and conventional implant cylinder cast-to interface. *J Dent Res* 1993;72(Special Issue):190, Abstract #696. (IADR, Chicago)
107. Brantley WA, Cai Z, Carr AB, Papazoglou E, Foreman DW. X-ray diffraction studies of as-cast high-palladium alloys. *J Dent Res* 1993;72(Special Issue):281, Abstract #1420. (IADR, Chicago)
108. Cai Z, Brantley WA,* Carr AB, Mitchell JC. Mechanism of grain size refinement for ruthenium in palladium alloys. *J Dent Res* 1993;72(Special Issue):281, Abstract #1421. (IADR, Chicago)
109. Papazoglou E, Brantley WA, Cai Z, Carr AB. Oxidation of high-palladium alloys: SEM/EDS studies. *J Dent Res* 1993;72(Special Issue):305, Abstract #1611. (IADR, Chicago)
110. Carr AB, Huseyin A, Brantley WA. Elemental analysis of titanium implant cylinder cast-to interface. *J Dent Res* 1993;72(Special Issue):377, Abstract #2191. (IADR, Chicago)

111. Papazoglou E, Brantley W, Carr A, Johnston W, Mitchell J. Characterization of bond failures between high-palladium alloys and porcelain. *J Dent Res* 1992;71(Special Issue):534, Abstract #149. (IADR, Glasgow, Scotland, 1992)
112. Culbertson BM, Sang J, Brantley WA, Lo SK. New dental resins with improved creep resistance. I. *J Dent Res* 1992;71(Special Issue):598, Abstract #663. (IADR, Glasgow)
113. Brantley WA,* Cai Z, Carr AB, Mitchell JC. SEM studies of heat-treated high-palladium alloys. *J Dent Res* 1992;71(Special Issue):626, Abstract #888. (IADR, Glasgow)
114. Miyake S, Brantley WA, Culbertson BM. Superelastic NiTi wires for prosthodontics: DSC studies. *J Dent Res* 1992;71(Special Issue):626, Abstract #889. (IADR, Glasgow)
115. Sang J, Brantley WA, Culbertson BM, Lo SK, Kao EC. Creep studies of visible light- cured posterior composite resins. *J Dent Res* 1992;71(Special Issue):137, Abstract #249. (AADR, Boston, March 1992)
116. Carr AB, Porter SS, Brantley WA. Implant cylinder microhardness and diffusion phenomena for cast-to specimens. *J Dent Res* 1992;71(Special Issue):144, Abstract #306. (AADR, Boston)
117. Carr AB, Miller RB, Brantley WA. Cast-to strength of Ti-6Al-4V with gold and palladium alloys. *J Dent Res* 1992;71(Special Issue):144, Abstract #307. (AADR, Boston)
118. Stewart RB, Gretz K, Brantley WA. A new high-palladium alloy for implant-supported prostheses. *J Dent Res* 1992;71(Special Issue):158, Abstract #423. (AADR, Boston)
119. Fletcher ML, Miyake S, Brantley WA, Culbertson BM. DSC and bending studies of a new shape-memory orthodontic wire. *J Dent Res* 1992;71(Special Issue):169, Abstract #505. (AADR, Boston)
120. Miyake S, Brantley WA.* Superelastic NiTi wires for removable prosthodontics: heat treatment in dental furnaces. *J Dent Res* 1992;71(Special Issue):263, Abstract #1257. (AADR, Boston)
121. Cai Z, Carr AB, Brantley WA, Mitchell JC. Effects of burnout temperature and heat treatment on palladium alloys. *J Dent Res* 1992;71(Special Issue):283, Abstract #1421. (AADR, Boston)
122. Carr AB, Brantley WA. Implant cylinder composition and cast-to interface characterization. *J Dent Res* 1992;71(Special Issue):317, Abstract #1694. (AADR, Boston)

123. Culbertson BM, Brantley WA, Kao EC, Deviney ML. Crack-microstructure interactions in dry and wet photocured composite resins. *J Dent Res* 1991;70(Special Issue):481, Abstract #1718. (IADR, Acapulco, Mexico, April 1991)
124. Crock B, Brantley W, Wade D, Gegauff A. Evaluation of small diameter orthodontic archwires. *J Dent Res* 1991;70(Special Issue):482, Abstract #1727. (IADR, Acapulco)
125. Su C, Brantley WA,* Dhuru VB, Fournelle RA, Mroczkowski SJ. Failure analysis of ceramic-metal bonds with sputtered oxide films. *J Dent Res* 1991;70(Special Issue):484, Abstract #1748. (IADR, Acapulco)
126. Carr AB, Brantley WA. Comparison of first and second generation high-palladium alloys. *J Dent Res* 1991;70(Special Issue):559, Abstract #2346. (IADR, Acapulco)
127. Bridgeport DA, Brantley WA, Herman PF. Mechanical properties of Co-Cr and Ni-Cr alloys for removable prosthodontics. *J Dent Res* 1991;70(Special Issue):559, Abstract #2347. (IADR, Acapulco)
128. Luebke N, Brantley W. Torsional performance of Peeso drills with an applied bending moment. *J Dent Res* 1991;70(Special Issue):565, Abstract #2390. (IADR, Acapulco)
129. Luebke N, Lausten L, Brantley W. Bending properties of Gates-Glidden drills. *J Dent Res* 1991;70(Special Issue):565, Abstract #2391. (IADR, Acapulco)
130. Kerby RE, Brantley WA, Lonsbrough R. Heat transfer characteristics of light-cured glass ionomers. *J Dent Res* 1991;70(Special Issue):567, Abstract #2413. (IADR, Acapulco)
131. Kerby RE, Brantley WA, Papazoglou E. Thermal expansion of metal-reinforced glass ionomer cements. *J Dent Res* 1991;70(Special Issue):568, Abstract #2414. (IADR, Acapulco)
132. Sang J, Cai Z, Brantley WA, Johnston WM. New surfactants for die stone mixes on elastomeric impression materials. *J Dent Res* 1991;70(Special Issue):573, Abstract #2455. (IADR, Acapulco)
133. Culbertson BM, Brantley WA, Kao EC, Grentzer T. DSC and DMA characterization of light cured dental resins. *J Dent Res* 1990;69(Special Issue):207, Abstract #789. (IADR, Cincinnati, March 1990)
134. Johnson W, Dhuru V, Brantley W, Suh B. Composite microfiller content and its effect on two mechanical properties. *J Dent Res* 1990;69(Special Issue):232, Abstract #991. (IADR, Cincinnati)
135. Leu L, Fournelle R, Brantley W,* Ehlert T. Evidence of R structure in superelastic NiTi orthodontic wires. *J Dent Res* 1990;69(Special Issue):313, Abstract #1633. (IADR, Cincinnati)

