TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Donald E. Patterson Title: Professor of Instruction

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
Ph.D.	1989	Rice University	Chemistry	Studies Involving Novel Inorganic Materials: I. The Direct Fluorination of Diamond, High Temperature Superconductors, and Selected Organic Materials; II. The Use of Gem-Cut Cubic Zirconia in the Diamond Anvil Cell
M.A.	1987	Rice University	Chemistry	
M.S.	1984	University of Texas – El Paso	Chemistry	The Reaction of Benzene with Cu(II) and Fe(III) Exchanged Hectorites
B.S. (Honors)	1982	University of Texas – El Paso	Chemistry	

C. University Experience

Position	*University*	*Dates*
Professor of Instruction	Texas State University	2026-presnt
Associate Professor of Instruction	Texas State University	2024-2026
Senior Lecturer	Texas State University	2019-2024
Graduate Faculty; Associate Grad	Texas State University	2018-Present
Lecturer	Texas State University	2014-2019
Education Supervisor	ITT Technical Institute	1996-1997
Adjunct Instructor	San Jacinto College	1996

D. Relevant Professional Experience

Position	*Entity*	*Dates*
Consultant and Member of the Technical Advisory Board	National Nanomaterials, Inc.	2014-2026
Founder	Tweaked Spirits, LLC.	2014-2023
Principal Scientist	Nanohmics, Inc.	2004-2012
Founder and Executive Vice President	Extreme Devices, Inc.	1998-2003
Principal Scientist	Systems & Processes Engineering Corp.	1997-1998
Director of Research and Development	SI Diamond Technology, Inc.	1991-1996
Founder and Chief Scientist	TSA, Inc.	1992-1993
Head of Diamond Film Research	Houston Advanced Research Center	1989-1993

E. Other Professional Credentials (licensure, certification, etc.)

II. TEACHING

A. Teaching Honors and Awards:

Alpha Chi Favorite Professor 2021
Teaching Award of Honor (Texas State) 2020

B. Courses Taught:

General Chemistry (CHEM1310, CHEM1341, CHEM1342)

Engineering Chemistry (CHEM1335)

Advanced Inorganic Chemistry (CHEM5341)

C. Graduate Theses/Dissertations, Honors Theses, or Exit Committees (if supervisor, please indicate):

Jeffrey R. Simpson, “Advanced Antireflective Coatings for Polycarbonate Substrates,” M.S., 2012 (Committee Member).

Phil Wheeler, “Anti-Biofouling Polymeric Windows: Additive Effects on Mechanical and Optical Properties”, M.S., 2010 (Committee Member).

D. Courses Prepared and Curriculum Development:

CHEM5341: Developed an entirely new course (lectures, presentations, etc.) for graduate students in Inorganic Chemistry. Topics included: CVD diamond (fabrication, properties, and uses), chemistry of the halogens with an emphasis on fluorine chemistry, advanced acid/base theories, semiconductor chemistry including an overview of semiconductor fabrication, and nanomaterial chemistry.

CHEM1335: In coordination with the Engineering Department, developed the overall curriculum for the Engineering Chemistry program at Texas State. Implemented a fully remote course in 2020.

CHEM1341/1342: Developed lectures, presentations, and chemistry demonstrations. Implemented fully remote courses in Spring 2020. Returned to in-class lectures Fall 2021.

E. Funded External Teaching Grants and Contracts:

F. Submitted, but not Funded, External Teaching Grants and Contracts:

G. Funded Internal Teaching Grants and Contracts:

H. Submitted, but not Funded, Internal Teaching Grants and Contracts:

I. Other:

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press)

1. Books (if not refereed, please indicate)

a. Scholarly Monographs:

b. Textbooks:

c. Edited Books:

d. Chapters in Books:

1. **D. E. Patterson***, K. D. Jamison, M. Durrett, A. Kashani, and D. Gedeon, "CVD Diamond

Based Miniature Stirling Cooler," *Cryocoolers 14*, S. D. Miller and R. G. Ross, Jr., eds., ICC Press: Boulder, CO, 95 (2007).

