**Dennis M. Manos**

(dmanos@wm.edu)

College of William and Mary

Vice Provost for Research, Graduate and Professional Studies

Director Applied Research Center at Newport News

Interim Director, William and Mary Research Institute

## EDUCATION

B.S. Case Institute of Technology, 1968,

Ph.D. Ohio State University, 1976,

U. S. Army Medical Field Service School, Medic (91A10), Medical Technologist (92B20), 1969-1971

**ACADEMIC POSITIONS**

Post-doctoral Fellow, Univ. of Toronto 1976-1978

Physicist Princeton Univ., 1980-1983

Research Physicist, Princeton Univ. 1983-1986

Principal Research Physicist, Princeton Univ.,1986-1992, 1987 at MRC (see below)

Group, Branch, and Division Head

Administrative Titles at DOE Princeton Plasma Physics Laboratory held concurrently with the above positions at Princeton University.

Visiting Research Scientist, Thomas Jefferson National Accelerator Laboratory 1992-2004,

Adjunct Professor of Physics, Hampton University 1993-1997

International Cooperative Professor, University of Electronic Science and Technology, Chengdu China, 1996-2000

CSX Eminent Professor, College of William and Mary

## INDUSTRY POSITIONS

Aerochem Research Laboratories, Staff Scientist, 1978-1980

Princeton Scientific Consultants, Inc.

Treasurer, 1981-1986

Vice-President 1988-1990

President 1990-1992, PSC

Technical Consultant to ~ 100 technical corporations

Materials Research Corporation, Orangeburg NY, Vice-President of Technology, 1987

Mentor Technologies Group, Consultant 1998-2002

Rosetta Venture Capital, Consultant 2002-2007

SMTS Corporation, Scientific Advisory Board, 2002-Present

Mason School of Business School Entrepreneurial Development Board, 2005-present

## Honors

Connaught Foundation Fellowship 1976-1978

CSX Chair, Applied Science and Physics 1992

Fellow of the American Vacuum Society of Am. Inst. Physics, 1994

NASA Goddard Space Flight Center, Group Achievement Award, 1996

Omicron Sigma Kappa Honor Society, Faculty Inductee 1996

**William and Mary service**

**Classroom Lecturer**

P101 Introduction to General Physics

P107 Physics for Life Sciences

P102H Introduction to General Physics – Honors Section

P451/452 Physics Undergraduate Research (list of supervised students below)\*

P800 Physics Dissertation , Thesis,

APSC150.01W Freshman Science Seminar – The Shape of Things

APSC 525 Introduction to Solid Surfaces and Interfaces

APSC 625 Plasma Physics for Device Processing

APSC 726 Solid Surfaces and Interfaces

APSC 784 Measurement Methods

APSC 790 Readings in Applied Science: Term course titles

 Statistical Analysis of Time Series

Business for Technical Entrepreneurs

Fortran programming for problem solving

APSC 791 Topics in Applied Science: One term course titles:

Statistical Thermodynamics

Mathematical Methods in Physics and Engineering

Neural Network Methods for Plasma Probe Diagnostics

Optics

Particle-Surface Interactions

Passage of Ions through Matter

APSC 794 Internship

APSC 795 Research

APSC 800 Applied Science Dissertation, Thesis

Other teaching:

Undergraduate Research Supervision for more than 50 students, 18 as Thesis Committee Director

Graduate Research Thesis Supervision for 49 students, 16 M.S., 33 Ph.D. 14 as Ph.D. Committee Chair/co-Chair

Post-Doctoral Advisor for 11 fellows

Research Supervisor for 4 High School Lead Science Teachers

Applied Research Center, Summer Research Mentor for numerous HS students

**CONTRACTS, AND GRANTS as PI, co-PI, or Key Investigator at William and Mary 1992-2011**

 ***Aw. Date*** ***Dept*** ***Acct#*** ***Prop#*** ***S#*** ***Start*** ***End*** ***Agency*** ***$***

 8/17/1992 331891 1993-021 1 7/1/1992 1/31/1993 SURA $9,000.00

 11/25/1992 304051 1993-119 1 11/25/1992 12/31/1993 NASA $17,160.00

 2/16/1993 372091 1993-213 1 2/16/1993 12/15/1993 SURA $53,136.00

 2/17/1993 331971 1993-246 1 2/16/1993 9/30/1993 SURA $10,000.00

 4/14/1993 372091 1993-270 1 2/16/1993 12/15/1993 SURA $20,144.00

 9/27/1993 304141 1994-077 1 1/1/1994 12/31/1996 NASA $157,500.00

 12/13/1993 381211 1994-159 1 12/1/1993 9/30/1994 SEMATEC $35,500.00

 12/16/1993 301181 1994-095 1 1/1/1994 12/31/1994 NASA $68,919.00

 12/17/1993 354391 1994-129 1 1/1/1994 12/31/1994 CIT $31,870.00

 12/22/1993 382001 1994-215 1 1/1/1994 12/31/1994 VAPOWER $27,970.00

 1/5/1994 301191 1994-093 1 1/5/1994 1/4/1995 NASA $224,145.00

 3/22/1994 301201 1994-092 1 1/1/1994 12/31/1994 NASA $174,606.00

 5/27/1994 304171 1994-396 1 6/1/1994 10/31/1994 NASA $7,115.00

 6/14/1994 304181 1994-420 1 7/1/1994 10/31/1995 NASA $100,000.00

 6/30/1994 372341 1994-448 1 6/15/1994 10/31/1996 SURA $12,302.00

 8/15/1994 304131 1995-041 1 1/1/1995 9/30/1995 NASA $45,000.00

 8/25/1994 304131 1995-051 1 1/1/1995 9/30/1995 NASA $2,000.00

 9/20/1994 332361 1995-005 1 9/1/1994 9/30/1995 NIST $5,661.00

 10/11/1994 304201 1995-098 1 10/15/1994 9/30/1995 NASA $84,535.00

 10/19/1994 301191 1995-125 1 1/5/1994 12/31/1995 NASA $42,695.00

 10/27/1994 332361 1995-133 1 10/1/1994 10/31/1995 NIST $65,100.00

 12/16/1994 301201 1995-193 1 3/15/1994 12/31/1994 NASA $33,258.00

 12/20/1994 304211 1995-189 1 1/1/1995 3/31/1995 NASA $24,124.00

 12/27/1994 382001 1995-187 1 1/1/1995 12/31/1995 VAP/CIT $45,620.00

 12/28/1994 301251 1995-081 1 1/1/1995 12/31/1996 NASA $89,337.00

 12/28/1994 301241 1995-080 1 1/1/1995 12/31/1996 NASA $164,228.00

 1/9/1995 304221 1995-214 1 1/1/1995 10/31/1997 NASA $89,596.00

 1/12/1995 304171 1995-213 1 11/1/1994 10/31/1995 NASA $26,342.00

 1/18/1995 304131 1995-227 1 5/1/1995 8/23/1995 NASA $40,000.00

 1/20/1995 301261 1995-079 1 1/20/1995 1/19/1997 NASA $155,243.00

 1/27/1995 355091 1995-238 1 1/1/1995 12/31/1995 CIT $25,000.00

 2/8/1995 301201 1995-085 1 1/1/1995 12/31/1996 NASA $204,602.00

 3/6/1995 301181 1995-279 1 1/1/1994 6/30/1995 NASA $13,128.00

 3/20/1995 304201 1995-287 1 10/15/1994 9/30/1995 NASA $11,519.00

 3/29/1995 304131 1995-300 1 8/24/1994 12/31/1995 NASA $44,924.00

 3/29/1995 304211 1995-299 1 1/1/1995 3/31/1995 NASA $3,003.00

 3/30/1995 382121 1995-294 1 3/30/1995 11/30/1995 SEMATEC $24,000.00

 6/9/1995 304131 1995-397 1 4/16/1995 4/15/1996 NASA $40,000.00

 6/22/1995 304131 1996-025 1 4/16/1995 4/15/1996 NASA ($40,000.00)

 8/7/1995 382171 1996-045 1 8/7/1995 8/6/1996 DUPONT $50,000.00

 8/22/1995 304131 1996-054 1 1/1/1995 4/15/1996 NASA $40,000.00

 8/29/1995 304201 1996-065 1 10/1/1995 9/30/1996 NASA $90,893.00

 9/14/1995 332361 1996-050 1 9/25/1995 10/31/1996 NIST $75,110.00

 9/15/1995 311111 1994-356 1 10/1/1995 9/30/1999 NSF $239,928.00

 9/25/1995 304211 1996-092 1 1/1/1995 3/31/1995 NASA ($2,645.00)