136. Kerby RE, Brantley WA, Lonsbrough R. Thermal diffusivity of glass ionomer cement systems. *J Dent Res* 1990;69(Special Issue):342, Abstract #1870. (IADR, Cincinnati)
137. Mroczkowski S, Brantley W,* Dhuru V, Lichtman D. Surface analyses of dental casting alloys. *J Dent Res* 1989;68(Special Issue):346, Abstract #1313. (AADR, San Francisco, March 1989) Presented for VB Dhuru
138. Khier S, Brantley W,* Fournelle R, Ehlert T. XRD and DSC studies of NiTi orthodontic wire alloys. *J Dent Res* 1989;68(Special Issue):386, Abstract #1638. (AADR, San Francisco)
139. Walia H, Brantley W, Costas J, Miserendino L, Gerstein H. Properties of nitinol root canal files. *J Dent Res* 1989;68(Special Issue):387, Abstract #1644. (AADR, San Francisco)
140. Hassan K, Dhuru V, Brantley W, El-Shafei F. Tensile strength of glass ionomer materials finished at different time periods. *J Dent Res* 1988;67(Special Issue):140, Abstract #222. (IADR, Montreal, March 1988)
141. Ancheril S, Dhuru V, Brantley W, Hassan K. Density of condensed and uncondensed posterior composite resins. *J Dent Res* 1988;67(Special Issue):220, Abstract #860. (IADR, Montreal)
142. Hetzer M, Dhuru V, Brantley W, Prey J. Tensile strength of composite restorative materials as determined by two methods. *J Dent Res* 1988;67(Special Issue):260, Abstract #1182. (IADR, Montreal)
143. Mante F, Brantley W, Dhuru V, Ziebert G. Fracture toughness of alumina core ceramics. *J Dent Res* 1988;67(Special Issue):263, Abstract #1207. (IADR, Montreal)
144. Lausten L, Dhuru V, Brantley W. Deflection of cantilever tip segments of slotted endodontic posts under incremental loads. *J Dent Res* 1988;67(Special Issue):304, Abstract #1531. (IADR, Montreal)
145. Khier S, Brantley W,* Fournelle R. Structural characterization of superelastic NiTi orthodontic wire alloys. *J Dent Res* 1988;67(Special Issue):361, Abstract #1988. (IADR, Montreal)
146. Luebke N, Walia H, Brantley W. Torsional properties of the Gates-Glidden bur. *J Dent Res* 1988;67(Special Issue):382, Abstract #2153. (IADR, Montreal)
147. Mante M, Dhuru V, Brantley W. Relationships between shade, thickness, transmitted light curing intensity and hardness of a composite restorative. *J Dent Res* 1987;66(Special Issue):127, Abstract #163. (IADR, Chicago, March 1987)

148. El Hadary R, Ancheril S, Dhuru V, Brantley W. Changes in hardness and weight of resilient denture liners stored in water and saliva. *J Dent Res* 1987;66(Special Issue):134, Abstract #221. (IADR, Chicago)
149. Hassan K, Dhuru V, Brantley W. Efficiency of two composite restorative finishing systems - a laboratory investigation. *J Dent Res* 1987;66(Special Issue):211, Abstract #840. (IADR, Chicago)
150. Mante F, Brantley WA, Dhuru VB, Ziebert GJ. Characterization and fracture toughness of the high alumina shrink-free core ceramic. *J Dent Res* 1987;66(Special Issue):270, Abstract #1307. (IADR, Chicago)
151. Golden WG, Mante F, Kelly JR, Brantley WA. Effects of casting conditions and heat treatment on the structure of Rexillum III. *J Dent Res* 1987;66(Special Issue):288, Abstract #1449. (IADR, Chicago)
152. Urbaniak J, Brantley W,* Pruhs R, Zussman R, Post C. *In vitro* force delivery of the quad-helix and W-arch appliances. *J Dent Res* 1987;66(Special Issue):295, Abstract #1511. (IADR, Chicago)
153. Walia H, Brantley W, Gerstein H, Arpaio J. New metallurgy root canal files. *J Dent Res* 1987;66(Special Issue):349, Abstract #1943. (IADR, Chicago)
154. Mante M, Dhuru V, Deshotels W, Schaefer A, Brantley W. Transmission of light through composite restorative: relationship with thickness and shades. *J Dent Res* 1986;65(Special Issue):190, Abstract #189. (AADR, Washington DC, March 1986)
155. Mante F, Dhuru V, Hassan K, Prey J, Brantley W. Mercury vapor levels in a preclinical operative laboratory. *J Dent Res* 1986;65(Special Issue):191, Abstract #198. (AADR, Washington DC)
156. Hassan K, Dhuru V, Mante F, Brantley W, Prey J. Intra-oral mercury vapor levels after chewing and intake of hot beverages. *J Dent Res* 1986;65(Special Issue):191, Abstract #199. (AADR, Washington DC)
157. Dhuru V, Mante F, Hassan K, Brantley W, Prey J. Emission of mercury vapor from various amalgam specimens. *J Dent Res* 1986;65(Special Issue):192, Abstract #200. (AADR, Washington DC)
158. Khier SE, Brantley WA, Fournelle RA. Structure and mechanical properties of as-received and heat-treated stainless steel orthodontic wires. *J Dent Res* 1986;65(Special Issue):195, Abstract #229. (AADR, Washington DC)

