

Dr. Alvin P. Kennedy
Professor and Chair of Chemistry Department
Morgan State University
Baltimore, Maryland

Education:

Bachelor of Science in Chemistry – Grambling State University	1978
Doctor of Philosophy in Physical Chemistry – University of California at Berkeley	1985

Career History:

2000 -Present	Professor and Chair of Chemistry, Morgan State University, Baltimore, MD.
2000 - 2002	Associate Professor and Chair of Chemistry, Morgan State University, Baltimore MD.
1996 - 2000	Associate Professor of Chemistry, North Carolina A&T State University, Greensboro, NC.
1991- 1996	Assistant Professor of Chemistry, North Carolina A&T State University, Greensboro, NC.
1989 - 1991	Project Leader, Central Research, Dow Chemical Co. Midland, MI.
1985- 1989	Senior Research Chemist, Central Research, Dow Chemical Co. Midland, MI.
1982- 1983	Teaching Assistant, Department of Chemistry, University of California, Berkeley, CA.

Research:

I. Selected Publications

1. *Alvin Kennedy*, Aron Reznik, Solomon Tadesse, Janine Nunes, Time Dependencies of Component Temperatures in Microwave Heated Immiscible Liquid Mixtures, Journal of Microwave Power and Electromagnetic Energy, Volume 43, No 2, 2009, pp 52-64 .
2. Yousef M. Hijji, Belygona Barare, **Alvin P. Kennedy**, Raymond Butcher, Synthesis and physical characterization of a Schiff base as an anion sensor, Sensors and Actuators B, Chemical, vol. 136 pp 297–302, 2009.
3. **A. Kennedy**, Solomon Tadesse, Janine K. Nunes, Melanine Wyche, Microwave Heating of Two Phase Immiscible Liquid Mixtures, 39th Annual IMPI Microwave Symposium Proceed., Seattle, WA, July 13-15, 2005, pp 74-76
4. Y. Hijji; G. Wairia; A. Edwards; M. Iwunze; **A. Kennedy**; R. J. Williams; "Synthesis and Characterization of Fluoride Fluorescent Sensors", Proceeding of SPIE 2004, Volume 5588, 214-223.
5. F. Oladeinde, A. Kinyua, A. Laditan, R. Michelin, M. Makinde, A. Williams, **A. Kennedy**, E. Taylor, and Y. Bronner (2004). Phytochemical and Anti-diabetic studies of *Cnidocolus Aconitifolius*, West Indian Medical Journal, 53 (Suppl 1): 30
6. F. Oladeinde, A. Kinyua, M. Mbagu, M. Makinde, M. Iwunze, Y. Hijji, A. William, **A. Kennedy**, E.