 10/1/1995 332781 1996-129 1 10/1/1995 9/30/1996 SURA $20,016.00

 10/4/1995 332721 1995-284 1 9/2/1995 8/31/1996 STRESS $50,000.00

 12/12/1995 304221 1996-168 1 1/18/1996 1/17/1997 NASA $82,504.00

 1/15/1996 332781 1996-208 1 2/1/1996 9/30/1996 SURA $13,344.00

 2/27/1996 301261 1996-217 1 1/20/1996 1/19/1998 NASA $87,654.00

 3/6/1996 304131 1996-268 1 4/16/1996 9/15/1996 NASA $62,000.00

 3/15/1996 301301 1996-111 1 3/15/1996 3/14/1998 NASA $165,334.00

 7/24/1996 301331 1996-329 1 7/24/1996 6/30/1998 NASA $44,124.00

 7/31/1996 382171 1997-025 1 8/7/1996 8/1/1997 DUPONT $50,000.00

 8/1/1996 304131 1997-040 1 8/1/1996 2/28/1997 NASA $64,000.00

 8/6/1996 304201 1997-045 1 10/1/1996 12/31/1996 NASA $19,843.00

 8/20/1996 333092 1997-373 1 8/1/1996 7/31/1997 VCES $26,615.00

 9/5/1996 304271 1997-058 1 9/16/1996 8/5/1998 NASA $41,829.00

 10/1/1996 332781 1997-119 1 10/1/1996 9/30/1997 SURA $40,032.00

 11/5/1996 372931 1997-071 1 10/15/1996 8/15/1997 VSGC $15,000.00

 12/6/1996 372961 1997-172 1 12/15/1996 1/31/1997 EWI $7,500.00

 1/28/1997 304221 1997-252 1 1/18/1997 7/31/1997 NASA $67,433.00

 1/28/1997 304201 1997-254 1 1/28/1997 NASA ($31,563.00)

 3/4/1997 333281 1997-296 1 1/31/1997 1/31/1999 STRESS $150,389.00

 4/30/1997 301332 1997-320 1 1/24/1997 12/31/1997 NASA $30,567.00

 5/1/1997 373031 1997-261 1 5/1/1997 4/30/1999 VSGC $10,000.00

 5/2/1997 373061 1997-367 1 5/1/1997 8/9/1998 VSGC $8,500.00

 5/19/1997 373511 1999-037 1 8/25/1998 8/24/2000 LUCE $50,000.00

 5/24/1997 301301 1997-201 1 3/15/1997 3/14/1998 NASA $6,525.00

 7/11/1997 333421 1996-382 1 7/1/1997 10/31/1997 ASM $23,000.00

 7/28/1997 382171 1998-037 1 8/1/1997 12/31/1998 DUPONT $50,000.00

 10/1/1997 332781 1998-151 1 10/1/1997 9/30/1998 SURA $41,712.00

 1/7/1998 373331 1997-161 1 10/1/1997 12/30/1998 VSGC $6,500.00

 3/31/1998 333092 1998-167 1 8/1/1996 7/31/1998 VCES $27,615.00

 3/31/1998 333092 1998-333 1 8/1/1996 7/31/1997 VCES ($4,820.00)

 8/15/1998 350892 1999-324 1 9/15/1998 9/14/1999 CIT $90,000.00

 8/18/1998 350891 1998-285 1 9/15/1998 9/14/1999 CIT $115,000.00

 8/18/1998 350894 1999-326 1 9/15/1998 9/14/1999 CIT $22,500.00

 8/18/1998 350893 1999-325 1 9/15/1998 9/14/1999 CIT $22,500.00

 9/9/1998 350901 1999-044 1 9/1/1998 3/31/1999 CIT $20,000.00

 10/1/1998 332781 1999-145 1 10/1/1998 9/30/1999 SURA $20,856.00

 10/15/1998 382471 1998-359 1 9/1/1998 12/31/1999 SOLAREX $13,060.00

 10/30/1998 332781 1999-216 1 10/1/1998 9/30/1999 SURA ($5,214.00)

 2/1/1999 333891 1998-015 1 1/1/1999 10/31/1999 ODU $76,362.00

 2/9/1999 333901 1999-285 1 2/9/1999 12/31/1999 VSGC $8,000.00

 5/25/1999 382531 1999-299 1 5/1/1999 6/30/2000 CORNING $62,310.00

 5/25/1999 334041 1999-403 1 12/1/1998 11/30/1999 ODU $14,580.00

 6/30/1999 350894 1999-326 2 9/15/1998 6/30/2000 CIT $45,000.00

 6/30/1999 350891 1998-285 2 9/15/1998 6/30/2000 CIT $226,000.00

 6/30/1999 350892 1999-324 2 9/15/1998 6/30/2000 CIT $184,000.00

 6/30/1999 350893 1999-325 2 9/15/1998 6/30/2000 CIT $45,000.00

 9/28/1999 301501 2000-045 1 10/1/1999 9/30/2002 NASA $25,000.00

 12/8/1999 334041 1999-403 2 12/1/1999 11/30/2000 ODU $14,580.00

 12/20/1999 333891 1998-015 2 1/1/1999 12/31/1999 ODU $15,273.00

 2/1/2000 334261 2000-115 1 2/1/2000 1/31/2001 AFOSR $149,940.00

 3/3/2000 301501 2000-045 2 3/3/2000 9/30/2002 NASA $149,059.00

 6/12/2000 350891 1998-285 3 7/1/2000 6/30/2001 CIT $219,000.00

 6/23/2000 350893 1999-325 3 7/1/2000 6/30/2001 CIT $40,000.00

 6/23/2000 350892 1999-324 3 7/1/2000 6/30/2001 CIT $166,000.00

 6/23/2000 350894 1999-326 3 7/1/2000 6/30/2001 CIT $40,000.00

 11/21/2000 334261 2000-115 2 12/1/2000 12/31/2002 AFOSR $149,940.00

 12/5/2000 301501 2000-045 3 12/4/2000 9/30/2002 NASA $150,000.00

 12/20/2000 334041 1999-403 3 12/1/2000 11/30/2001 ODU $14,580.00

 4/20/2001 353471 2002-093 1 5/21/2001 8/24/2001 VMEC $6,500.00

 5/4/2001 334861 2001-249 1 3/7/2001 6/30/2002 SURA $44,487.50

 6/1/2001 374381 2001-238 1 7/1/2001 6/30/2002 VSGC $5,000.00

 6/14/2001 350893 1999-325 4 7/1/2001 6/30/2003 CIT $28,468.00

 6/14/2001 350894 1999-326 4 7/1/2001 6/30/2003 CIT $28,468.00

 6/14/2001 350892 1999-324 4 7/1/2001 6/30/2003 CIT $125,464.00

 6/14/2001 350891 1998-285 4 7/1/2001 6/30/2003 CIT $152,600.00

 8/25/2001 335021 2002-086 1 8/25/2001 10/31/2001 SURA $4,124.99

 10/25/2001 335021 2002-086 2 11/1/2001 11/30/2001 SURA $1,833.33

 11/6/2001 353691 2002-270 1 11/1/2001 12/31/2002 CTRF $1,080,790.0

 11/13/2001 301501 2000-045 4 11/13/2001 9/30/2002 NASA $2,500.00

 11/30/2001 335021 2002-086 3 12/1/2001 10/31/2002 SURA $20,166.63

 2/21/2002 335151 2/1/2002 7/31/2004 UNC-C $217,939.00

 10/4/2002 335441 10/8/2002 10/7/2003 ONR $113,214.00

 10/20/2002 335021 11/1/2002 10/31/2003 SURA $21,996.00

 5/22/2002 354031 5/28/2002 8/3/2002 VMEC $7,000.00

 7/19/2002 335361 7/8/2002 10/7/2002 ONR $35,000.00

 11/21/2002 353691 11/1/2001 4/30/2003 CTRF $541,958.00

 5/7/2002 374381 7/1/2002 6/30/2003 VSGC $5,000.00

 7/13/2002 334861 5/25/2002 6/30/2003 SURA $20,000.00

 4/1/2003 335561 6/1/2003 11/30/2004 ONR $1,974,000.00

 1/8/2003 334861 3/7/2001 6/30/2002 SURA $20,000.00

 6/3/2003 354361 5/25/2003 8/24/2003 VMEC $7,500.00

 5/14/2003 335721 4/1/2003 9/30/2003 INCOGEN $49,975.00

 6/18/2003 334861 3/7/2001 9/30/2003 SURA $6,000.00

 11/17/2003 334861 3/7/2001 9/30/2003 SURA ($694.76)

 1/23/2003 353691 11/1/2001 10/31/2003 CTRF $541,958.00

 10/2/2003 335021 11/1/2002 10/31/2003 SURA ($4,124.25)

 5/15/2003 374381 6/1/2003 6/30/2004 VSGC $5,000.00

 12/2/2003 334861 4/14/2004 9/30/2004 SURA $39,367.00

 10/2/2003 335441 10/8/2003 10/7/2004 ONR $116,044.00

 4/7/2004 354641 5/25/2004 8/24/2004 UVA $10,450.00

 4/14/2004 336161 1/3/2005 1/3/2005 SURA $39,367.00

 6/10/2004 336301 4/1/2004 8/31/2005 Incogen $ 160,272.00

 8/15/2005 336301 4/1/2004 8/31/2005 Incogen $ 198,187.00

 4/1/2005 336161 4/14/2004 6/30/2006 SURA $ 48,383.00

 4/27/2006 336162 5/01/2006 8/31/2006 SURA $ 27,299.00

 8/28/2006 336162 5/1/2006 12/24/2006 JEFSCI $ 36,087.00

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 2007 REVIEW LINE \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 9/1/2005 336881 6/1/2005 EXT./2007 ONR $1,299.830.00

 7/1/2006 210002 7/1/2006 6/30/2007 CoVA-BioInit $ 800,000.00

 12/18/06 736162 1/08/2007 6/30/2007 $ 31,081.00

 5/23/2007 JSA 07-C1073 5/23/2007 5/22/2009 NavSea /JSA $ 829.500..00

 07/01/02 113930 NA 06/30/08 SOV MPRP $ 1,619,000.00

 07/01/02 111500 NA 06/30/08 SOV ARC $ 1,017,172.00

 07/01/06 113930 06/30/08 06/30/08 SOV BMRBME $ 400,000.00

 07/01/08 113930 06/30/09 SOV BMRBME $ 75,000.00

 07/01/09 113930 06/30/10 SOV MPRP $ 171,400.00

 07/01/09 111500 06/30/10 SOV ARC $ 520,150.00

 07/01/09 113930 06/30/10 SOV BMRNME $ 75000.00

 09/04/2009 713787 05/01/2010 StatoilHydro PhaseI $ 1,000,000.00

 \*05/01/2010 713787 06.30/2011 StatoilHydro Phase II $ 2,000.000.00

 \*05/01/2010 \*DE-EE0003146 05/01/201 DOE Sustainable Energy $ 500,000.00

Grants and Contracts Total Yrs 1992-2011 $22,076,000.