2. **D. E. Patterson**, C. J. Chu, B. J. Bai, N. J. Komplin, R. H. Hauge, and J. L. Margrave*, "Thermochemical Vapor Deposition of Diamond in a Carbon-Halogen-Oxygen and/or Sulfur Atmospheric Hot Wall Reactor," *Applications of Diamond Films and Related Materials*, Proc. First Int. Conf. on the Appl. of Diamond Films and Related Materials, Materials Science Monographs **73**, Y. Tzeng, M. Yoshikawa, M. Murakawa, and A. Feldman, Eds., Amsterdam: Elsevier, 569 (1991).
3. **D. E. Patterson**, C. J. Chu, B. J. Bai, N. J. Komplin, R. H. Hauge, and J. L. Margrave*, "Diamond Growth with Thermal Activation of Carbon-Hydrogen-Halogen Systems and Growth Enhancement with the Addition of Oxygen," *Diamond Materials*, Proc. Second Int. Symp. on Diamond Materials, A. J. Purdes, B. M. Meyerson, J. C. Angus, K. E. Spear, R. F. Davis, and M. Yoder, Eds., Pennington, NJ: Electrochemical Society, 3 (1991).
4. M. N. Gardos, B. L. Soriano, **D. E. Patterson**, R. H. Hauge, and J. L. Margrave*, "SEM Tribometry of Fluorinated CVD Diamond Coatings," *Diamond Materials*, Proc. Second Int. Symp. on Diamond Materials, A. J. Purdes, B. M. Meyerson, J. C. Angus, K. E. Spear, R. F. Davis, and M. Yoder, Eds., Pennington, NJ: Electrochemical Society, 365 (1991).
5. **D. E. Patterson**, R. H. Hauge, and J. L. Margrave*, "CVD Diamond Shapes and Coatings," *Diamond, Silicon Carbide, and Related Wide Bandgap Semiconductors*, Mat. Res. Soc. Symp. Proc. **162**, J. T. Glass, R. Messier, and N. Fujimori, Eds., Pittsburg, PA: MRS, 167 (1990).
6. **D. E. Patterson**, R. H. Hauge, and J. L. Margrave, "Fluorinated Diamond Films, Slabs, and Grit," *New Materials Approaches to Tribology: Theory and Applications*, Mat. Res. Soc. Symp. Proc. **140**, L. E. Pope, L. L. Fehrenbacher, and W. O. Winer, Eds., Pittsburg, PA: MRS, 351 (1989).

e. Creative Books:

2. Articles

a. Refereed Journal Articles:

1. C. Booth*, P. Wheeler †, J. Hancock, R. Ximenes, and **D. E. Patterson**, "Optical Behavior of Antibiofouling Additives in Environmentally-Friendly Coverglass Materials for Bio-Sensors and Solar Panels," *Polymers for Advanced Technologies* **20**, 626 (2009).
2. P. Wheeler †, J. Hancock, R. Ximenes, **D. E. Patterson**, and C. J. Booth*, "Anti-Biofouling Windows: Additive Effects on Mechanical and Optical Properties", *ACS Polym. Pre.* **2008,** 47(1), 408.
3. C. Booth, P. Wheeler †, J. Hancock, R. Ximenes, and **D. E. Patterson, "**Effects on Impact and Tensile Behavior in Transparent Polymer Materials with the Addition of Anti-Biofouling Agents," *J. Polymer Chemistry* **57**, 452 (2008).
4. K. D. Jamison*, B. G. Zollars, **D. E. Patterson**, R. Schueller, H. Windischmann, G. Mulhollan, and A. Kloba, "Gated Carbon-Based Cold Cathode for High Current Applications," *J. Vac. Sci. Tech B*, 21, 1738 (2003).