159. Brantley WA, Egan R, Fournelle RA. Cellular phase transformations in dental gold casting alloys. *J Dent Res* 1986;65(Special Issue):236, Abstract #605. (AADR, Washington DC)
160. Tulachka GJ, Brantley WA, McGivney GP, Ziebert GJ. Investigation of potential biohazards associated with handling of ceramic asbestos-substitute ring liners. *J Dent Res* 1986;65(Special Issue):354, Abstract #1664. (AADR, Washington DC)
161. Mante F, Dhuru V, Brantley W, Hassan K. Knoop microhardness, Rockwell superficial hardness and indentation resistance of composite restoratives. *J Dent Res* 1985;64(Special Issue):178, Abstract #34. (IADR, Las Vegas, March 1985)
162. Dhuru V, Hassan K, Brantley W, Prey J. A comparison of separation torque for self-shearing retention pins. *J Dent Res* 1985;64(Special Issue):182, Abstract #67. (IADR, Las Vegas)
163. Brantley WA,* Olsen DL, Yang J, Conover JP. Effects of ligation on torque delivery of arch wires in brackets. *J Dent Res* 1985;64(Special Issue):184, Abstract #86. (IADR, Las Vegas)
164. Walia HD, Brantley WA, Dhuru VB, Lichtman D. Characterization of wear of carbide burs by AES, SEM, and EDS. *J Dent Res* 1985;64(Special Issue):319, Abstract #1300. (IADR, Las Vegas)
165. Egan R, Brantley W, Fournelle R. Age hardening studies of reduced gold content dental casting alloys. *J Dent Res* 1984;63(Special Issue):176, Abstract #47. (IADR, Dallas, March 1984)
166. Kelly JR, Brantley WA. Extent of Rexillum III etching determined by reflection photometry. *J Dent Res* 1984;63(Special Issue):230, Abstract #534. (IADR, Dallas)
167. Kupfer P, Dhuru V, Brantley W. Surface roughness of anterior restoratives finished with clinical and laboratory procedures. *J Dent Res* 1984;63(Special Issue):293, Abstract #1103. (IADR, Dallas)
168. Asgharnia M, Brantley W.* Comparison of bending and tension tests for orthodontic wires. *J Dent Res* 1984;63(Special Issue):296, Abstract #1124. (IADR, Dallas)
169. Liu C, Brantley W, Kos W, Ziebert G. An evaluation of asbestos-substitute casting ring lining materials. *J Dent Res* 1984;63(Special Issue):330, Abstract #1432. (IADR, Dallas)
170. Sebanc J, Brantley W,* Pincsak J, Conover J. Dependence of effective root torque on edge bevel for arch wires. *J Dent Res* 1983;62(Special Issue):174, Abstract #41. (AADR, Cincinnati, March 1983)
171. Kupfer P, Dhuru V, Brantley W. Critical tilt and contact angles of die stone on impression materials. *J Dent Res* 1983;62(Special Issue):276, Abstract #883. (AADR, Cincinnati)

172. Norwick S, Dhuru V, Brantley W, Mayer J, Ashrafi M. Surface and interior microhardness of photo-polymerized resins. *J Dent Res* 1983;62(Special Issue):286, Abstract #1051. (AADR, Cincinnati)
173. Donovan M, Lin J, Brantley W,* Conover J. Weldability of titanium molybdenum alloy archwires. *J Dent Res* 1982;61(Special Issue):305, Abstract #1144. (IADR, New Orleans, March 1982)
174. Dhuru V, Kupfer P, Brantley W. Contact angles of die stone on impression materials - effect of technique variables. *J Dent Res* 1982;61(Special Issue):306, Abstract #1147. (IADR, New Orleans)
175. Kupfer P, Dhuru V, Brantley W. A comparison of different methods of measuring contact angles. *J Dent Res* 1982;61(Special Issue):306, Abstract #1148. (IADR, New Orleans)
176. Asgharnia M, Dhuru V, Brantley W. Effect of different methods of tooth surface preparation on the rebond strength of orthodontic brackets. *J Dent Res* 1982;61(Special Issue):329, Abstract #1355. (IADR, New Orleans)
177. Quiroz C, Dhuru V, Ziebert G, Brantley W. Accuracy of fit of castings cemented by two different methods. *J Dent Res* 1981;60(Special Issue):348, Abstract #149. (IADR, Chicago, March 1981)
178. Brenner J, Brantley W,* Conover J. Effects of heat treatment on mechanical properties of orthodontic wires. *J Dent Res* 1981;60(Special Issue):439, Abstract #518. (IADR, Chicago)
179. Dhuru V, Wyler R, Brantley W. Advancing and receding contact angles of die stone on impression materials. *J Dent Res* 1981;60(Special Issue):627, Abstract #1270. (IADR, Chicago)
180. Fournelle RA, Brantley WA.* Age hardening studies of dental gold casting alloys. *J Dent Res* 1980;59(Special Issue):474, Abstract #826. (AADR, Los Angeles, March 1980)
181. Brantley WA,* Blake RE. Comparison of stiffness and transverse bending tests for orthodontic wires. *J Dent Res* 1979;58(Special Issue):255, Abstract #649. (IADR, New Orleans, March 1979)
182. Salander S, Brantley WA.* Effects of pre-stretching on force degradation characteristics of orthodontic modules. *J Dent Res* 1978;57(Special Issue):201, Abstract #508. (IADR, Washington DC, March 1978)
183. Brantley WA,* Augat WS. Bending deformation behavior of orthodontic wires. *J Dent Res* 1977;56(Special Issue):B84, Abstract #128. (AADR, Las Vegas, June 1977)

184. Brantley WA.* Comments on stiffness measurements for orthodontic wires. *J Dent Res* 1976;55(Special Issue):B151, Abstract #360. (IADR, Miami Beach, March 1976)