**PROFESSIONAL SERVICE**

**Standing Committees:**

CWM Agency Risk Management and Internal Control Standards Oversight Committee, 2007- present

CWM Emergency Management Team, 2007-present

Representative, VA Higher Ed Preparedness Consortium 2008-present

VIMS-Industry Consortium, 2002-present

CWM Strategic Planning Steering Committee, Financial Modeling, 2008-present

Faculty Committee on University Priorities, 2004-present

Advisory Council on Space Management, 2004-present

Faculty Research Committee, Administrator, 2004-present

Information Technology Steering Committee, 2009-present

President’s Delegate URA Executive Advisory Board, 2009 - present

President’s Delegate SURA Executive Advisory Board, 2009 - present

President’s Delegate, Virginia Space Grant Board of Director’s, 2004-present

Representative, COVA 25 by 25 Energy Initiative 2009-present

Research Integrity Officer, ORI Delegate, 2004-present

Principal Research Compliance Officer, 2004-present

Institutional Animal Use and Care, ex off.,. Inst. Official, 2004-present

Institutional Biosafety Committee, voting ex off, Inst. Official, ex off., 2004- present

Protection of Human Subjects Committee, 2004- present

Radiation Safety Committee, ex. off. Inst. Official, 2004- present

Research OSHA Safety Liaison 2004-present

**Current and Past Ad Hoc and Rotating Assignments**

Co-chair Provost Ad Hoc Committee of F&A Distribution, 2010-2011

Governor’s Joint Commission on Science and Technology,

JCOTS Subcommittee on Energy, 2010-2011

JCOTS Subcommittees on Nanotechnology and Computational Science 2004- 2008

Governor’s Virginia Research and Technology Advisory Committee, 2004- 2009

Chair, Intellectual Property Sub-Committee, Governor’s VRTAC, 2004-2005

Member, Governor’s Working Group on Commonwealth Research, VRTAC 2007-2008

Committee for Environment Science and Policy Planning, 2009-2010

Task Force on Digital Imaging 2006-2010

CWM, Ethics Committee, 2007- 2009

Chair, Committee on Graduate Student Compensation 2006- 2007

Representative, Virginia Microelectronics Consortium, Operations Committee, 1997-2007

Representative, Virginia Microelectronics Consortium, Executive Committee, 2005-2007

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 2007 Review line above \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Swem Library Committee 1996-2002

Faculty Compensation Board 2001-2004

Director, Technology Innovation Center, Center for Innovative Technology, 1998-2003

Representative, INanoVA, Consortium for Nanotechnology in Virginia, 2001-2005

Honors and Interdisciplinary Studies 1993-2004

Charles Center - Rhodes Scholarship Review Committee, 1994- 2004

Dean’s Advisory Committee, 1992-2000

Representative Virginia Consortium for Engineering and Science, 1996-2002

Representative, Virginia Space Grant Consortium, 1992-present, Chair, 1996- 2006

Representative, Peninsula Area Technology Development Committee,1992-1993

Director William and Mary Applied Science Program, 1992-1995

Chair, Applied Science Department, William and Mary, 1995-2000

Center Director, Applied Research Center at Newport News, 1998- present

Chair, Applied Science Admission Committee 1992-1995

Applied Science Academic Progress Committee, 1992-2006

Applied Science Space Committee, 1992-1995

Applied Science Faculty Search committees, ad hoc, 1993-2004

Physics Department, Faculty Search Committees, 1992-2004

Physics Dept. Appointments Committee, 1994-1998

Physics Dept. Evaluation Committee on Shops, Chair, 1994-1995

Princeton Univ. Plasma Laboratory (PPPL) Public Spokesperson 1985-1992

PPPL Emergency Response Spokesperson 1990-1992

US DoE DT Materials Physics Task Group 1986-1992, Chairman 1990-1992

US DoE High Heat Flux Materials Task Group 1984-1990

US DoE Evaluation Committee on CO2 and Global Warming 1990

US DoE Representative to International Thermonuclear Experimental Reactor, 1990-1992

Arbitrator, Princeton University Grievance Committee, 1990-1992

Chair, Science on Saturday, PPPL DoE Community Education Program 1990-1992

CEBAF-CETAC Steering Committee, 1992-1995

CEBAF Laser Processing Consortium Steering Committee 1994-present

Senior Editor AIP Books Series, 1992-1998

Senior Editor, AIP Conference Proceeding Series ,1992-1994

AVS Program Committee 1985-1993, Vice Chair, 1989, Chair 40th Anniversary Year, 1993

AIP Liason Committee 1989-1990

AVS Publications Committee, Vice-Chair 1992-1995

AVS Plasma Diagnostic Committee, Chair, 1990

AVS Associate Editor J. Vac. Sci. Technol B,1998-2000

**PRINT PUBLICATION BIBLIOGRAPHY**, abbreviated listing, in chronological order (\* indicates a contribution to an edited or curated print or online scientific archive, reviewed by one or more qualified referees)

\*1) Crossed molecular beam study of chemiluminescent reactions of Group 111b atoms with O2 with J.M. Parson, J. Chem. Phys. vol 63, 3575-85, (1975).

 \*2) Direct Observation of the Effect of Enhanced Vibrational Excitation on Fragmentation in a Mass Spectrometer with F.E. Bartoszek and J.C. Polanyi, J. Chem. Phys. vol. 67, 3395 (1977).

 \*3) Chemiluminescent Reactions of Group IIIb Atoms with O2:Spectral Simulations and Extended Energy Dependence with J.M. Parson, J. Chem. Phys. vol. 69, 231 (1978).

 \*4) Effect of changing reagent energy.X. /vibrational threshold energies for alternative reaction paths HF(v)+D to F+HD and to H+DF with F.E. Bartoszek and J.C. Polanyi, J. Chem. Phys. vol 69, 933-5 (1978).

 \*5) High Temperature Fast Flow Reactor Observations on Chemiluminescent Sn-Oxidizer Reaction with A. Fontijn, J. Chem. Phys. vol. 72, 416 (1980).

 \*6) PDX Experimental Results with D. Meade et. al., Proc. 8th Int. Conf. on Plasma Physics and Controlled Nuclear Fusion Research, Brussels, July (1980); Princeton Plasma Physics Laboratory Report PPPL-1740 (January 1980).

 7) Neutral Beam Heating Results on PDX with R.J. Hawryluk et. al., PPPL-IM-May 1981 (PPPL reports on request at archive : /www.pppl.gov/techreports.cfm

\*8) PDX Experimental Results with D. Meade et. al., Nuclear Fusion Supplement vol. 1, 665-77 (1981).

 1

 \*9) Recent PDX Results with M.G. Bell et. al., Proc. 10th European Conf. on Controlled Fusion and Plasma Physics, 21-39 (September 1981).

  \*10) Calorimeter Probe Studies of PDX and PLT with R. Budny, T. Satake, and S.A. Cohen, J. Nucl. Mater. vol. 111 & 112, 130 (1982).

 \*11) Changes in Tokamak Plasma Properties During Impurity Injection with S.A. Cohen et. al., J. Vac. Sci. Technol. vol. 20, 1226 (1982).

 \*12) Confinement Studies with Neutral Beam Injection on PDX and PLT with R. J. Goldston et. al., Proc. 3rd Joint Varenna-Grenoble International Symposium on Heating in Toroidal Plasmas, Grenoble, France (1982).

 \*13) Deuterium Flux Measurements in the Edge Plasmas of PLT and PDX During Auxiliary Heating Experiments with W.R. Wampler, S.A. Cohen, H.F. Dylla, and C.W. Magee, J. Vac. Sci. Technol. vol. 20, 1234 (1982).

 \*14) Deuterium Implantation in the First Wall Candidate Materials by Exposure in the Princeton Large Torus with J. Chang and A. Tobin, J. Nucl. Mater.vol. 111 & 112, 168 (1982).

 15) High Power ICRF and ICRF Plus NB Heating on PLT with D.Q. Hwang et. al.,Proc. 9th Int. Conf. on Plasma Physics and Controlled Nuclear Fusion Research,Baltimore (1982).

 \*16) Impurity Levels and Power Loading in the PDX Tokamak with High Power Neutral Beam Injection with R.J. Fonck et. al., J. Nucl. Mater. vol. 111 & 112, 343 (1982); also as Princeton Plasma Physics Laboratory Report PPPL-1932 (1982).

  \*17) Ion Heating with High Power Perpendicular Neutral Beam Injection in PDX with R.J. Hawryluk et. al., Phys. Rev. Lett. vol. 49, 326 (1982).

 \*18) Laboratory Study of the PDX/PLT Laser Blow-Off Trace Element Injector with D. Ruzic, R. Moore, and S.A. Cohen, J. Vac. Sci. Technol. vol. 20,1230 (1982).

 19) MHD Stability Properties of PLT Discharges During High Power ICRF Heating with J.R. Wilson et. al., Int. Conf. on Plasmas, Goteburg, Sweden (1982).