5. **D. E. Patterson***, K. D. Jamison, M. L. Kempel, and S. Freeman, "Advanced CVD Diamond Microtip Devices for Extreme Applications," *Materials Issues in Vacuum Microelectronics*, Mat. Res. Soc. Symp. Proc. **509**, 65 (1998).
6. C. Xie*, C. N. Potter, R. L. Fink, C. Hilbert, A. Krishnan, D. Eichman, N. Kumar, H. K. Schmidt, M. H. Clark, A. Ross, B. Lin, L. Fredin, B. Baker, **D. E. Patterson**, and W. Brookover, "Diamond Field Emission Displays'" *Int. Vac. Microelectronics Conf. Proc.* **271**, 229 (1994).
7. B. J. Bai, C. J. Chu, **D. E. Patterson**, R. H. Hauge*, and J. L. Margrave, "Methyl Halides as Carbon Sources in a Hot-Filament Diamond CVD Reactor: A New Gas Phase Growth Species," *J. Mat. Res.* 8 [2], 233 (1993).
8. C. J. Chu, B. J. Bai, **D. E. Patterson**, R. H. Hauge*, and J. L. Margrave, "Homoepitaxial Growth Rate Studies on Diamond (100), (110), and (111) Surfaces in a Hot Filament Reactor," *Novel Forms of Carbon*, Mat. Res. Soc. Symp. Proc. Vol. **270** (1992).
9. **D. E. Patterson***, C. J. Chu, B. J. Bai, Z. L. Xiao, N. J. Komplin, R. H. Hauge, and J. L. Margrave, "Thermal Activation of Diamond Growth in Carbon-Hydrogen-Halogen Systems," *Diamond and Related Materials* **1**, 768 (1992).
10. **D. E. Patterson***, R. H. Hauge, and J. L. Margrave, "CVD Diamond Shapes and Coatings," *Diamond, Silicon Carbide, and Related Wide Bandgap Semiconductors*, Mat. Res. Soc. Symp. Proc. **162**, J. T. Glass, R. Messier, and N. Fujimori, Eds., Pittsburg, PA: MRS, 167 (1990).
11. **D. E. Patterson*** and J. L. Margrave, "The Use of Gem-Cut Cubic Zirconia in the Diamond Anvil Cell," *J. Phys. Chem.* **94**, 1094 (1990).
12. **D. E. Patterson***, R. H. Hauge, and J. L. Margrave, "Fluorinated Diamond Films, Slabs, and Grit," *New Materials Approaches to Tribology: Theory and Applications*, Mat. Res. Soc. Symp. Proc. **140**, L. E. Pope, L. L. Fehrenbacher, and W. O. Winer, Eds., Pittsburg, PA: MRS, 351 (1989).
13. M. P. Eastman*, **D. E. Patterson**, and K. H. Pannell, "Reaction of Benzene with Cu(II)- and Fe(III)-Exchanged Hectorites," *Clays and Clay Minerals* **32**, 327 (1984).
14. M. P. Eastman*, **D. E. Patterson**, R. A. Bartsch, Y. Liu, and P. G. Eller, "Three Novel Spin-Labeled Crown Ethers," *J. Phys. Chem.* **86**, 2052 (1982).

b. Non-refereed Articles:

3. Conference Proceedings

a. Refereed Conference Proceedings:

1. **D. E. Patterson***, K. Jamison, and B. Zollars, "Recent Advances on Multi-layer Antireflective Coating Development for PMMA Fresnel Lenses," NASA Mirror Technology SBIR/STTR Workshop, Boulder, CO, 7 Jun 2010.
2. **D. E. Patterson***, K. Jamison, and B. Zollars, "Multi-layer Antireflective Coating Development for PMMA Fresnel Lenses," NASA Mirror Technology SBIR/STTR Workshop, Albuquerque, NM, 17 Jun 2009.

3. **D. E. Patterson***, K. D. Jamison, M. Durrett, A. Kashani, and D. Gedeon, "CVD Diamond Based Miniature Stirling Cooler," 14th International Cryocooler Conference, Annapolis, MD, June 14-16, 2006.
4. **D. E. Patterson***, B. J. Bai, H. K. Schmidt, R. H. Hauge, and J. L. Margrave, "Disposal of Chlorofluorocarbons and Halons via Novel Techniques Involving the Halogen-Assisted CVD of Diamond," *Abstracts of Papers of the American Chemical Society* **203**, 81 (1992) (poster).
5. **D. E. Patterson***, L. G. Fredin, B. J. Bai, N. J. Komplin, C. J. Chu, R. H. Hauge, and J. L. Margrave, "The Use of Fluorine and Other Halogens in CVD Diamond Processes," *Abstracts of Papers of the American Chemical Society* **203**, 80 (1992) (oral).

b. Non-refereed:

4. Abstracts:

5. Reports:

1. B. G. Zollars*, **D. E. Patterson**, S. M. Savoy, Q. Xue, J. J. John, and K. Hoover, "Hyperspectral Antireflective Coatings for Infrared Window Materials," AF SBIR Phase II Final Report, Contract No. FA8650-10-C-5404, Sep 2012.
2. **D. E. Patterson***, "Advanced Antireflective Coatings for Polycarbonate Lenses," AF STTR Phase I Final Report, Contract No. FA9550-12-C-0005, Aug 2012.
3. **D. E. Patterson*,** "Vacuum Microelectronic Thermoelectric Cooler," DOE SBIR Phase I Final Report, Contract No. DE-SC0001214, August 16, 2010.
4. **D. E. Patterson***, K. Jamison, and B. Zollars, "Multi-layer Antireflective Coating Development for PMMA Fresnel Lenses," NASA SBIR Phase II Final Report, Contract No. NNX09CB36C, Jul 2010.
5. **D. E. Patterson***, "Novel Energetic Polymers," Army SBIR Phase I Report, Contract No. W31P4Q-09-C-0029 (2009). Available through NTIS.
6. **D. E. Patterson*,** "Natural Product Antifoulant Protection for Bio-Sensors and Solar Panels," NOAA SBIR Phase II Report, Contract No. DG133R06CN0202 (2008), Available through NTIS.
7. **D. E. Patterson*,** "FluoroGuard: Personal Insect Repellent Device," Army Phase I Report, Contract No. W81XWH-08-C-0013 (2008), Available through NTIS.
8. **D. E. Patterson*,** "Microchip MEMS Iron Maiden," OSD Phase I Report, Contract No. W31P4Q-06-C-0358 (2007), Available through NTIS.
9. **D. E. Patterson*** and K. D. Jamison, "High Efficiency MEMS Based Cryocooler." NASA SBIR Phase II Report, Contract No. NNA04CA10C (2006), Available through NTIS.
10. **D. E. Patterson***, K. D. Jamison, and M. Kempel, "Radiation Hard Vacuum Field Emission Triode Using a Diamond Microtip Cathode," Air Force SBIR Phase II Report, Contract No. F29601-97-C-0117 (1999), Available through NTIS.
11. **D. E. Patterson*** and H. K. Schmidt, "A Diamond Metal Multilayer Interconnect Technology for High Power Electronics Packaging," Air Force SBIR Phase I Report, Contract No. F33615-

93-C-2338 (1994). Available through NTIS.

12. Z. Zheng*, **D. E. Patterson**, R. Tsu, and H. K. Schmidt, "Nanoscale Particles and Structuring", DARPA Phase I Report, Contract No. DASG60-92C-0135 (1993) Available through NTIS.
13. **D. E. Patterson***, H. K. Schmidt, A. W. Moorehead, E. H. Street, B. J. Bai, C. J. Chu, A. J. Griffin, M. A. Cisñeros Guerrero, and J. L. Margrave, "Low Temperature CVD Diamond Deposition Using Halogen Assistance," DARPA SBIR Phase I Report, Contract No. DAAH01-92-C-R060 (1992). Available through NTIS.
14. **D. E. Patterson*** and H. K. Schmidt, "Disposal of CFCs and Halons by Chemical Vapor Deposition and by Catalyzed Conversion," USAF SBIR Phase I Report, Contract No. F08635-91-C-0191 (1992). Available through NTIS.

6. Book Reviews:

7. Other Works in Print:

U.S. Patents:

1. **D. E. Patterson***, "Optically Transparent Polymer with Antibiofouling Properties," U.S. Patent No. 7,786,186, 31 Aug 2010.
2. **D. E. Patterson*** and K. D. Jamison, "Traveling Wave Tube Having a Multilayer Carbon-Based Field Emission Cathode," U.S. Patent. No.6,710,534, 23 Mar 2004.
3. K. D. Jamison*, **D. E. Patterson**, C. Hong, R. D. Schueller, D. Hebert, and R. Woodin, "Gated Electron Field Emitter Having an Interlayer," U.S. Patent. No. 6,664,721, 16 Dec 2003.
4. **D. E. Patterson*** and K. D. Jamison, "Carbon-Based Field Emission Electron Device for High Current Density Applications," U.S. Patent No. 6,441,550, 27 Aug 2002.
5. K. D. Jamison* and **D. E. Patterson**, "Segmented Gate Drive for Dynamic Beam Shape Correction in Field Emission Cathodes," U. S. Patent No. 6,429,596, 6 Aug 2002.
6. A. Kloba*, R. D. Schueller, D. A. Delguzzi, **D. E. Patterson**, K. D. Jamison, and K. R. Kalar, "Mounting for Cathode in an Electron Gun," U.S. Patent No. 6,373,182, 16 Apr 2002.
7. **D. E. Patterson*** and K. D. Jamison, "Amplifier Having Multilayer Carbon-Based Field Emission Cathode," U. S. Patent No. 6,359,378, 19 Mar 2002.
8. **D. E. Patterson*** and K. D. Jamison, "Electron Gun and Cathode Ray Tube Having Multilayer Carbon-Based Field Emission Cathode," U. S. Patent No. 6,329,745, 11 Dec 2001.
9. **D. E. Patterson*** and K. D. Jamison, "Multilayer Carbon-Based Field Emission Electron Device for High Current Density Applications," U.S. Patent. No. 6,181,055, 30 Jan 2001.
10. C. Xie*, **D. E. Patterson**, and N. Kumar, "Method for Producing Thin Uniform Powder Phosphor Films for Display Screens," U.S. Patent No. 5,697,824, 16 Dec 1997.
11. C. Xie*, **D. E. Patterson**, and N. Kumar, "Method for Producing Thin Uniform Powder Phosphor Films for Display Screens," U.S. Patent No. 5,531,880, 2 July 1996.
12. S. DiVita, J. L. Margrave, L. G. Fredin, and **D. E. Patterson***, "Abrasion Resistant Diamond Like Coating for Optical Fiber and Method of Forming the Coating," U.S. Statutory Invention