Other Published Abstracts

1. Brantley WA, Svec, TA, Iijima M, Powers JM, Grentzer TH. DSC study of phase transformations in nickel-titanium rotary endodontic instruments. Proceedings of the 29th Annual Conference of the North American Thermal Analysis Society (NATAS), September 2001, pages 213-218. [Extended abstract]
2. Brantley WA, Vickery JM, Grentzer TH. Dynamic mechanical analysis of dental elastomeric impression materials. Proceedings of the 29th Annual Conference of the North American Thermal Analysis Society (NATAS), September 2001, pages 207-212. [Extended abstract]
3. Brantley WA, Iijima M, Grentzer TH. Temperature-modulated study of phase transformations in nickel-titanium orthodontic wires. Proceedings of the 28th Annual Conference of the North American Thermal Analysis Society (NATAS), October 2000, pp 440-445. [Extended abstract]
4. Vickery JM, Brantley WA, Bardin TA. MDSC study of melting and glass transitions in elastomeric dental impression materials. Proceedings of the 27th Conference of North American Thermal Analysis Society (NATAS), September 1999, pp. 591-596. [Extended abstract]
5. Shaker RE, Brantley WA, Wu Q, Culbertson BM. Use of DSC for study of the complex setting reaction and microstructural stability of a gallium-based dental alloy. Proceedings of the 27th Conference of North American Thermal Analysis Society (September 1999), pp. 677-682. [Extended abstract]
6. Vickery JM, Brantley WA, Weddle BJ, Gallagher PK. MDSC study of dental elastomeric impression materials. Proceedings of the 26th Conference of North American Thermal Analysis Society (September 1998), pp. 527-532. [Extended abstract]
7. Holloway JA, Litsky AS, Sosa MA, Brantley WA, Denry IL, McGlumphy EA. Effect of plasma-sprayed coatings on fatigue behavior of pure titanium for dental implants. *Trans Soc Biomaterials* 1998; 21:228. [*Transactions of the 24th Annual Meeting of the Society for Biomaterials*]
8. Blake RE, Brantley WA, Conover JP, Winders RV. Comparison of stiffness and transverse bending tests for orthodontic wires. *Am J Orthod* 1980;78:234. (*Abstract of MS thesis*)

Publication in Testing Machine Company Magazine

Brantley WA. Olsen stiffness testers play key role in evaluation of orthodontic wires. *Tinius Talks* 1977;28:2.

Invited Lunch and Learning Presentations at IADR/AADR Meetings

Brantley WA. Future directions for palladium-based and other noble dental casting alloys. AADR, Chicago, March 2001.

Brantley WA. Nickel-titanium alloys in orthodontics and endodontics. IADR, Glasgow, July 1992.

Brantley WA. Metallurgy of palladium- and titanium-based dental casting alloys. AADR, Boston, March 1992.

Presentations at Other Scientific Meetings (Brantley presentation [*]; first author delivered other presentations)

1. Brantley WA. Use of DSC and MDSC to investigate nickel-titanium shape-memory orthodontic wires. North Coast Thermal Analysis Society [NCTAS] (Strongsville, OH), March, 2002.
2. Brantley WA*, Vickery JM, Grentzer TH. Dynamic mechanical analysis of dental elastomeric impression materials. 29th Annual Conference of the North American Thermal Analysis Society (NATAS), St. Louis, September, 2001.
3. Brantley WA*, Svec, TA, Iijima M, Powers JM, Grentzer TH. DSC study of phase transformations in nickel-titanium rotary endodontic instruments. 29th Annual Conference of the North American Thermal Analysis Society (NATAS), St. Louis, September, 2001.
4. Brantley WA,* Iijima M, Grentzer TH. Temperature-modulated DSC study of phase transformations in nickel-titanium orthodontic wires. Poster presentation at the 28th Annual Conference of the North American Thermal Analysis Society (NATAS), Orlando, October 2000.
5. Vickery JM, Brantley WA, Weddle BJ, Gallagher PK. MDSC study of dental elastomeric impression materials. Proceedings of the 26th Conference of North American Thermal Analysis Society, Cleveland, September 1998.
5. Kerber SJ, Barr TL, Mann GP, Brantley WA, Papazoglou E, Mitchell JC. The complementary nature of x-ray photoelectron spectroscopy and angular-resolved x-ray diffraction. Presented at the ASM Conference on Materials Solutions, September 1997.
6. Brantley WA,* Wu Q, Mitchell JC, Vermilyea SG. Effects of composition on the mechanical properties of two Pd-Cu-Ga dental alloys. Presented at the Scanning Microscopy 1997 Meeting, Chicago, May 1997.

7. Wu Q, Brantley WA, Mitchell JC, Vermilyea SG. SEM and x-ray diffraction studies of three high-palladium dental alloys. Presented at the Scanning Microscopy 1997 Meeting, Chicago, May 1997.
8. Brantley WA,* Cai Z, Mitchell JC, Vermilyea SG. Mechanism for formation of lamellar constituents in grain-refined Pd-Cu-Ga dental alloys. Scanning Microscopy 1996 Meeting, Bethesda, MD, May 1996.
9. Wu Q, Brantley WA,* Cai Z, Mitchell JC, Vermilyea SG. Heat treatment response of four high-palladium dental alloys. Scanning Microscopy 1996 Meeting, Bethesda, MD, May 1996.
10. Lausten LL, Luebke NH, Brantley WA, Mitchell JC. Fractographic analyses of nickel-titanium rotary endodontic instruments subjected to cantilever bending and torsion. Scanning Microscopy 1996 Meeting, Bethesda, MD, May 1996.
11. Brantley WA,* Wu Q, Cai Z, Vermilyea SG, Mitchell JC. Microstructures and Vickers hardness of dendritic Pd-Cu-Ga dental alloys. Scanning Microscopy 1995 Meeting, Houston, May 1995.
12. Brantley WA,* Cai Z, Wu Q, Carr AB, Mitchell JC. Room temperature aging of Pd-Cu-Ga dental alloys. Scanning Microscopy 1995 Meeting, Houston, May 1995.
13. Cai Z, Papazoglou E, Bradway SD, Brantley WA. On the biocompatibility of high-palladium dental alloys. Scanning Microscopy 1995 Meeting, Houston, May 1995.
14. Luebke NH, Brantley WA. Torsional moment, deflection and failure site data for fractured rotary endodontic instruments: 28 mm Gates Glidden drills. American Association of Endodontists, Orlando, May 1995.
15. Brantley WA. Metallurgy of oral implants. Invited presentation at annual AADS meeting, Section on Biomaterials: Workshop on Educational Aspects of Oral Implant Materials - Current Status and Recommendations, March 1995.
16. Brantley WA,* Cai Z, Vermilyea SG, Papazoglou E, Mitchell JC, Carr AB. SEM studies of high-palladium dental alloys subjected to different solidification conditions and heat treatments. Scanning Microscopy 1994 Meeting, Toronto, May 1994.
17. Brantley WA,* Bradley TG, Culbertson BM. Phase transformations in nickel-titanium orthodontic wire alloys. First Heartland Conference on Dental Materials Science, Chicago, October 1993.
18. Brantley WA,* Tufekci E, Mitchell JC, Foreman DW, McGlumphy EA. SEM studies of ceramic layers and interfacial regions for HA/TCP-coated titanium dental implants. Scanning Microscopy 1993 Meeting, Los Angeles, May 1993.