 20) Neutral Beam Heating Experiments on PDX with D. Johnson et. al., Proc. 9th Int. Conf. on Plasma Physics and Controlled Nuclear Fusion Research, Baltimore (1982).

 \*21) Secondary Electron Yields of Carbon Coated and Polished Stainless Steel with D. Ruzic, R. Moore, and S.A. Cohen, J. Vac. Sci. Technol. vol. 20, 1313 (1982).

 \*22) Surface Modifications of the PLT Lower Hybrid Waveguides to Improve Operations with J. Timberlake et. al., J. Vac. Sci. Technol. vol. 20, 1309 (1982).

 23) Surface Studies in PLT, PDX, and TFTR with S.A. Cohen and H.F. Dylla, Symposium of Effective Utilization of Surface Analysis Techniques, Sapporo, Japan (1982).

 \*24) The Development of a Universal Diagnostic Probe System for TFTR with R. Mastronardi and R. Cabral, NASA 16th Aerospace Mechanism Symposium, NASA JFK, Florida (1982).

 25) Totally Optical Ambient NMHC Monitor with H. Volltrauer and J. Allen, Aerochem Research Labs Final Report P-423, November (1982).

 26) A Universal Diagnostic probe system for Tokamak Fusion Test Reactor with R. Mastronardi and R. Cabral, 10th Symposium on Fusion Engineering Proceedings, 1507-11 vol. 2. (1983).

 \*27) Effect of Molecular Structure on Soot Formation with H.F. Calcote, Combustion and Flame vol. 49, 289 (1983).

 \*28) High-beta experiments with neutral-beam injection on PDX with D. Johnson et. al., Nucl. Fusion. Suppl. vol. 1, 9-26 (1983).

 \*29) High confinement discharges in PDX with neutral beam injection with S.M. Kaye, 11th European Conference on Controlled Fusion and Plasma Physics, 19-22 vol. 1 (1983).

 \*30) High-power ICRF and ICRF plus neutral-beam heating on PLT with D. Hwang et. al., Nucl. Fusion Suppl. vol. 2, 3-15 (1983).

 \*31) Initial Results From the Scoop Limiter Experiment in PDX with R. Budny et. al., J. Nucl. Mater. vol. 121, 294 (1984); also as Princeton Plasma Laboratory Report PPPL-2061, August (1983).

 32) Limiter Designs for PLT/SSX with J. Timberlake et. al., Bull. Am. Phys. Soc. vol. 28, 1093 (1983).

 \*33) Measurements of Energetic Ion Losses from PLT During ICRF and NB Heating with R. Kaita et. al., PPPL-IM-May (1983).

 34) PDX Experimental Results in FY82 with S.M. Kaye et. al., Princeton Plasma Physics Laboratory Report PPPL-2016, 45 pp. (August 1983).

 \*35) Perturbation of Tokamak Edge Plasma by Laser Blow-Off Impurity Injection with R. Budny et. al., J. Vac. Sci. Technol. A. vol. 1, 837 (1983).

 \*36) Photography of the PLT Plasma During Impurity Injection with J. Timberlake and S. Cohen, J. Vac. Sci. Technol. A vol. 1, 841 (1983).

 \*37) Plasma Edge Studies Using Carbon Resistance Probes with W.R. Wampler, J. Vac. Sci. Technol. A. vol. 1, 827 (1983).

 \*38) Plasma Rotation in the PDX Tokamak with K. Brau et. al., Nuclear Fusion vol. 23, 1643-55 (1983); also as Princeton Plasma Physics Laboratory Report PPPL-2013, June (1983).

 \*39) Recent results on ICRF heating on PLT with J.R. Wilson et. al., IEEE Conf. Record vol. 89, 1656 (1983).

 \*40) Study of High Beta Pressure Driven Modes in PDX with K. McGuire et. al., Phys. Rev. Lett. vol. 50, 891-5 (1983).

 \*41) TFTR Prototype Electrostatic Calorimeter Probe Head with R. Budny and S.A. Cohen, J. Vac. Sci. Technol. A. vol. 1, 845 (1983).

 \*42) X-Ray Spectroscopy on Tokamaks with S. von Goeler et. al., Diagnostics for Fusion Reactor Conditions EUR 8351-1 EN, published by Commission of the European Communities; also as Princeton Plasma Physics Laboratory Report PPPL-2013, June (1983).

 \*43) Attainment of high Confinement in Neutral Beam Heated Divertor Discharges in the PDX Tokamak with S.M. Kaye et. al., J. Nucl. Mater. vol. 121, 115-65 (1984).

 \*44) Confinement Studies of Ohmically-Heated Plasmas in TFTR with P.C.Efthimion et. al., Proc. of the Tenth Internat. Conf. on Plasma Physics and Controlled Nuclear Fusion Research vol. I, 29, London (Sept. 1984).

 \*45) Examination of the Damage to a Graphite Probe Cap Exposed to RF Heating in PLT Plasmas with T. Bennett et. al., J. Vac. Sci. Technol. vol A2, (1984).

 \*46) High Energy and particle confinement times in PDX scoop discharges with R. Budny et. al., J. Nucl. Mater. vol. 128-129, 425-29 (1984).

 \*47) H-Mode Studies in PDX with R.J. Fonck et. al., Princeton Plasma Physics Laboratory Report PPPL-2118, July (1984).

 \*48) Initial limiter and getter operation in TFTR with J.L. Cecchi et. al., J. Nucl. Mater vol. 128-129, 1-9 (1984).

 \*49) Initial Results from the scoop limiter experiment in PDX with R. Budny et. al., J. Nucl. Mater. vol. 121, 294-303 (1984).

 \*50) Measurements of Low Energy Neutral Hydrogen Efflux During ICRF Heating with S.A. Cohen et. al., Nuclear Fusion vol. 24, 1490-5 (1984).

 \*51) Particle and Heat Flux Measurements in PDX Edge Plasmas with R. Budny, J. Nucl. Mater. vol. 121, 41-7 (1984); Princeton Plasma Physics Laboratory Report PPPL-2061, December (1983).

 \*52) Plasma Materials Interactions during Rf Experiments in Tokamaks with S.A. Cohen et. al., J. Nucl. Mater. vol. 128-129, 280-291 (1984).

 53) PLT Ion Cyclotron Range of Frequencies Heating Program with J. Hosea et. al., Princeton Plasma Physics Laboratory Report PPPL-2117, September (1984).

 \*54) Preparation and Analysis of Carbon Foils Implanted with 100 uCi Tritium with J. Timberlake et. al., J. Vac. Sci. Technol. vol A2, 645 (1984).

 55) Recent Results from TFTR with R.J. Hawryluk et. al., Proc. 4th International Symposium on Heating in Torodial Plasmas vol. 2, 2 (1984).

 561) The PLT Rotating Limiter Experiment with S.A. Cohen et. al., J. Nucl. Mater vol. 128-129, 430-3 (1984); also as Princeton Plasma Physics Laboratory Report PPPL-2123, July (1984). also as Power Measurements in the PDX Scrape-Off Layer with S. Cohen, Bull. Am. Phys. Soc. vol. 25, 929 (1980).

 \*57) Totally Optical Technique for Monitoring Ambient Non-Methane Hydrocarbons with Hermann N. Voltrauer et. al., NTIS Tech Notes, (September 1984).

 58) A Ground Based Experimental Test Program to Duplicate and Study the Spacecraft Glow Phenomena with W.D. Langer et. al., Proc. of Workshop on Spacecraft Glow, NASA, Huntsville, AL, May (1985).

 \*59) Acceleration of Beam Ions During Major-Radius Compression in the Tokamak Fusion Test Reactor with K.L. Wong et. al., Phys. Rev. Lett. vol. 55,2587-2590 (1985); also as Princeton Plasma Physics Laboratory Report PPPL-2247,September (1985).

 \*60) Confinement studies in TFTR with M. Murakami et. al., Fusion Technol. vol. 8, 657-63 (1985).

 \*61) Confinement Studies of Neutral Beam Heated Discharges in TFTR with

M. Murakami et. al., Plasma Physics and Controlled Fusion vol. 28, No. 1A,17-27, (1986); Princeton Plasma Physics Laboratory Report PPPL-2285,

November (1985).

 \*62) Diagnostics for Process Plasmas with H.F. Dylla, Mat. Res. Soc. Symp. Proc. vol. 38, 3 (1985).

 \*63) Q=1 MHD Activity in PLT Studied with Aluminum Injection as a Diagnostic Tool with A. Compant La Fontane et. al., Plasma Physics and Controlled Fusion vol. 27, 229-43 (1985).

\*64) Synergistic Effects in Fusion Machines: Session Summary with R.A. Langley and J. Roth. Proc. of the Workshop on Synergistic Effects in Surface Phenomena Related to Plasma-Wall Interactions vol. 89, 5-11, (1985).

 \*65) Characterization of the Tokamak Fusion Test Reactor Plasma Edge by Langmuir-Calorimeter Probes with S.J. Kilpatrick et. al., J. Vac. Sci. Technol. vol. A4, 1817 (1986); Princeton Plasma Physics LaboratoryReport PPPL-2284, March (1986).

 \*66) Coherent and Turbulent Fluctuations in TFTR with K. McGuire et. al., Proc.11th IAEA on Plasma Physics, IAEA-CN-471 (1986).

 \*67) Confinement studies of neutral beam heated discharges in TFTR with M. Murakami et. al., Plasma Phys. Control. Fusion vol. 28, 17-27 (1986).