- Taylor, (2003). Investigation of the water, alcohol and microwave extraction techniques of Khaya Grandifoliola plant bark., *The Amer. J. Tropical Medicine & Hygiene*, 69 (3): 494.
7. **A. Kennedy**, S. Tadesse, "Dielectric In-situ Monitoring of Microgravity Polymerizations", *Proceed. Microgr. Trans. Process in Fluid, Therm Biol and Materials Sci.*, Ed. Sadhal, N.Y. Acad.Sci. Oct, 2002, pp
 8. **A. Kennedy**, S. Tadesse, J. Nunes, "Microwave Heating of Multi-phase Fluids", *Proceed. Trans. Process in Fluid, Thermal, Biological, and Materials Sci. Conf.*, Banff, Alberta, Canada, Sept. 30, 2001.
 9. R. Williams, **A. Kennedy**, Y. Hijji, S. Tadesse, *Proc. NOBCCHE Conf.*, Baltimore, MD, 2001.
 10. **A. Kennedy**, S. Tadesse, T. Allen, "Dielectric In-situ Monitoring of Microgravity Polymerizations", *Proceed. Microgr. Trans. Process in Fluid, Therm Biol and Materials Sci.*, Ed. Sadhal, N.Y. Acad.Sci. Oct, 2002, pp
 11. **A. Kennedy**, J. McLendon, "Development of Impedance Spectroscopy to Study Polymerization Processes in Microgravity.", *Polymer Research in Microgravity, Polymerization and Processing*, Ed. John Pojman, ACS Sym. Series 793, Chapter 15, 2001 pp 217-226.
 12. **A. Kennedy**, M. McLendon, "Development of Impedance Spectroscopy to study polymerization processes in Microgravity" *Proceedings of the American Chemical Society Division of Polymeric Materials: Science and Engineering*; March, 2000
 13. **A. Kennedy**, S. Tadesse, T. Allen, "Dielectric In-situ Monitoring of Microgravity Polymerizations", *Proceed. Microgr. Trans. Process in Fluid, Thermal, Biological, and Materials Sci. Conf.*, Banff, Alberta, Canada, Sept. 30, 2001.
 14. **A. Kennedy**, S. Tadesse, J. Nunes, "Microwave Heating of Multi-phase Fluids", *Proceed. Trans. Process in Fluid, Thermal, Biological, and Materials Sci. Conf.*, Banff, Alberta, Canada, Sept. 30, 2001.
 15. **A. Kennedy**, "Dielectric Spectroscopy of Surface and Solution Polymerization of Polydiacetylene.", *NASA/CR NASA/CR-1999-245803*, 1999, pp. XV..
 16. **A. Kennedy**, "Investigation of Solution Polymerization in Microgravity and 1-G.", *NASA/CR-1998-208803*, 1998, pp. XXIV
 17. **A. Kennedy**, "Determination of Enthalpy of Vaporization using a Microwave Oven." , *J. Chem. Educ*, Vol, 74, pp 1231-1232, October 1997.
 18. **A. Kennedy**, D. Babb, J. Bremmer, A. Pasztor, "Perfluorocyclobutane Aromatic Ether Polymers II: Thermal and Oxidative Stability and Decomposition of a Thermoset Polymer. ", *J. Polymer Sci: Part A*, 33, 1995, 1859-1865.
 19. D. Babb, B. Ezzell, K. Clement, W. Richey, **A. Kennedy**, "Perfluorocyclobutane Aromatic Ether Polymers", 31, 1993, 3465-3477.
 20. D. Babb, B. Ezzell, K. Clement, W. Richey, **A. Kennedy**, D. Frye, *Polymer Preprints*, 34,(1), 1993, 413-414.
 21. R. Heistand, R. DeVellis, T. Manial, **A. Kennedy**, T. Stokich, P. Townsend, "Advances in MCM Fabrication with Benzocyclobutene (BCB) Dielectric", *J. Microcircuits & Electronic Packaging*, 15,(4), 1992, 183-194.
 22. K. Scanlon, **A. Kennedy**, "Characterization of Competitive Aluminum Nitride Powders",

Proceedings of the American Ceramic Society, June 1990.

Sixteen Internal Dow Chemical Publications.

II. Patents

1. U.S. Patent No. 5,730,922; Babb; David A.; Richey; W. Frank ; Clement; Katherine; Peterson; Edward R.; **Kennedy; Alvin P.**; Jezic; Zdravko; Bratton; Larry D.; Lan; Eckel ;Perettie; Donald J.; "Resin transfer molding process for composites" Mar. 24, 1998.
2. U.S. Patent No. 5,246,782; **Kennedy** et. al. "Laminates of Polymers having Perfluorocyclobutane Rings and Polymers containing Perfluorocyclobutane Rings." Sept. 21, 1993.
3. U.S. Patent No. 5,409, 77;. **Kennedy** et. al. "Laminates of Polymer shaving Perfluorocyclobutane Rings" April 15, 1995.

III. Invited Lectures

1. **A. Kennedy**, S. Tadesse, T. Allen, "Dielectric In-situ Monitoring of Microgravity Polymerizations", Microgr. Trans. Process in Fluid, Thermal, Biological, and Materials Sci. Conf., Banff, Alberta, Canada, Sept. 30, 2001.
2. **A. Kennedy**, S. Tadesse, J. Nunes, "Microwave Heating of Multi-phase Fluids", Trans. Process in Fluid, Thermal, Biological, and Materials Sci. Conf., Banff, Alberta, Canada, Sept. 30, 2001.
3. **A. Kennedy**, "Dielectric Spectroscopy of Epoxy Thermoset Resins", Clark-Atlanta University, Atlanta, GA. March 30, 2001.
4. **A. Kennedy**, "Dielectric Spectroscopy of Thermoset Resins", Howard University, Washington, D.C., GA. October 30, 2001.
5. **A. Kennedy**, J. McLendon, "Development of Impedance Spectroscopy to Study Polymerization Processes in Microgravity.", Invited Speaker, ACS National Meeting, POLY 623, San Francisco, CA, March 30, 2000.
6. **A. Kennedy**, "Solution and Thermoset Polymerizations in Microgravity and 1G Environment." University of Southern Mississippi. Oct. 1998.
7. **A. Kennedy**, "Dielectric Spectroscopy of Thermoset Polymerizations." Guest lecturer at Rohm and Haas Research Laboratories, May 1997.
8. **A. Kennedy**, "Dielectric Spectroscopy of BCB Thermoset Resins." Norfolk State University March 1995.