19. Brantley WA,* Cai Z, Carr AB, Mitchell JC. Metallurgical structures of as-cast and heat-treated high-palladium dental alloys. Scanning Microscopy 1992 Meeting, Chicago, May 1992.
20. Culbertson BM, Brantley WA, Sang J. Crack-microstructure studies on dry and wet photocurable dental composites using SEM. Scanning Microscopy 1992 Meeting, Chicago, May 1992.
21. Toth JM, Hirthe WM, Hubbard WG, Brantley WA, Lynch KL. Determination of the ratio of HA/TCP mixtures by x-ray diffraction. Society for Biomaterials, Charleston SC, May 1990.
22. Brantley WA. Macroscopic creep. Academy of Dental Materials, Scientific Session on Creep in Dental Materials, Chicago, February 1988. (Keynote address)
23. Walia HD, Brantley WA, Luebke NH, Miserendino LJ. Nitinol root canal files: a preliminary study. American Association of Endodontists, Anaheim, CA, April 1988.
24. Luebke NH, Walia HD, Brantley WA. A preliminary investigation of the torsional properties of the Gates-Glidden bur. American Association of Endodontists, Anaheim, April 1988.
25. Walia H, Brantley W, Gerstein H, Miserendino L. Effect of heat treatment on the torsional ductility of files. American Association of Endodontists, San Antonio, April 1987.
26. Brantley WA, Dhuru VB. Abrasivity of polishing agents used by hygienists. Wisconsin Dental Hygienists' Association, Milwaukee, May 1985. (*Co-presenter*)
27. Brantley WA. Partial denture and wrought alloys. Dental Materials Teachers Conference - Course Content for the Eighties. University of Michigan School of Dentistry, Ann Arbor, October 1984.
28. Brantley WA. A study of the cutting efficiency of seven brands of endodontic files in linear motion. American Association of Endodontists, Hollywood FL, April 1983. (*Presented for JG Newman*)
29. Brantley WA. An investigation of the torsion and bending properties of endodontic Files. American Association of Endodontists, Hollywood FL, April 1983. (*Presented for JD Krupp*)
30. Brantley WA,* Harrison DA. Degradation studies of diffused GaAs electroluminescent diodes subjected to mechanical stress. Institute of Electrical and Electronics Engineers, Reliability Physics Symposium, Las Vegas, April 1973.
31. Brantley WA,* Bauer CL. Geometric analysis of charged dislocations in the fluorite structure. American Institute of Mining, Metallurgical and Petroleum Engineers (AIME), Las Vegas, May 1970.

32. Katz RN, Brantley WA. Fractography of high boron ceramics subjected to ballistic loading. Sixth University Conference on Ceramic Science, North Carolina State University at Raleigh, December 1970.
33. Brantley WA,* Bauer CL. Electroacoustic investigations of charged dislocations in NaCl. AIME, Cleveland, October 1967.
34. Brantley WA,* Bauer CL. The crystallography of charged dislocations in the NaCl structure. American Physical Society, Durham NC, March 1966.

Presentations at University Seminars, Dental Societies and Other Groups

1. Porcelain adherence to high-palladium dental alloys. Ohio State University Center for Materials Research (CMR) Faculty Seminar Series, March 2000.
2. Mechanisms of strengthening and porcelain adherence for high-palladium dental alloys. Biomedical Engineering Faculty Seminar (BME 881), January 1999.
3. High-palladium dental alloys: Fundamental applications of dental materials science. Ohio State University CMR Faculty Seminar Series on Biomaterials, April 1998.
4. Mysteries in high-palladium alloys. Columbus Section of American Society for Metals, February 1998.
5. Corrosion characteristics of four palladium dental alloys. Annual Conference on Engineering - Biomedical Engineering Program, The Ohio State University, May 1997. (*Co-authors: E Ojala, S Vermilyea and J Mitchell*).
6. Complex ultrastructures of high-palladium dental alloys revealed by transmission electron microscopy. Second Life Sciences Faculty Research Exposition, The Ohio State University, February 1997.
7. Transmission electron microscopy studies of high-palladium dental alloys. First Annual Research Exposition (Health Sciences), The Ohio State University, December 1995. (*Co-presenter with Z Cai*)
8. Research on high-palladium dental alloys. Faculty Council Meeting, College of Dentistry, October 1995.
9. Calcium phosphate-coated dental implants. Oral Sciences Seminar, College of Dentistry, March 1994.