 \*68) Detection of Surface Glow Related to Spacecraft Glow Phenomenon with W.D. Langer et. al., J. Geophys. Res. Lett. vol. 13, 377 (1986). also as Ground-Based Studies of Spacecraft Glow and Erosion Caused by Impact of Oxygen and Nitrogen with W.J. Langer et. al., Bull. Am. Phys. Soc. vol. 31, 1512 (1986).

 \*69) Discharge Control and Evolution in TFTR with D. Mueller et. al., Princeton Plasma Physics Laboratory Report PPPL-2289, January (1986).

 \*70) Energy Confinement and Profile Consistency in TFTR with R.J. Goldston et. al., Proc. 11th IAEA on Plasma Physics, IAEA-CN-471 p. (1986).

 \*71) Experimental Results from the TFTR Tokamak with R.J. Hawyluk et. al.,Proc. Royal Soc. March 1986; also as Princeton Plasma Physics Laboratory Report PPPL-2390, October (1986).

 \*72) Impurity and Particle Transport and Control in TFTR with K.W. Hill et. al., Proc. 11th IAEA on Plasma Physics, IAEA-CN-471 p. (1986)

 \*73) Power Transport to the PDX Scoop Limiter with H.W. Kugel et. al., Fusion Technology; also as Princeton Plasma Physics Laboratory Report PPPL-2363, July (1986).

 \*74) Preliminary Measurements of Beam Energy Spectrum and Impurity Content for the TFTR Neutral Beam Injectors with R.A. Langley et. al., J. Vac. Sci. Technol. vol. A4, 1087 (1986).

 \*75) Probes for Edge Plasma Studies of TFTR with R.V. Budny et. al., Rev. Sci. Instrum. (1986).

 76) Probes for Plasma Edge Diagnostics in Magnetic Confinement Fusion Devices with G.M. McCracken, Physics of Plasma Wall Interactions in Controlled Fusion,D.E. Post and R. Behrisch, editors, Plenum Press, New York, NY, 135-209 (1986).

 \*77) TFTR Confinement Results with M.G. Bell et. al., Plasma Phys. Control. Fusion vol 28, 1329-1340 (1986).

 \*78) TFTR Plasma Regimes with R.J. Hawryluk et. al., Proc. 11th IAEA on Plasma Physics, as IAEA-CN-471 p. (1986).

 \*79) Use of Graphite in Langmuir Calorimeter Probe Heads with S. Kilpatrick et. al., Rev. Sci. Instrum. vol. 27, 2075 (1986).

 80) Diagnostic Methods for Low Temperature Plasmas with H.F. Dylla, Plasma Etching and Chemistry, Book Chapter. D.M. Manos and D.L. Flamm, eds., Academic Press, NY (1987).

 \*81) Edge Measurements During ICRF Heating in PLT with I.S. Lehrman et. al., J. Nucl. Mater. vol. 145-147, 250-254 (1987);also as Proceedings of the Seventh APS Topical Conference on Applications of Radio-Frequency Power to Plasmas, Kissimmee, FL, 274-277 (May 1987)

 \*82) Edge Turbulence Measurements in TFTR with S.J. Zweben, J. Nucl. Mater. Vol. 145-147, 250-254 (1987).

 \*83) Energy Confinement and Profile Consistency in TFTR with R.J. Goldston et. al., Princeton University Plasma Physics Laboratory Report PPPL-2425,17 pp. (April 1987); Proceedings of the Eleventh International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Kyoto, Japan (November 1986); Paper IAEA-CN-47-A-II-1.

 \*84) Evolution of TFTR Scrape-Off Plasmas With Neutral Beam Injection with R. Budny et. al., J. Nucl. Mater. vol 145/146, 245-249 (February 1987);also as Princeton University Plasma Physics Laboratory Report PPPL-2364, 16. pp. (September 1986).

 \*85) Experimental results from the TFTR tokamak with R.J. Hawryluk et. al., Philosophical Transactions of the Royal Society of London A vol. 322, 147-162 (1987).

 86) Groundbased Spacecraft Glow by Impact of O and N Beams with W.D. Langer,Proc. 18th Int. SAMPE Conf., Oct 7-8, (1987), Seattle, WA.

 \*87) High Power Neutral Beam Heating Experiments on TFTR with Balanced and Unbalanced Momentum Input with M. Bitter et. al., Plasma Phys./Control. Fusion vol. 29, 1235-1245 (October 1987).

 \*88) High Temperature Plasmas in the Tokamak Fusion Test Reactor with J.D.Strachan et. al., Phys. Rev. Lett. vol. 58, 1004-1007 (1987).

 \*89) Neutral beam injection on the Tokamak Fusion Test Reactor with L.R. Grisham et. al., Nucl. Instrum. Methods Phys. Res. B vol. B24-B25, 741-745 (1987).

 \*90) Neutral Particle Surface Alteration with R.W. Motley, W.D. Langer, and S.A. Cohen, U.S. Patent 4,662,977 (May 5, 1987).

 \*91) Plasma-Material Interactions in TFTR with H.F. Dylla et. al., J. Nucl. Mater. 145/146, 48-60 (Feb 1987); also as Princeton University Plasma Physics Laboratory Report PPPL-2386, 44 pp. (October 1986).

 \*92) Power Transport to the PDX Scoop Limiter with H.W. Kugel et. al Fusion Technol. vol 12, 145-152 (July 1987); also as Princeton Plasma Physics Laboratory Report PPPL-2362, 31 pp. (July 1986);).

93) Prospects for Rf wave measurements using probes on TFTR with G.J. Greene et. al., IEEE Conf. Proc. p 130, 33 (1987). .

 \*94) An Overview of TFTR Confinement with Intense Neutral-Beam Heating with M.G. Bell et. al., Plasma Physics and Controlled Nuclear Fusion Research vol. 1, 27(October 1988).

 \*95) Current drive and confinement of angular momentum in TFTR with S.D. Scott et. al., Plasma Physics and Controlled Nuclear Fusion Research, 655-67(1988).

 \*96) Fast-Probe Plasma Diagnostics with S.J. Kilpatrick, Mat. Res. Soc. Symp. vol 117 (1988).

 \*97) Stability of TFTR Plasmas with J. Manickam et. al., Plasma Physics and Controlled Nuclear Fusion Research vol. 1, 395-407 (October 1988); also as Int. Atomic Energy Agency Report IAEA-CN-50/A-VIII-4.

 \*98) Transport and Stability Studies on TFTR with K.M. McGuire et. al., Plasma Phys./Control. Fus. vol. 30, 1391-1403 (November 1988); also as Princeton University Plasma Physics Laboratory Report PPPL-2551, 21 pp. (October 1988).

 \*99) Transport in TFTR Supershots with M.C. Zarnstorff et. al., Proceedings of the Twelfth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Vienna, Austria (1988); Paper IAEA-CN-50/A-3-3, Vol. I, p 183-191.

 \*100) Tritium Retention in TFTR with R. Bastasz et. al., Princeton Plasma Physics Laboratory Report PPPL-2523, 127 pp. (April 1988); also as Sandia National Laboratories, SAND 88-8212, 127 pp. (April 1988).

 \*101) An Overview of TFTR Confinement with Intense Neutral Beam Heating with M.G. Bell et. al., Plasma Phys./Control. Nucl. Fus. Res. vol. I, 27-40 (1989).

 \*102) Collector Probe Measurements of Ohmic Conditioning Discharges in TFTR with S.J. Kilpatrick et. al., J. Nucl. Mater. vol. 162-164, 757-762 (1989; also as Princeton University Plasma Physics Laboratory Report PPPL-2600, 20 pp. (1989).

 103) Confinement in TFTR with K. McGuire et. al., Proc. All-Union Seminar on Toroidal Systems, Dubna, USSR, (February 1989).

 \*104) Current Drive and Confinement of Angular Momentum in TFTR with S.D. Scott et. al., Plasma Phys./Control. Nucl. Fus. Res. vol. 1, 655-667 (1989).

 105) Development of Laser Release Analysis Diagnostic for the TFTR Bumper Limiter with J.R. Timberlake et. al., Proc. Conf. on Canadian Fusion Fuels Technology Project, Toronto, Canada (November 1989).

\*106) First-Wall Conditioning for Enhanced Confinement Discharges and the DT Experiments in TFTR with H.F. Dylla et. al., J. Nucl. Mater. vol 162/164, 128-137 (1989); also as Princeton Plasma Physics Laboratory Report PPPL-2570, 24 pp. (November 1988).

 \*107) Hydrogen Isotope Trapping on Graphite Collectors During and Isotope Exchange Experiment in the Tokamak Fusion Test Reactor with S.J. Kilpatrick et. al., J. Vac. Sci. Technol. vol. A7, 1087-1091 (May/June 1989); also as Princeton Plasma Laboratory Report PPPL-2599, 19 pp. (March 1989).

 \*108) Probe Measurements of TFTR Edge Plasmas of the Neutral Beam Heating Powers up to 20 MW with S.J. Kilpatrick, M.G. Bell, R.V. Budny, and M. Ulrickson, J. Nucl.Mater. vol. 162-164, 251-257 (1989).

  \*109) Progress in the Neutral Beam Injection Heating Experiment on Tokamak Fusion Test Reactor with L.R. Grisham et. al., Nucl. Instrum./Methods vol. B40/41, 996-999 (1989).

 \*110) Stability of TFTR Plasmas with J. Manickam et. al., Proceedings of the Twelfth International Conference on Plasma Physics and Controlled Nuclear Fusion Research vol. I, 395-407, Vienna, Austria (1989).