Registration No. H1,461, 4 Jul 1995.

13. **D. E. Patterson***, R. H. Hauge, C. J. Chu, and J. L. Margrave, "Halogen-Assisted Chemical Vapor Deposition of Diamond," U.S. Patent No. 5,316,795, 31 May 1994.

14. **D. E. Patterson***, C. J. Chu, R. H. Hauge, and J. L. Margrave, "Halogen-Assisted Chemical Vapor Deposition of Diamond," U.S. Patent No. 5,071,677, 10 December 1991.

B. Works not in Print

1. Papers Presented at Professional Meetings:

1. M. A. Cisñeros Guerrero*, **D. E. Patterson**, and J. L. Margrave, "Ultilization de CH_2Cl_2 en la Formacion de Diamante por CVD," XIV Encuentro de Investigacion Metalurgica, Instituto Tecnologico de Saltillo, November 25 - 27, 1992 (poster)
2. **D. E. Patterson**, R. H. Hauge, and J. L. Margrave, "Carbon-13 Studies of Halogen-Assisted CVD Diamond Deposition in a Hot Filament Reactor," Poster Presentation #1, Gordon Research Conference on Diamond Synthesis, Plymouth, NH, June 15-19, 1992 (poster).
3. **D. E. Patterson***, L. Fredin, B. J. Bai, N. J. Komplin, C. J. Chu, R. H. Hauge, and J. L. Margrave, "Diamond Growth Studies with Halogens, Chalcogens, and Hydrocarbons," Proc. 2nd European Conference on Diamond, Diamond-like, and Related Coatings, Nice, France, September 2-6, 1991 (oral).
4. **D. E. Patterson***, C. J. Chu, B. J. Bai, Z. L. Xiao, N. J. Komplin, R. H. Hauge, and J. L. Margrave, "CVD Diamond Growth with Halocarbons," Proc. Int. Conf. on Metallurgical Coatings and Thin Films, San Diego, CA, April 22-26, 1991 (oral). B. J. Bai*, C. J. Chu, N. J. Komplin,
5. J. L. Margrave*, **D. E. Patterson**, C. J. Chu, and R. H. Hauge, "Halogen-Assisted Formation of CVD Diamond Films," Proc. DARPA Materials Research Council, July 1990 (oral).
6. J. L. Margrave* and **D. E. Patterson**, "Fluorinated Diamond Film Update," Proc. USAF Symposium on Tribology, Wright-Patterson Air Force Base, Ohio, November 1989 (oral).
7. C. J. Chu*, **D. E. Patterson**, R. H. Hauge, and J. L. Margrave, "Mechanistic Studies of CVD Diamond Thin Film Growth," Lawrence Berkeley Laboratory Report, September 1989 (oral).
8. J. L. Margrave*, **D. E. Patterson**, C. J. Chu, and R. H. Hauge, "Free-Standing Diamond Shapes - Cylinders, Hemispheres, Grids, and Fibers," Proc. DARPA Materials Research Council, July 1989 (oral).
9. **D. E. Patterson***, R. H. Hauge, and J. L. Margrave," Oxyfluoride Superconductors," Proc., Mat. Res. Soc., Boston, MA, November 28 - December 2, 1988 (poster).
10. **D. E. Patterson***, R. H. Hauge, and J. L. Margrave, "Fluorinated High -Temperature Superconductors," Paper #P108, Twelfth International Symposium on Fluorine Chemistry, Santa Cruz, California, August 8 - 12, 1988 (poster).
11. J. L. Margrave*, **D. E. Patterson**, and R. H. Hauge, "The Fluorination of Diamond Surfaces," Paper #226, Twelfth International Symposium on Fluorine Chemistry, Santa Cruz, California, August 8-12, 1988 (poster).
12. J. L. Margrave*, **D. E. Patterson**, and R. H. Hauge, "Surface Fluorination of Diamond," Proc. DARPA Materials Research Council, July 1988 (poster).
13. J. L. Margrave*, **D. E. Patterson**, and R. H. Hauge, "Oxyfluoride Superconductors," Proc. DARPA Materials Research Council, July 1988 (poster).
14. **D. E. Patterson***, L. Fredin, and J. L. Margrave, "The Use of Gem-Cut Cubic Zirconia in the Diamond Anvil Cell," Paper #461, Southwest Regional ACS Meeting, Houston, Texas, November 19-21, 1986 (oral).