10. High-palladium casting alloys - need for oral biology research. Oral Sciences Seminar, College of Dentistry, The Ohio State University, November 1993.
11. The amalgam question. Columbus Dental Society, April 1991.
12. Dental implant materials. Department of Metallurgical Engineering and Materials Science, Carnegie-Mellon University, Pittsburgh, April 1991.
13. Review of dental scientific literature on health hazards associated with dental amalgams. Faculty Council Meeting, College of Dentistry, The Ohio State University, January 1991.
14. Dental implant materials. Marquette University College of Engineering Colloquium, April 1989.
15. Comparison of noble metal and base metal casting alloys. Waukegan Dental Study Club (Illinois), November 1985.
16. Recent advances in dental materials. Jefferson County Dental Society (Wisconsin), March 1983.
17. Some factors for the selection of economy casting alloys for crown and bridge applications. Winnebago County Dental Society (Wisconsin), April 1981.
18. Current topics in dental materials - high copper amalgams and precious vs. nonprecious casting alloys for crown and bridge applications. Washington-Ozaukee County Dental Society (Wisconsin), February 1981.
19. Dental casting alloys for fixed prostheses. Burlington Dental Society (Wisconsin), April 1980.
20. Precious, semi-precious and base metal dental casting alloys. Dental Technicians Society of Milwaukee (Wisconsin), March 1980.
21. Noble and base metal alloys for crown and bridge applications. Dental Technicians Association of Wisconsin, November 1979.
22. Mercury - physical properties, toxicity considerations and hygiene. Greater Milwaukee Dental Hygiene Association, February 1979.
23. Some recent advances in dental materials. Dental Program Faculty and Administrators Workshop, Wisconsin Board of Vocational, Technical and Adult Education, February 1979.

Continuing Dental Education Presentations

Selecting gold alloys and amalgams for specific purposes. Restorative Dentistry Symposium. Columbus, OH, October 1992.

Comparison of clinical materials advances in the United States and Great Britain. Marquette University School of Dentistry - International Continuing Dental Education Program on Dental Education and Practices in Great Britain, June 1987.

Recent advances in restorative dental materials. Marquette University School of Dentistry, January 1982. Course co-director with VB Dhuru, JH Prey and GJ Ziebert.

Table Clinic Presentations

1. Thermal conducting properties of restorative filling materials. Post College Assembly, College of Dentistry, The Ohio State University, April 1990.
2. Superelastic and non-superelastic NiTi orthodontic wires. Wisconsin Dental Association, May 1988 (with S.E. Khier).
3. Factors for the clinical selection of new nickel-titanium orthodontic wires. Wisconsin Dental Association, May 1987.
4. Biocompatibility and casting alloys. Wisconsin Dental Association, May 1986.
5. Critical tilt and contact angles of die stone on impression materials. Spring Table Clinic Day, Marquette University School of Dentistry, March 1983.
6. Dependence of effective root torque on edge bevel for arch wires. Spring Table Clinic Day, Marquette University School of Dentistry, March 1983.
7. Gold substitute casting alloys. Spring Table Clinic Day, Marquette University School of Dentistry, March 1982 (*Co-presenter with R Egan*)
8. Weldability of titanium molybdenum alloy arch wires. Spring Table Clinic Day, Marquette University School of Dentistry, March 1982.
9. Current status of economy precious metal dental casting alloys. Wisconsin Dental Association, May 1981.
10. Current status of economy precious metal dental casting alloys. Centennial Year Spring Table Clinic Day Program, Marquette University School of Dentistry, March 1981.

11. Some recent advances in dental materials. Wisconsin Dental Association, May 1980
(Co-presented with VB Dhuru)
12. Gold casting alloys. Wisconsin Dental Association, May 1979.
13. New casting alloys. Wisconsin Dental Association, May 1978.
14. Mercury hygiene procedures for the dental office. Wisconsin Dental Association, May 1977.

Teaching Responsibilities at The Ohio State University College of Dentistry

Graduate Courses in Dental Materials Program and Other Graduate Courses

Course	Title	Credits
Dent 700.08	Alloys (Taught annually. Present most weekly course sessions.)	2-3 cr hr
Dent 700.02 or Dent 700.08	Orthodontic Materials (Taught alternate years. Present entire course)	2 cr hr
Dent 700.08	Dental Ceramics (Present one weekly session. Course offered annually.)	3 cr hr
*Dent 700.08	Dental Amalgams, Gallium Alloy, Composite Resins	3 cr hr
*Dent 700.08	Dental Metallurgy and Ceramics Science	3 cr hr
*Dent 700.08	Tissue Engineering and Bone Morphogenetic Proteins	3 cr hr
*Dent 700.08	Mechanical Behavior of Dental Materials I	3 cr hr
*Dent 700.08	Mechanical Behavior of Dental Materials II	3 cr hr
*Dent 700.08	Scientific Aspects of Dental Implant Materials	3 cr hr
*Dent 700.08	X-ray Diffraction and Thermal Analysis	3 cr hr
*Dent 884	Biocompatibility of Dental Materials and Dental Implant Science	3 cr hr
*Dent 884	Biomimetic Materials and Tissue Engineering	3 cr hr
*Dent 884	Dental Materials	3 cr hr
*Dent 884	Frontiers of Biomaterials	3 cr hr
*Dent 993	Individual Studies (Topics have included dental materials science, elastomeric dental materials, gypsum products, dental alloys, and resins)	3-5 cr hr
**Dent 700.08	Biological Properties of Dental Materials	3 cr hr
**Dent 700.08	Polymeric Dental Materials	3 cr hr
**Dent 700.08	Composite Resins	3 cr hr
**Dent 700.08	Special Topics – Wrought Alloys, Lasers, CAD/CAM	3 cr hr
**Dent 884	Oral Biomaterials, Biocompatibility and Dental Implants	3 cr hr

†Dent 700.08	Dental Ceramics	3 cr hr
†Dent 700.08	Gypsum Products and Investments	3 cr hr
†Dent 700.08	Impression Materials, Cements and Prosthetic Polymers	3 cr hr
††Dent 700.08	Restorative and Prosthetic Materials I	4 cr hr
††Dent 700.08	Restorative and Prosthetic Materials II	4 cr hr
‡Dent 700.08	Biomedical Materials	3 cr hr

Notes

- *Offered occasionally, depending upon needs of students
- **No longer offered and subject matter incorporated in other Dent 700.08 and Dent 884 courses.
- †Three of original four-course Dent 700.08 sequence.
- ††Two-course Dent 700.08 sequence that replaced original four-course sequence.
- ‡No longer offered after BME 631 and BME 733 became available.