 \*111) A Review of Carbon Blooms on JET and TFTR with M. Ulrickson et. al., J. Nucl. Mater. vol. 176/177, 7 pp. (1990).

 \*112) Commercially designed and manufactured storage ring for synchrotron radiation applications with M.A. Green et. al., Nucl. Instrum. Methods Phys. Res. A vol. 291, 464-71 (1990).

 \*113) Correlations of Heat and Momentum Transport on TFTR with S.D. Scott at. al., Phys. Fluids vol. B2, 1300-1305 (June 1990).

 \*114) Effects of Boronization of the First Wall in TFTR with H.F. Dylla, J. Nucl. Mater. vol 176, 137 (1990).

 \*115) First-Wall Behavior in TFTR with C.S. Pitcher et. al., Proceedings of the Seventeenth European Conference on Controlled Fusion and Plasma Heating, Amsterdam, The Netherlands (June 1990).

 \*116) High-Beta Operation and Magnetohydrodynamic Activity on the TFTR Tokamak with K. McGuire et. al., Phys. Fluids vol. B2, 1287-1290 (June 1990); also as Princeton Plasma Physics Laboratory Report PPPL-2674, 15 pp. (April 1990).

 \*117) ICRF Heating in Several Regimes on TFTR with J. Hosea et. al., Proceedings of the Thirteenth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Washington, D.C. (October 1990); Paper IAEA-CN-53/E-1-5.

 118) ITER Diagnostics Conceptual Design with M. Adams et. al., ITER Documentation Series No. 33, International Atomic Energy Agreement, Vienna, Austria (1990).

 119) ITER Operation and Diagnostics with V. Mukhovatov, Proceedings of the Thirteenth International Conference on Plasma and Controlled Nuclear Fusion Research, Washington, D.C., (1990); Paper IAEA-CN-53/F-3-17.

 120) Limiter H-Mode Experiments on TFTR with C. Bush et. al., Proceedings of the Thirteenth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Washington, D.C. (October 1990); Paper IAEA-CN-53/A-4-5.

  \*121) Midplane Measurements of MeV Ion confinement in TFTR with R. Boivin, S. Kilpatrick, and S.J. Zweben et. al., Rev. Sci. Instrum. vol. 61 (101) 3208-3210 (1990).

 122) Modeling of Carbon in the TFTR Edge Plasma with B.J. Braams et. al., Europhysics Conference Abstracts, Part III, p. 1417 (European Physical Society, 1990).

 \*123) Ohmic and neutral beam heated detached plasmas on TFTR with C.E. Bush, J. Nucl. Mater. vol. 176-177, 785-91 (1990).

 \*124) Peaked Density Profile Circular Limiter H-Modes on TFTR with C.E. Bush, Phys. Rev. Lett. vol. 65, 424-427 (July 1990); also as Princeton University Plasma Physics Laboratory Report PPPL-2693 (June 1990), 17pp.

 \*125) Power and Particle Balance During Carbon Blooms, with S. Pitcher et. al. Phys. Fluids vol. B2, 1287-1290 (June 1990).

 \*126) Recent TFTR Results with D.M. Meade et. al., Proceedings of the Thirteenth International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Washington, D.C. (October 1990); Paper IAEA\*175) Summary of TFTR Diagnostics, Including JET and JT-60 with K.W. Hill et. al., Princeton University Plasma Physics Laboratory Report PPPL-2690 (May 1990).

 \*127) The Boundary Plasma Behavior During Neutral Beam Injection in TFTR with C.S. Pitcher, R.V. Budny, S.J. Kilpatrick, S.S. Medley and A.T. Ramsey, J. Nucl. Mater. (1990).

\*128) The Effect of Plasma Density on the Behavior of the Plasma Boundary in Helium Discharges in the Tokamak Fusion Test Reactor with S.J. Kilpatrick et. al., J. Vac. Sci. Technol. vol A8 3, 1767-1771 (May/June 1990); also as Princeton Plasma Physics Laboratory Report PPPL-2683, 14 pp. (March 1990).

 \*129) The PPPL Lorentz Orbit Code with J. Felt, C.W. Barnes, R.E. Chrien, S.A. Cohen, W.W. Heidbrink and S. Zweben, Rev. Sci. Instrum vol. 61, 3262-3264 (October 1990).

 130) Vacuum System Design for LSU Electron Storage Ring with H.F. Dylla, P. LaMarche, J. Citrolo and M. Ulrickson, Nineteenth Annual Symposium on Applied Vacuum Science and Technology, Clearwater, FL (February 1990).

 131) Carborane films: Applications to first-wall problems in Tokamaks with B.L. Doyle, D.S. Walsh, W.R. Wampler, A.K. Hays, H.F.Dylla, and S.J. Kilpatrick, AIP Conf. Proc., 639-642 (1991).

 \*132) Diagnostics of low temperature plasmas: the electron component with J.L. Cecchi, C.W. Cheah, and H.F. Dylla, Thin Solid Films vol. 195, 319-336 (1991).

 \*133) High-Q Plasmas in the TFTR tokamak with D.L. Jassby et. al., Phys. Fluids B vol. 3, 2308-15 (1991).

 \*134) ICRF Heating in Several Regimes on TFTR with J. Hosea et. al., Proceedings of the Thirteenth International Conference on Plasma Physics and Controlled Nuclear Fusion Controlled Nuclear Fusion Research, Washington, D.C. (1991).

 \*135) ITER Conceptual Design Report with S.A. Cohen, K. Young, R. Kaita and the ITER Participants, ITER Documentation Series No. 18, International Atomic Energy Agency, Vienna, Austria (1991).

 116) ITER Diagnostics: Progress in the U.S. , with K.M. Young, K.W. Hill, and G. Schilling, Bull. Am. Phys. Soc. Vol. 36, 2276 (1991).

 \*137) ITER Diagnostics with V. Mukhovatov et. al., ITER Documentation Series, No.33, International Atomic Energy Agency, Vienna, Austria, 1-135 (1991).

 138) Limiter H-Mode Experiments on TFTR with C.Bush, Proc. 13th Int Conf.Plasma Physics and Controlled Nuclear Fusion, Washington, D.C. (1990);Atomic Energy Agency, Vienna, Austria (1991).

 139) Overview of TFTR transport studies with R.J. Hawryluk et. al., Plasma Phys. Control. Fusion vol. 33, 1509-36 (1991).

\*140) Physics and Technology R &D for Conceptual Design with S.A. Cohen, D. Post,K. Young, R. Kaita, and ITER participants, ITER Documentation Series No 19,International Atomic Energy Agency, Vienna, Austria (1991).

 141) Plasma Flow to the TFTR Bumper Limiter with C.S. Pitcher et. al., Bull. Am. Phys. Soc. Vol. 36, 2451 (1991).

 \*198) Power and Particle Balance During Carbon Blooms in TFTR Discharges withC.S. Pitcher, J. Nucl. Mater. (1991).

 \*142) The Effect of Limiter Conditioning on the Tokamak Fusion Test Reactor Edge Plasma with S.J. Kilpatrick, J. Vac. Sci. Technol. vol. 9, 742-746 (1991).

 \*143) The Influence of Unbalanced Injection on the Edge Structure of a Tokamak with A. Chankin, A. Ramsey, C. Bush, K. Hill and S. Kilpatrick, Proc. Int. Conf. on Plasma Materials Interaction, Bournemouth, UK (1991).

 \*144) A Database for Edge Turbulence and Transport Studies with H. Tsui et. al., J. Nucl. Mater. Vol. 196-198, 794 (1992).

 \*145) Contamination Control in the Design and Manufacture of Gas Flow Components, with J. Sullivan, S. Schaffer, S. King, and H.F. Dylla, J. Vac. Sci. Technol. Vol. A10, 1869-74 (1992).

 \*146) Edge Plasma and Fluctuations in TFTR with H. Tsui, A. Rudyj, Ch. Ritz, and A. Wooten, J. Nucl. Mater., vol. 196-198, 292 (1992).

 \*147) Effect of the Boundary Plasma on TFTR Ohmic Discharges with C.S. Pitcher et. al., Nuc. Fus. Vol. 32, No. 2, 239-256 (1992).

 148) Experiments on TFTR Supershot Plasmas with J.D. Strachan et. al., Princeton University Plasma Physics Laboratory Report PPPL-2841, 31 pp. (May 1992).

 \*149) Laboratory Characterization of Spectroscopic Markers for Surface Erosion by Plasmas with T. Bennett, M. Herzer, and J. Schwartzman, J. Nucl. Mater. Vol. 196-198, 933 (1992).

 \*150) Noble Gas Pumping by the TFTR Graphite Limiter with A.T. Ramsey, J. Nucl. Mater. vol. 196-198, 509 (1992).

 \*151) Oxide Degradation Effects in Dry Patterning of Resist Using Neutral Oxygen Beams with W.E. Mlynko, and S.R. Kasi, Material Res. Society vol. 41-8, 405 (1992).

 \*152) Plasma Fluxes to surfaces for an oblique magnetic field with C. Pitcher et. al., J. Nucl. Mater. Vol 196-198, 794 (1992).

 \*153) A comparison of edge turbulence in tokamaks, stellarators, and reversed-field pinches with H.Y.W. Tsui et. al., Phys. Fluids B vol. 5, 2491-7 (1993).

 \*154) Correlation of outgassing of stainless steel and aluminum with various surface treatments with H.F. Dylla, and P.H. LaMarche, J. Vac. Sci. Technol. Vol. A11, 2623-36 (1993).