2. Invited Talks, Lectures, and Presentations:

1. **D.E. Patterson***, "Tweaking Diamonds: Chemistry in the Small Business World," Texas State University – San Marcos, MSEC Presentation, February 10, 2017 (invited talk).
2. **D.E. Patterson***, "Diamonds to Gin: Life as a Chemist in the Small Business World," Texas State University – San Marcos, NSF-REU, July 28, 2015 (invited talk).
3. **D.E. Patterson*,** "Diamonds to Gin: Life as a Chemist in the Small Business World", Texas State University – San Marcos, MSEC Symposium, October 10, 2014 (invited talk).
4. **D.E. Patterson***, "Diamonds to Gin: Life as a Chemist in the Small Business World," Texas State University – San Marcos, NSF-REU, July 29, 2014 (invited talk).
5. J. R. Simpson†, **D. E. Patterson**, and C.J. Booth*, "Anti-Reflective Coating for Polycarbonate Lenses via MAPLE Deposition", FluoroPoly 2012, Las Vegas, NV, fall 2012.
6. **D. E. Patterson***, "Diamonds to Algae: Life as a Chemist in the Small Business World," UTEP Department of Chemistry ACS Symposium, April 27, 2007 (invited talk).
3. **D. E. Patterson***, B. G. Zollars, and M. G. Durrett, "Prediction of Field-Emission Array Drive Characteristics from Single-Tip I-V Data," IVMC 2003, Osaka, Japan, July 2003.
4. K. D. Jamison*, B. G. Zollars, **D. E. Patterson**, R. Schueller, H. Windischmann, G. Mulhollan, and A. Kloba, "Gated Carbon-Based Cold Cathode for High Current Applications," IVMC 2002, Lyons, France, July 2002 (oral).
5. **D. E. Patterson***, "The Future of Diamond in Field Emission Markets," ICMCTF '96: Industrial Perspectives in Diamond Coatings, San Diego, CA, April 24, 1996 (invited oral).
6. **D. E. Patterson***, "Diamond Cold Cathode Technology for Field Emission Display Manufacture," DARPA High Definition Systems Information Exchange Conference, Washington, DC, April 16, 1996 (invited oral).
7. **D. E. Patterson***, "Diamond and DLC: Ultimate Materials for Flat Panel Displays, Thermal Management, and Coatings Applications," Gorham Conference: CVD Diamond & DLC Coatings and Thick Film Markets, Atlanta, GA, March 12, 1996 (invited oral).
8. **D. E. Patterson***, H. K. Schmidt, L. G. Fredin, N. Kumar, R. Fink, A. Ross, M. Kempel, K. Jamison, and C. Xie, "Diamond and Diamond-Like Materials for Use as Cathodes in Field Emission Flat Panel Displays," Materials Research Society, Fall Meeting, Symposium DD, Boston, MA, November 30, 1995 (invited oral).