Teaching responsibilities for the Dent 700.08 courses have varied over the years because of graduate curriculum revisions requested by the Prosthodontics Program. Originally developed a four-course Dent 700.08 sequence, offered in alternate quarters over two years, which was taken by graduate students in Prosthodontics and Dental Materials. Had principal teaching responsibilities for three courses (Alloys, Ceramics, Gypsum Products and Investments), and shared teaching responsibilities with other faculty for the fourth course on Impression Materials and Cements, as well as for the course on Biomedical Materials. The subject matter for the original four-course sequence subsequently was converted to two courses, Restorative and Prosthetic Materials I and II, that were directed by Dr. Isabelle Denry, and teaching responsibilities were shared among several faculty. These two courses were then replaced by the current, annually offered, four-course Dent 700.08 sequence (Gypsum Products and Impression Materials; Alloys; Prosthetic Polymers and Cements; Ceramics). Have principal teaching responsibilities for the course on Alloys, and the other three courses are directed by other faculty. Directed all of the listed Dent 884 courses except for the course on Dental Materials, which was directed by Dr. William Johnston. While generally conduct several class sessions in each Dent 884 course, other faculty usually have assisted with the teaching.

Other Courses or Teaching Responsibilities

Two half-day sessions were presented one year in Dent 796.06 for residents in Endodontics. For several years submitted topics for graduate student term papers in BME 600, and graded one or two papers. Two lectures (one week of course) are presented in BME 631, now offered in alternate years. Presented two sessions of lecture and literature review (one week of course) in BME 733. Offered Dent 700.08 (Bioceramics), BME 793 (Tissue Engineering) and BME 999 (Research) to individual students. Director of Dent 999 (Research) course quarterly to Ph.D. student advisees in Oral Biology Program.

Predoctoral Courses

Three of four lectures are generally presented in Dent Hyg 273, and individual lectures are presented in some Restorative Dentistry courses (Dent 434, Dent 489.01 and Dent 533). Assisted one time in the Dent 730 course for Part II National Board Preparation (questions on dental amalgams). For several years presented lectures in Dent 431, which has been incorporated into another course where do not have lecture involvement. Seminar participant (four two-hour sessions) one time in Dent 614.

Previous Teaching Responsibilities at Marquette University School of Dentistry

Graduate Courses in Dental Materials Program (offered alternate years)

DeMa 201	Mechanical Behavior of Dental Materials	3 sem hr
DeMa 205	Dental Metallurgy 1	3 sem hr
DeMa 206	Dental Metallurgy 2	3 sem hr
DeMa 207	Dental Ceramics	3 sem hr
DeMa 210	Advanced Experimental Techniques for Dental Materials Research 1 (Scanning electron microscopy)	1 sem hr
DeMa 211	Advanced Experimental Techniques for Dental Materials Research 2 (Mechanical testing and x-ray diffraction)	1 sem hr
DeMa 295	Readings and Research (Dental Biostatistics)	3 sem hr

[Presented the entire seven courses except for one period in DeMa 206.]

Graduate Courses for Clinical Specialty Programs (offered annually)

DeMa 231	Advanced Dental Materials for Orthodontists and Pedodontists	1 sem hr
DeMa 232	Advanced Dental Materials for Endodontists	1 sem hr
DeMa 233	Advanced Dental Materials for Prosthodontists	1 sem hr

Undergraduate Courses to Dental Students and Dental Hygiene Students (offered annually)

DeHy 160	Dental Materials (junior dental hygiene students)	1 sem hr
DeMa 512	Introduction to Dental Materials (first-year dental students)	1 sem hr
DeMa 521	Advanced Dental Materials (second-year dental students)	1 sem hr
DeMa 531	Applied Dental Materials (third-year dental students)	1 sem hr

Course director for DeMa 231, DeMa 233, DeHy 160 and DeMa 521, where presented approximately two-thirds of lectures. Presented one-third of lectures in other courses.

SERVICE ACTIVITIES

Professional Service (Outside of University Position)

2001	<i>ad hoc</i> Member of NIDCR Special Grants Review Committee (specialist in biomaterials and tissue engineering), October 18-19
1999-2002	Consultant, Council on Scientific Affairs, American Dental Association
1997-present	Reviewer for <i>Journal of Prosthetic Dentistry</i> and member of Editorial Board
1996, 1997	Member of Special NIDR Study Section to evaluate SBIR grant applications.
1994-1997	Co-organizer for Dental Materials portion of Scanning Microscopy Meeting.
1994-present	Reviewer for <i>Cells and Materials</i> and member of Editorial Board.
1994-1997	Member, Gies Award Committee of the AADR
1993-present	Reviewer for <i>Dental Materials</i> .
1989-1993	Reviewer for <i>Angle Orthodontist</i> .
1988-present	In charge of Membership activities, Dental Materials Group/IADR. (Parallel responsibility for Dental Materials Group/AADR, 1988-1993.)
1987-present	Reviewer for <i>American Journal of Orthodontics and Dentofacial Orthopedics</i> .
1987	Reviewer for abstracts and assisted in arranging program for presentations on dental materials at the annual IADR meeting.
1985	In charge of Lunch and Learning Program for Dental Materials at the annual IADR Meeting.
1984-1989	Consultant to Wisconsin Innovation Service Center.
1983-1989	Consultant to Naval Dental Research Institute, Great Lakes, Illinois.
1981-present	Cohort, National Action Committee of AADR.
1980-present	Reviewer for <i>Journal of Dental Research</i> .

- 1980-present Member, MD156 Orthodontic Wire Specification No. 32 Subcommittee, American National Standards Institute/American Dental Association: Chair from 1982-present and Secretary during 1980-82. Renamed: Working Group on Wires in Dentistry, 1996. (Co-Chair)
- 1976-1985 Member, MD156 Subcommittees for Dental Amalgam Specification Nos. 1, 43 and 55 on alloy for dental amalgam, dental amalgamators and dispensers.
- ad hoc* Reviewer for *Scripta Metallurgica and Materiala*, *International Journal of Prosthodontics*, *Journal of Materials Research*, *Journal of Dentistry*, NIDR Small Grant applications, NIDR SBIR Phase I and II Grants, National Academy of Sciences/National Research Council COBASE program travel grant application, American Chemical Society, The Ohio State University Interdisciplinary Research Grant and Faculty Seed Grant programs, and research grant applications submitted to the Department of Surgery in the College of Medicine.
- Served as external examiner for a thesis prepared by Professor Chew Chong Lin for the degree of Doctor of Dental Surgery from the National University of Singapore (nine-page report submitted November 1998).
- Served as Research/Clinical Sciences reviewer for the fourth annual Judson C. Hickey Scientific Writing Award competition sponsored by the Editorial Review Board of *The Journal of Prosthetic Dentistry* (November 1998).