 \*155) A new device for injection of iron atoms into plasmas with H. Hsuan et. al., Rev. Sci. Instrum. vol. 66, 568-70 (1995).

 \*156) NDE Applications of Radio Wave Emission From Stress and Fracture with A. Friedman, M. Hinders, B. Smith, and T. Venhaus, Reviews of Progress in Quantitative Nondestructive Evaluation, vol. 14, 1175-1182 (1995).

 \*157) Chris .A. Nichols and D. M. Manos, "Simulation of a surface-reflection neutral stream source", J. of App. Phys. 80, p2643, (1996)

 158) Deuterium Desorption from Beryllium, R. Bastasz, J. Whaley, T. Venhaus, and D. M. Manos, Proc. Int. Conf. Effects Hydrogen on Behavior of Materials, Mineral,Metal, Materials Society, Warrendale PA, pg 251,(1996)

 159) Ionized Gases: Science and Technology of Plasmas, J. Diggs and D. M. Manos, AVS Monograph Series M‑16, P. Thiel and D. Fowler, eds, 62‑69, (1996).

 \*160) Gas Permeation and Leakage through Through Reusable Seals, M. Johnson, T. Provost,and D. M. Manos, J. Vac. Sci. Technol., 15, 763, (1997)

 \*161) Stripping and cleaning of photoresist using low energy neutrals, Xianmin Tang, C. A. Nichols and D. M. Manos, J. Appl. Phys, Vol.86, p.2419-2424, (1999).

\*162) Characterization and modeling of a microwave driven xenon excimer lamp, J. D Ametepe, Jessie Diggs, D. M Manos, M. J. Kelley, J. Appl. Phys. 85(11), 7505-7510, (1999).

\*163) Xianmin Tang and D. M. Manos, Time-resolved electrostatic probe studies of a pulsed inductively coupled plasma", Plasma Sources Sci. and Technol., 8(1999) 594-602.

 164) Xianmin Tang, Qi Wang and D.M.Manos, "Process-induced damage by low energy neutrals", The 4th International Symposium on P2ID, Monterey, CA, May, 1999p.116-119.

 \*165) Optical emission studies and neutral stream characterization of a surface reflection materials processing source, X. M. Tang and D. M. Manos, J Vac Sci Technol, A18, 1359, (2000)

\*166) Process damage assessment of a low-energy inductively-coupled plasma-based neutral beam source, X. M. Tang, Qi Wang, and D. M. Manos, J. Vac. Sci. Technol B18,1262, (2000)

167) Lingling Wu, Hongjun Gao, Dennis M. Manos, Pattern Writing by Implantation in a Large-scale PSII System with Planar Inductively Coupled Plasma Source, Proc. Mat. Research Soc, 2000

\*168) Analysis of diamond-like carbon and Ti.MoS2 coatings on Ti-6Al-4V substrates for applicability to turbine engines, L. L. Wu, C. R. Kalil, A. Prasad, B. Holloway, and D. M. Manos, Surface and Coatings Techologies, v130, 207, (2000)

169) Characterization of titanium alloy surface treatments for adhesive bonding using atomic force microscopy techniques. J. C. Williams, S. Lowther, C. Park, T. St. Clair, C. Kalil, and D. M. Manos, Proc. 23rd Annual Meet. Adhes. Soc., p276-278, (2000).

177) Micro-processing using plasma source ion implantation, N. Theodore, L. Wu, C. Sinclair, T. Siggins, and D. Manos, Proc. 14th University/Government/Industry Microelectronics Symposium, Jun 2001, Richmond VA, ISBN, 0749-6877, 126, (2001)

178) Optical Lithography Using Excimer Lamps: 172nm and beyond, J. Diggs, J. Ametepe, S. Peng, M. Kelley, and D. M. Manos, Proc. 14th University/Government/Industry Microelectronics Symposium, Jun 2001, Richmond VA, ISBN, 0749-6877, 135, (2001)

179) Dramatic reduction of dc field emission from large area electrodes by plasma-source ion implantation, C. K. Sinclair, H. F. Dylla, and T. L. Siggins, T. J. Venhaus, L. Wu, and D. M.Manos, 29th Proc. Particle Accelerator Conference, July 2001, AIP Press,(2001)

180) Shenggang Liu,   D.C. Huong,  Dajun  Zhu ,  Chengyue Li,   D.M.  Manos, Theoretical study of a microwave system for the plasma microwave excited excimer laser, ,**Infrared and Millimeter Waves,** 73- 74, (**2002) (**ISBN: 0-7803-7423-1)

181)“Surface Processing Using Plasma Source Ion Implantation.” , Nimel Theodore, Ling Ling Wu, Dennis Manos.  Proceedings of the 2002 Virginia Space Grant Consortium.  March 2002.

\*182) Theory of Wave Propagation along a waveguide filled with moving magnetized plasma, S. Liu, Y. Yan, J. Mao, and D. Manos, Phys. Rev. E,65,036411 (pg1-8) 2002

183) Nimel Theodore, Ling Ling Wu, Dennis Manos.  "Surface Processing Using Plasma Source Ion Implantation."  Proceedings of the 2002 Virginia Space Grant Consortium.  March 2002.

184) N. D. Theodore, A. L. Wilkerson, D. M. Manos, R. Moore, “Analysis of implanted metal and alloy surfaces”, Proc. Workshop on Thin Films, Surfaces and Materials Processing, Vacuum Society, Newport News, VA, 2002

185) Ga+ TOF-SIMS Lineshape Analysis for Resolution Enhancement of MALDI MS Spectra of a Peptide Mixture, D. I. Malyarenko\*, H. Chen, A. L. Wilkerson, E.R. Tracy, W.E. Cooke, D.M. Manos, Proc SIMS XIV Conference, San Francisco, Sep 2003

\*186) dc field-emission analysis of GaAs and plasma-source ion-implanted stainless steel, with C. Hernandez, et. al., , J. Vac. Sci. Technol.. A, Vol 21, Issue 4, pg 1115-1119, (2003)

244) Field emission of clean and oxidized Mo<110> Microtips, with Xin Zhao, et. al., Proc IVNC, 2004 Tech Digest 17th International Conf., p96-97 (2004)

\*187) Carbon nanotube field emitter and back-gated structure, with MY Zhu, et. al.  , **Proc. IVNC 2004.,** pages 98- 99, **2004**

\*188) Field emission from a  Ca nanotip grown on a  Mo<110> Microtip, with Xin Zhao, et. al., Applied Physics Letters, Vol 85, Issue 8, pp. 1415-1417 ,(2004)

\*189) Free-standing subnanometer graphite sheets, with J.. J. Wang, et. al., Applied Physics Letters, Vol. 85, Issue 7, pp. 1265-1267, ,(2004)

\*190) “Synthesis of carbon nanosheets by inductively coupled radio-frequency plasma enhanced chemical vapor deposition” with Jianjun Wang, et. al., *Carbon*, 42(14) 2867-2872, (2004)

\*191) “Synthesis and field-emission testing of carbon nanoflake edge emitters”, with Jianjun Wang, et; al;, J. Vac. Science & Technol. B: Microelectronics and Nanometer Structures,Vol. 22, Issue 3, pp. 1269-1272 (2004)

\*192) Ga+ TOF-SIMS Lineshape Analysis for Resolution Enhancement of MALDI MS Spectra of a Peptide Mixture with D.I. Malyarenko, et. al., Appl. Surf. Sci., 231-232, pp.357-361. (2004)

\*193) “Enhancement of Sensitivity and Resolution of Surface-Enhanced Laser Desorption/Ionization Time-of-Flight Mass Spectrometric Records for Serum Peptides Using Time-Series Analysis Techniques”, with Dariya I. Malyarenko, et. al., *Clinical Chemistry*, **2005**, 51(1), 65-74

\*194) NIH SBIR Phase II Final Progress Report 2004, *INCOGEN Final Report 02-24-05, W&M Subcontract* (Malyarenko, D., Miller, J., Lee, Y., Sasinowski, M.) Feb. 2005

\*195) “Nitrogen-Implanted Silicon Oxynitride: A Coating for suppressing field emission from Stainless Steel Used in High-Voltage Applications”, with ND Theodore, et. al., IEEE Transactions in Plasma Science, 34, (4), 1074-1079, (2006)

196) "Two-Dimensional Carbon Nanostructure - Carbon Nanosheets and Their Applications", with Mingyao Zhu, et. al., Proc. Virginia Nanotech Conference, June 11-13, Newport News, VA, 2006.

197) “Analysis and kinetic model of a high-pressure KrI excimer emission in a novel capacitively coupled rf lamp “,S. Peng, J. Ametepe, DM Manos, Applied Physics B, Volume 83, Issue 4, pp.643-650, (2006)

\*198) “Deconvolution Filters to Enhance Resolution of Dense Time-of-Flight Survey Spectra in Time-Lag Optimization Range”, with Malyarenko, D.I., et. al., RapidCommun. Mass. Spec., 20 (112), p. 1661-1669 (2006)

\*199) “Resampling and deconvolution of linear time-of-flight records for enhanced protein profiling”, D.I. Malyarenko, W.E Cooke, E.R Tracy, M.W Trosset, O.J Semmes, M Sasinowski, D.M Manos, Rapid Commun. Mass. Spec., 20 (112), p. 1670-1678 (2006)

\*200) "High field emission reproducibility and stability of carbon nanosheets and nanosheet-based backgated triode emission devices", with Sigen Wang, et. al., Applied Physics Letters  (2006),  89(18),  183103/1-183103/3.