3. Consultancies:

Technical Advisor for National Nanomaterials, 2014-Present

4. Workshops:

5. Other Works not in Print:

a. Works “submitted” or “under review”

b. Works “in progress”

c. Other works not in print

Notes: * Corresponding Author
† Graduate Student under my supervision
‡ Undergraduate Student under my supervision

C. Grants and Contracts

1. Funded External Grants and Contracts: (only associated with Texas State University)

Title:	**Advanced Antireflective Coatings for Polycarbonate Lens**
Funding Agency:	USAF
Duration of Grant:	11/1/11-6/30/12
Type of Grant:	STTR Phase I (Nanohmics)
Role on Grant:	PI
Names of PI or Co-PI(s):	Chad Booth (TXState PI)
Total Funds Awarded:	$100,000
Funds Under Your Fiscal Control:	$100,000

Title:	**Novel Energetic Polymers**
Funding Agency:	US Army
Duration of Grant:	11/1/08-4/30/09
Type of Grant:	STTR Phase I (Nanohmics)
Role on Grant:	PI
Names of PI or Co-PI(s):	Chad Booth (TXState PI)
Total Funds Awarded:	$75,000
Funds Under Your Fiscal Control:	$75,000

Title:	**FluoroGuard: Personal Insect Repellent Device**
Funding Agency:	US Army
Duration of Grant:	10/1/2007 – 4/30/2008
Type of Grant:	SBIR Phase I (Nanohmics)
Role on Grant:	PI
Names of PI or Co-Pi(s):	Chad Booth (TXState PI)
Total Funds Awarded:	$75,000
Direct Funds Received:	$75,000

Title:	**Natural Product Antifoulant Protection for Bio-Sensors and Solar Panels**
Funding Agency:	NOAA
Duration of Grant:	7/15/05-1/15/06
Type of Grant:	STTR Phase I and II (Nanohmics)
Role on Grant:	PI
Names of PI or Co-PI(s):	Chad Booth (TXState PI)
Total Funds Awarded:	$460,000
Funds Under Your Fiscal Control:	$460,000

2. Submitted, but not Funded, External Grants and Contracts: (only associated with Texas State University)

Title:	**Durable Fire Resistant Textile Coatings**
Funding Agency:	US Navy
Submission Date:	11/01/2012
Type of Grant:	SBIR Phase I
Role on Grant:	PI
Amount of Grant:	$100,000
Status:	Not Funded

Title:	**Novel Field Drying System**
Funding Agency:	US Navy
Submission Date:	11/01/2012
Type of Grant:	SBIR Phase I
Role on Grant:	PI
Amount of Grant:	$100,000
Status:	Not Funded

Title:	**NanoClear: Advanced Optical Coating Technology**
Funding Agency:	National Science Foundation Multifunctional Materials: Nanostructured Materials STTR Program
Submission Date:	2009
Type of Grant:	SBIR Phase I
Role on Grant:	PI
Amount of Grant:	$75,000
Status:	Not Funded

Title:	**NanoClean: Advanced Hydrophobic / Oleophobic Textile Coating**
Funding Agency:	US Army (SBIR Phase I)
Submission Date:	2008
Type of Grant:	SBIR Phase I
Role on Grant:	PI
Amount of Grant:	$75,000
Status:	Not Funded

Title:	**Advanced Hard Coatings for Optical Grade Polymers**
Funding Agency:	US Office of the Secretary of Defense
Submission Date:	2008
Type of Grant:	SBIR Phase I
Role on Grant:	PI
Amount of Grant:	$75,000
Status:	Not Funded

Title:	**FluoroGuard: Personal Insect Repellent Device**
Funding Agency:	US Army
Submission Date:	2008
Type of Grant:	SBIR Phase II
Role on Grant:	PI
Amount of Grant:	$750,000
Status:	Not Funded

Title:	**Advanced Periscope Head Window Coating**
Funding Agency:	US Navy
Submission Date:	2007
Type of Grant:	SBIR Phase I
Role on Grant:	PI
Amount of Grant:	$75,000
Status:	Not Funded

3. Funded Internal Grants and Contracts:

4. Submitted, but not Funded, Internal Grants and Contracts:

D. Fellowships, Awards, Honors:

IV. SERVICE

A. Institutional

1. University:

2. College:

3. Department/School:

- Non-Tenure Track Personnel Evaluation Committee (2019-Present)
- Search Committee – Inorganic Chemistry Tenure Track Position (2018-19)
- Undergraduate Curriculum Committee (2014-present)
- Nontenure Line Faculty Committee (2014-present)

B. Professional:

- American Chemical Society: 1986-Present
- Cryogenic Society of America: 2004-2010
- SPIE: 2006-2010
- Sigma Xi: 1987-2003
- Phi Kappa Phi: 1983

C. Community:

D. Service Honors and Awards:

- Tibbets Award (Outstanding SBIR Company; SI Diamond Technology); 1996