IV. Other Conference Talks

1. **A. Kennedy**, S. Tadesse, J. Nunes, M. Wyche, "Microwave Heating of Two Phase Immiscible Liquids", NOBCChE National Conference, Orlando, FL, April 2007.
2. **A. Kennedy**, S. Tadesse, J. J. Winstead, "Correlation of Dielectric Properties of Epoxy Resins to Molecular Weight Distribution and Other Cure Parameters." NOBCChE National Conference, San Diego, CA, April 15, 2004.
3. **A. Kennedy**, S.C Osaka;, F.O Oladeinde, "Determination of Chloroquine in the Hair of Mice by UV-

Spectrophotometric Technique”, 9th RCMI International Symposium on Health Disparities, Baltimore Marriott Waterfront, Dec 8-11, 2004.

4. **A. Kennedy**, B. Suitte, J. May, "Microwave heating of immiscible liquids in microgravity.", SOCED 12, ACS National Meeting, San Francisco, CA., March 27, 2000.
5. **A. Kennedy**, "Solution and Thermoset Polymerization in Microgravity and 1G Environments." Third Annual Life and Physical Sciences Symposium 1998.
6. **A. Kennedy**, "Quest for Fire: Microwave Chemistry of Simple Chemical Systems.", First Annual Life and Physical Sciences Symposium February 23, 1996.
7. **A. Kennedy**, E. Williams, J. Richardson, D. Anderson, D. Fant, D. Moore, "FTIR Characterization of Diamond-like Carbon Thin Films", Science and Technology Alliance Materials Conference North Carolina A&T State University, Greensboro, NC., October 27, 1993.

V. Grants and Funding

Total Principal Investigator Funding (1991-2010): \$ 3,306,656

1. NSF-Research Infrastructure for Science and Engineering Grant “Development of Biological and Chemical Sensors for Bioenvironmental Research “, **\$1,000,000**, Oct. 1 2006.
2. DOE "Development of Fluorescent Microsensors to Determine the Activity of Intra-cellular Proteins", **\$800,000**, August 16, 2006.
3. NSF – HBCU Capacity Building Grant, “Infrastructure Building to Develop a Center for Biological and Chemical Sensors Research”, **\$899,765**, Oct. 1, 2002.
4. NASA/MSU Infrastructure grant, "Microgravity Chemical and Biological Sensors Center", **\$350,000**, August. 28, 2001.
5. NASA - Faculty Award for Research, "Polymerization of Advanced Thermosets in Microgravity Develop Ultra Low Poss Polymers" - NAG8-1847, **\$199,891**, August 1, 2001.
6. NASA/MSU Mini-equipment grant, "Microgravity Chemical and Biological Sensors Center", **\$57,000**, May 2001.

Teaching & Advising:

I. Masters Thesis

- **Janine Nunes, M.S. May 2006**
“Characterization of the Polymerization Reaction Between Diglycidyl Bisphenol A and 4,4’ Diaminodiphenyl Sulfone”
- **Rosemarie Aygei-Aygepong, M.S. December 2001**
“Dielectric Spectroscopy and Gel Permeation Chromatography of Diglycidyl Ether of Bisphenol-A and Aniline thermoplastics”
- **Solomon Tadesse, May 2001**
“Correlation of Dielectric Properties to the Network Morphology for Thermosets from Diglycidyl Ether of Bisphenol-A”

- Dawn Fant, **May 1995**

“The synthesis of diamond films and diamond like carbon (DLC) films using a two factorial experimental design”