College of Dentistry Committees, The Ohio State University

- 2001 Member of Operating Committee for NIDCR Institutional Training Grant (Comprehensive Training in Oral and Craniofacial Sciences)
- 2000 Member of Steering Committee for preparation of Institutional Training Grant Application to NIDCR
- 1998 Member, Clinical Operations, Records and Materials Committee.
- 1998 and 1999 Assisted Admissions Committee in interviewing applicants to College of Dentistry (October 1998 and December 1999).
- 1998 Represented College for presentation on Interdisciplinary Biomaterials Seed Grant application to University (September).
- 1997 (summer) Participation in Minority Research Initiative for high-school students

- 1996-98 (summer) Research mentor for predoctoral dental student (Chad Webb)
- 1996, 1998 (summer) Member, Search Committee for Research Associate; Section of Restorative Dentistry, Prosthodontics and Endodontics
- 1995-present Secretary, Ph.D. Graduate Studies Committee (Program in Oral Biology).
- 1994 (summer) Member, *ad hoc* OSHA Committee (wrote new College protocol for handling hazardous materials).
- 1994 (summer) Chair of subcommittee of Admissions Committee for special project to develop new technical standard for admission to the College of Dentistry.
- 1993-present Member, Faculty Search Committee; Section of Restorative Dentistry, Prosthodontics and Endodontics.
- 1993-1994 Co-Chair, Oral Sciences Seminar, Autumn and Winter Quarters.
- 1991-1996
2000-present Member, Admissions Committee. Vice Chair, 2000-present
- 1991-1995 Member, Oral Biology Ph.D. Program Advisory Committee. (Replaced by Ph.D. Graduate Studies Committee)
- 1991-1992 Chair, Subcommittee on Category III Faculty Guidelines for Oral Biology Ph.D. Program.
- 1991 *ad hoc* College Committee of faculty and staff selected for participation in University-wide process to define mission/vision and academic priorities for The Ohio State University.
- 1990-1995 Member, Graduate Studies Committee for M.S. programs.
- 1990-93
1997-present Member, Research Committee; Secretary during 1990-1992.
- 1990-present Omicron Kappa Upsilon, Membership Committee during 1990-1992.
- 1990-present Peer Review Committees: John C. Bailey, Harris C. Bowman, David A. Bridgeport, Julie A. Holloway, Ronald E. Kerby, Edwin A. McGlumphy, and Jeannie M. Vickery.

1989-1994 Equipment and Materials Committee, Chair during 1992-1994.

ad hoc Assisted in faculty interview process, Section of Orthodontics, 2000
Judge for Graduate student research presentations at Post College Assembly and
Research Day for the College of Dentistry (generally each year)
Member of a Forensic Committee to identify characteristics of male skeletal
remains (Vietnam war) returned to the Department of State.

Biomedical Engineering Program, The Ohio State University

2000 Appointed Chair of Graduate Studies Committee.

1999, 2000 Assisted in faculty interview process.

1996 and 1997 Judge, Student Poster Session.

1998-present Member, Graduate Studies Committee

Department of Geological Sciences, The Ohio State University

1998-present MARC Advisory Committee (Microscopic and Chemical Analysis Research
Center), Department of Geological Sciences

The Ohio State University

2000-present Member, Committee of Chairs of Graduate Studies Committees, College of
Engineering

Graduate School, The Ohio State University

1999 and 2000 Member, University Postdoctoral Fellowship Program Committee.

1990-1993 Member, Research and Graduate Council (RGC).
Graduate Associate and Fellowship (GAF) Committee (1990-1991).
Chair, Health Benefits Subcommittee, GAF Committee.
Policy and Standards (PS) Committee (1990-1993).
Co-Chair, General Examination Subcommittee, PS Committee (1993)

1990 Member, *ad hoc* Committee to Study Merger of Research Committees of RGC
and University Senate.

Marquette University School of Dentistry

- 1988 Chair, Subcommittee on Research, Self-Study for American Dental Association and External Site Visit.
- 1987-1989 Promotion and Tenure Committee.
- 1985-1989 Combined Degrees Program Committee.
- 1985 Chair, *ad hoc* Committee to Consider Merging Departments of Fixed Prosthodontics and Operative Dentistry.
- 1984-1985 Co-Chair, Executive Faculty *ad hoc* Subcommittee on Student Ethics.
- 1981-1984 Executive Faculty Committee.
- 1981-1984 Co-Chair, Subcommittee on Curriculum Review.
- 1981-1989 Graduate Instruction Committee, Chair from 1984-1989.
- 1981-1983 Chair, Subcommittee on University Relationship and Program. Administration, Self-Study for American Dental Association Accreditation Site Visit.
- 1979-1989 Research Committee.
- 1979-1989 Dental Materials and Techniques Committee, Chair from 1979-1984.
- 1975-1989 Minority Recruitment Committee.

Marquette University

- 1984-1989 Subcommittee on Nominations, Appointments and Elections, Committee on Faculty (COF), Chair from 1987-1989.
- 1981-1989 Special Judge for the Wisconsin Dental Association, Annual Southeastern Wisconsin Science and Engineering Fair (not in 1985).
- 1980-1982 Subcommittee on Academic Affairs (COF).
- 1979-1982 Interviewed candidates for Assistant Director of Physical Recreation at the University Recreation Center (except 1981).
- 1978-1981 Dental Subcommittee of the Central Committee on Investigations Involving Human Subjects, Chair from 1979-1981.