\*201) A Mechanism for Carbon Nanosheet Formation” with Mingyao Zhu; et. al., Carbon, 45, 2229-2234, (2007) DOI:10.1016/j.carbon.2007.06.017.

\*202) " Synthesis of carbon nanosheets and carbon nanotubes by radio frequency plasma enhanced chemical vapor deposition", with Mingyao Zhu, et. al., Diamond and Related Materials, Vol. 16, 196-201 (2007)

203) "High Brightness Field Emission from Carbon Nanosheets and Back-gated Devices", with Mingyao Zhu, et. al., Proc. IEEE March 2007, p58,Richmond, VA

204) “Field emission observation of carbon nanosheet thin film by photoelectron emission microscopy (PEEM)”, with Kun Hou, et. al., Proc 20th IVNC, July 2007

205) “Low temperature synthesis of two-dimensional carbon nanosheets as a field electron emission material”,with Mingyao Zhu, et. al., Proc. 20th IVNC, Chicago, Ill., July 2007

206) “MALDI-TOF Signal Processing Optimization up to 100,000 m/z for Serum Proteins” with H. Chen, et. al., Proc. 55th ASMS Conference of Mass Spectrometry Indianapolis , IN, June 2007

\*207) Semiclassical treatment of excimer spectral line shape for rare gas halides, S Peng, J B Delos, J D Ametepe and D M Manos 2007 *J. Phys. B: At. Mol. Opt. Phys.* **40** 1161-1172   doi: [10.1088/0953-4075/40/6/007](http://dx.doi.org/10.1088/0953-4075/40/6/007)

208) “Precision Enhancement of MALDI-TOF Spectrometry using High-Resolution Peak Detection and Label-Free Alignment”  with Maureen B. Tracy, et. al., Proc 55th ASMS Conference of Mass Spectrometry Indianapolis , IN, June 2007

\*209) “Automated Peak Identification in a Tof-MS Spectrum”, with Haijian Chen, et. al.,in *Quantitative Medical Data analysis Using Mathematical Tools and Statistical* *Techniques (edited by D. Hong and Y. Shyr)*, p113-p131, World Scientific Publications, Singapore, 2007

210) “Creation and Optimization of Mass Spectrometry Diagnostic Workflows using Visual Programming Interface” with Maciek Sasinowski, et. al. 55th ASMS Conference of Mass Spectrometry Indianapolis , IN, June 2007

211) “Computational Detection and Experimental Verification of Ionization Noise versus Molecular Signals in MALDI-TOF of Protein Mixtures”, with D. Malyarenko, et al, Proc. 56th ASMS Conference of Mass Spectrometry, #2197, (2008)

\*212) "Field emission from Mo2C coated carbon nanosheets," with M. Bagge-Hansen, et. al., Journal of Applied Physics 103, 014311 (2008)

\*213) “Uniform and enhanced field emission from chromium oxide coated carbon nanosheets”, with [Kun Hou](http://scitation.aip.org/vsearch/servlet/VerityServlet?KEY=ALL&possible1=Hou%2C+Kun&possible1zone=author&maxdisp=25&smode=strresults&aqs=true), et. al.,Appl. Phys. Lett. **92**, 133112 (2008); DOI:10.1063/1.2894201.

\*214) “Field emission from Mo2C coated carbon nanosheets**”,** with M. Bagge-Hansen, et. al**,** , J. Appl. Phys. **103**, 014311 (2008); doi:10.1063/1.2829810

225) “High Brightness Electron Sources”, Final Report to Naval Sea Systems Command Code PMS 405, September 2009

216) “Sample Preparation and Instrumental Protocols for Improved Reflectron and LIFT Detection of Ions Up to 10 kDa”, with Christine Bunai, Proc. 57th Conf on Mass Spectrometry, ASMS, Philadelphia, PA June (2009)

217) “Diagnostic Feature Detection of Leukemia Serum Proteins in 2-200 kDa TOF-MS Spectra”, Proc. 57th Conf on Mass Spectrometry, ASMS, Philadelphia, PA June, (2009)

218) “Enhancement of CNS Field Emission Cathodes via Thin Film Coatings”, RA Outlaw, M. Bagge-Hansen, and DM Manos, Technology and Alternatives Working Group Symposium, Colorado Spings, Colorado, July 30, 2009.

\*219) “Low Temperature Synthesis of Carbon Nanosheets by C2H2/H2 Plasma Enhanced Chemical Vapor Deposition”, M.Y. Zhu, R.A. Outlaw, K. Hou, D.M. Manos, Carbon, 2010,

220) Enhancement of MS Signal Processing Toward Improved Cancer Biomarker Discovery, with D. Malyarenko, et. al., Proc. Clinical Proteomic Technologies for Cancer, Advancing Protein Science for Personalized Medicine, p 35, NCI, Oct 5-7, 2009, Bethesda MD

\*221) Hyperthermal atomic hydrogen and oxygen etching of vertically oriented graphene sheets, M. X. Bagge-Hansen, R.A. Outlaw, M.X. Zhu, and D. M. Manos, J. Vac. Sci. Technol. B, vol 27, 2413-2419, (2009)

\*222) Automated assignment of ionization states in broad-mass MALDI-TOF spectra of protein mixtures, with D.I. Malyarenko, Rapid Communications In Mass Spectrometry, vol 24, 138-146, (2010)

223) Effect of Normalization on Diagnostic Protein Detection in 2-200 kDa TOF Mass Spectra from Leukemia Serum, **Maureen, B. Tracy,** Dariya Malyarenko; Dennis Weaver; Karl Kuschner; Christine Bunai; Eugene Tracy; Dennis Manos; William Cooke, 58th ASMS Conference on Mass Spectrometry and Allied Topics, May 23 - 27, 2010 Salt Palace Convention Center, Salt Lake City, Utah

\*224) The initial oxidation of polycrystalline thorium , M. Bagge-Hansen, R. A. Outlaw, M.Y. Zhu, D. M. Manos , *Surface and Interface Analysis, vol x,* DOI 10.1002/sia.3693, (2010)

\*225) Enhanced Field Emission of Vertically Oriented Carbon Nanosheets”, M.Y. Zhu, R.A. Outlaw, M. Bagge-Hansen, H.J. Chen, and D. M. Manos, *Carbon, 49, 2526 (*2011*)*

226)Environmental Remediation and Renewable Energy Through High-yield Algal Aquaculture, Karl W. Kuschner, Charlotte L. Clark, William E. Cooke, Dennis Manos, and Eugene R. Tracy, Proc. Fourth National Conference on Ecosystem Restoration, Baltimore Maryland, August 1, 2011, Baltimore MD

227*\*)* Thermal-Vacuum Stability of the Surface Oxide Complex on Cu, M. Bagge-Hansen, R.A. Outlaw, K. Seo, C. Reese, J. Spradlin , A. M. Valente-Feliciano, and D.M. Manos, J. Vac. Sci. Technol. A 29, 053001 (2011)

228) Remediation and Renewable Energy Through High Yield Algae Aquaculture, William E. Cooke, Karl W. Kuschner, Charlotte L. Clark, Dennis Manos, and Eugene R. Tracy, Proc. Algal Biomass Summit, ABO, Minneapolis Mn, Oct. 25-27, 2011.

229\*) “Improved Signal Processing and Normalization for Biomarker Protein Detection in Broad-Mass-Range TOF Mass Spectra from Clinical Samples”, Proteomics Clin. Appl. 2011, 5, 1–8 DOI 10.1002/prca.201000095, Maureen B. Tracy, Dariya I. Malyarenko, William E. Cooke, Christine L. Gatlin, Lisa H. Cazares, Dennis M. Weaver, O. John Semmes, Eugene R. Tracy, Dennis M. Manos

**Patents Issued and Pending**

1. Surface Modification to Waveguides, J. R. Timberlake, D. N. Ruzic, R. L. Moore, S. A. Cohen, D. M. Manos, US Patent 4,414,244, (1983)
2. Neutral Particle Surface Alteration, R. W. Motley, D, M. Manos, W. D. Langer, S. A. Cohen, US Patent 4,662,977, (1987)
3. Direct Current sputtering of boron from boron/carbon mixtures, J. R. Timberlake, E. Nartowitz, D. M. Manos, US Patent 5,372,686 (1994)
4. Rf capacitively coupled electrodeless light source, D. M. Manos, J. Diggs, J. Ametepe, J. A. Fugit, US Patent 6,130,512, (2000)
5. Microwave-driven ultraviolet light sources, D. M. Manos, J. Diggs, J. Ametepe, US Patent, 6,343,089, (2002)
6. Method of Time-Domain Filtering and Deconvolution of Overlapped Spectral Records in the Presence of Noise, Serial No. 60/502,824 filed on September 12, 2003
7. A compact Vacuum UV spectrometer, S. Peng and D. M. Manos, Patent applied for by AFOSR10/574,507
8. “Synthesis and Field Emission Testing of Carbon Nanoflake Edge Emitters”, U.S. Patent Application filed 04/03/2006, claiming priority to PCT application and ultimately to provisional application filed 10/03/2003 60/984,444
9. “Carbon Nanoflakes and Methods of Making and Using the Same”, U.S. Provisional Patent Application filed 07/07/07.
10. Carbon Nanoflakes and Methods of Making and Using the Same, 60/948,444 (filed 7/07/2007)

# Silicon Oxynitride Coating Compositions, 11/856,814 (filed 09/18/2007)

# Carbon Nanoflake Compositions and Methods of Production, 12/166180, filed 07/07/2008