II. Undergraduate Research

From 1991-2010, supervised over 40 students in undergraduate research

- 12 students have been accepted into Doctoral Granting programs, of which 4 have been awarded degrees.
- 9 students have been accepted in Master's programs, of which 8 have been awarded degrees.
- Currently 7 of these students still perform undergraduate research
- Undergraduate research advisements has resulted in a number of student awards:
 1. **Raquel Jemison: 1st Place – 2007**
Rohm-Haas & The National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) Undergraduate Research Award
 2. **Janine Nunes: 1st Place -2004**
Rohm-Haas & NOBCChE Undergraduate Research Award
 3. **Melanie Wyche: 2nd Place -2004**
NOBCChE Undergraduate Poster Competition
 4. **Janine Nunes: 1st Place -2002**
NOBCChE Undergraduate Poster Competition
 5. **Tanika Allen: Finalist - 2002**
Rohm-Haas\NOBCChE Undergraduate Research Award
 6. **Janine Nunes: 1st Place -2002**
Morgan State University 8th Annual Undergraduate and Graduate Research Symposium
 7. **Tanika Allen: 2nd Place - 2002**
Morgan State University 8th Annual Undergraduate and Graduate Research Symposium
 8. **Richelle Williams: 1st Place -2001**
Rohm-Haas & NOBCChE Undergraduate Research Award
 9. **Richelle Williams: 3rd Place -2001**
Beta Kappa Chi NIS/BSP Annual Symposium
 10. **Richelle Williams: 1st Place -2001**
UMBC Undergraduate Research Symposium Poster Session
 11. **S. Longest: 1st Place- 2000**
International Space Olympics. - Moscow, Russia

Honors and Awards:

- 2008 National Organization of Black Chemist and Chemical Engineers
Henry McBay Outstanding Teacher of the Year
- 2008 Morgan State University Sponsored Programs
Platinum Award for Surpassing \$1,000,000 in Funding
- 1998 NASA/ASEE Research Fellow Marshal Space Flight Center
- 1997 NASA/ASEE Research Fellow Marshal Space Flight Center
- 2001 Who's Who Among America's Teachers
- 1995 Who's Who Among America's Teachers
- 1994 Who's Who Among America's Teachers
- 1992 Outstanding Paper Award, The 7th Annual International Microelectronics Conference
- 1985 AT&T Bell Laboratories Corporate Research Fellow

Professional Activities:

I. Directorial Positions

- 2006 - Director, Morgan State University NSF HBCU-UP Undergraduate Research Development Program
- 2002 Director , Math in Science Academic Summer Enrichment Program, June 12-July31

II. Advisory Committees/Boards

- 2007 NSF HBCU-UP Mathematics Advisory Board Member
- 2007 Howard University, Center for Nanotechnology External Advisory Committee
- 2007 New Mexico State University, Center for Bio-Informatics External Advisory Committee
- 2006 MARC Advisory Council
- 2006 MBRS\RISE Advisory Council

III. NSF Review Panels

- 11/2004 NSF-RISE
- 11/2005/06 NSF-REU
- 11/2002 Chemical Instrumentation,
- 8/ 2002 Math & Science Partnership
- 7/2002 Graduate Teaching Fellows in K-12 Education

IV. Mentorship

- 1995-1998 NASA Sharp Plus Summer Program Faculty Coordinator
- 1995-1998 NASA Sharp Plus Summer Program Student Mentor
- 1998 North Carolina Undergraduate Research Conference Coordinator
- 1998 Beta Kappa Chi Scientific Honor Society National Conference Co-Coordinator
- 1992-2007 MARC Core Faculty Adviser
- 1997-1999 Beta Kappa Chi Honor Society, Faculty Adviser
- 1997-1999 Summer High School Internship Program (SHIP) Mentor
- 1996 PEN'S Scholar Research Mentor
- 1995 Chancellor's Scholars Program Mentor
- 1997 The Ronald McNair Post-Baccalaureate Achievement Program - Mentor
- 1994-2008 Minority Biomedical Apprenticeship Program Mentor

Membership in Professional Organizations:

American Chemical Society	ACS Maryland Section, Chair 2010 ACS Maryland Section, Vice-Chair 2009
National Organization of Black Chemist and Chemical Engineers	NOBCChE Higher Education Strategic Initiatives - Chair

- Sigma Xi Scientific Society
- Council of Chemical Research
- Beta Kappa Chi Honor Society

Public Service:

I. Community Outreach

- 2002 Math in Science Academic Summer Enrichment Program, Principal Investigator, GEAR-UP Program with Rognel Heights and Lombard Middle Schools Award, **\$33,000**
- 2002 Chemistry Workshop for Baltimore City Chemistry Teachers, Sponsor

II. Oral Presentations

- 2002 "Teaching Science Ethics in School" , Baltimore City Chemistry Teachers Workshop, Morgan State University
- 2001 "Partnerships in Curriculum Reform", Washington ,D.C. QEM/MSE
- 2000 "Building a Viable Research Program", Morgan State University

III. Departmental, School, University Committee Assignments

- 2008 Task Force Five Manager for Morgan Middle States Accreditation
- 2001- Bio-Environmental Ph.D. Graduate Committee
- 2004-2007 SCMNS Biohazard Committee

2003-2006 Faculty Development and Research Committee

2004-2005 University Honor's Advisory Council