

DARYUSH ILA, PhD -

Email: dila@uncfsu.edu

Positions Held (selected):

Associate Vice Chancellor for Research and Technology Transfer at FSU,

(<http://www.uncfsu.edu/research>) since 2011 - (Now)

Board of North Carolina Science, Technology and Innovation

(<http://fsunews.uncfsu.edu/?s=Dr.+ILA>)

Professor of Chemistry and Physics at FSU (<http://www.uncfsu.edu/chemistry/faculty-and-staff/daryush-ila>) (Now)

Member of IRB committee and subcommittees (Now)

External Advisory Board member of Tuskegee NSF-MSP (Now)

ORAU consortium Councilor (<https://www.orau.org/university-partnerships/spotlights/fayetteville-state-university.aspx>) (Now)

Member of North Carolina “University Innovation Council”, 2015-17

Executive Director of Alabama EPSCoR Program (<http://uanews.ua.edu/2007/08/ila-named-executive-director-of-alabama-epscor/>) (2007-2010)

Executive Director of Alabama A&M University Research Institute (AAMURI) (1999-June 2010)

<https://www.yumpu.com/en/document/view/42207415/spring-2009-alabama-am-university/27>

Director of Research and Development (AA&MU, 1999)

Director and founder of Center for Irradiation of Materials (CIM: 1991-2010)

(<http://www.slideshare.net/DaryushILA/center-for-irradiation-of-materials-cim-brochure-10207>)

Director of Alabama DOD EPSCoR Program (DEPSCoR 1999-2009)

Chair of the PhD Comprehensive Exam in the Department of Physics

Served as a member of Research Council, Graduate Council, and Safety Committee

Served as a member of the search committee (for Faculty, Chairs, Deans, and Directors)

Served as a member of National and International Science Advisors/Committees/Boards

- Board member of SMMIB, SSTA, VBSC, National Academies, EPSCoR Foundation and others
- Independent Assessment Committee (OSD on-belhalf of Sec. Gates)
- Board member of Small Business and Technology Development Center (SBDTC) , FAY-NC
- Board member - SE Section Secretary of Univ. Space Research Association (USRA)

Major Accomplishments:

NASA Space Act Agreement with FSU

Cooperative Research and Development Agreement (CRADA) with US Army Medical Command

Education Partnership Agreement (EPA) with US Army Research Lab

Mentor Protégé Agreement with several major industries, including ORAU to mentor FSU

Over \$78,000,000 Grants and Contracts as P.D./P.I./P.M.

Over \$80,000,000 Grants and Contracts as Co.I.

Over \$48M of Grants and Contracts are/were from DoD

PI/PD of the Alabama NSF-EPSCoR-RII Project, \$1,500,000.

Over 289 Publications, over 160 presentations and over 68 invited talks

Built a unique strategic partnerships with Private, Public and Federal sectors (>\$140M)

Build partnership with major Universities for joint R&D

Eleven Books, two book chapters and Nine Patents filed

Established Small Business partnering programs (STTR/SBIR, Mentor/Protégé and Training).

Designed an innovative process for high tech based community and economic development.

Established the Research Office and restructured the OSRP at the UNCFSU, 2011.

Science and Technology Roadmap team member, Montgomery, AL.

Established Strategic plans for High-Tech Economic Development

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Educational and Certified Training Background:

➤	Legal trainings in Patent Laws, False Claim Act, Contract Laws 101,	
➤	Techtransfer, Negotiation, Research Institutes, ... (SRA)	2014
➤	Core Facility Management training (SRA)	2013
➤	Training on “ Negotiation in Scientific and Technical Fields” (M.I.T)	2013
➤	Training on Research Administration (SRA)	2010
➤	Training on Contract Proposal Development (SAIC)	2005, 06, & 08
➤	Training on Negotiation for Senior Executives @ Harvard Law School & @ MIT	2004
➤	Training on Challenges of Leadership in Teams @ MIT Sloan School of Management	2003
➤	Training on Industrial Contract Management @ GTRI	2000
➤	Ph.D., Condensed Matter Physics, University of Massachusetts, Lowell, MA.	1984-1987
➤	M.S., Physics (Nuclear Structure/Instrumentation), M. I. T., Cambridge, MA.	1982
➤	B.S., Physics, T.U.	1978

Professional and Administrative Experience:

- **Board of North Carolina Science, Tecnology and Innovation (appointed by Governor McCrory)**
(Presently)
- **External Advisory Board of NSF-MSP grant at Tiskegee University** 2011-now
- ORAU consortium Councilor (Presently)
- **Member of DOD Independent Assessment Committee (OSD on-belhaf of Sec. Gates)**
Dec. 2010-2011
- **Member of NSF Science Master’s Degree Prog. Evaluation Advisory Com.** 2011-2012
- **Board member of Small Bus. & Tech. Dev. Ctr. (SBDTC) , FAY-NC** 2012- present
- **Member of Chief Research Officers of UNC-GA** 2011- present
- **Executive Director/Co-Founder of AAMU Res. Inst.– AAMU** Jan. 1999- 2010
- **Executive Director of Alabama EPSCoR Program** June 2007 - 2010
- **Director/Founder of Center for Irradiation of Materials – Alabama A&M University**-Jan. 1990- 2010
- **Director of Grants & Contracts (just before establishing AAMURI)** 1998 - 1999
- **Professor of Physics – Alabama A&M University** Sept. 1998- 2011
- **Director of Alabama DoD EPSCoR, Alabama A&M University,** 2001 - 2009
- Steering Committee member of Alabama EPSCoR Steering Committee 2007- 2010
- **Board member of Space Science & Transportation Alliance** 2001- 2008
- **Board member and SE Section Secretary of Univ. Space Research Association (USRA)**-1999- 2011
- **Board member of Center for Macromolecular Crystallography** 2008- 2011
- **Board member of Von Braun Science Center** 2008- 2011
- **Radiation Safety Officer of the Alabama A&M University** 1988-Fall 2000
- **Campus Director, NASA-Alabama Space Grant Consortium** 1991- 2008
- **Member of Steering Committee of the Science and Engineering Alliance (SEA)** 1995- 2011
- **Member of Alabama A&M Research Council** 1990- 2009
- **Member of Admission Committee of Phys. Dep., AAMU** 1996- 2003
- Chairman of Recruitment Committee of Dept. of Physics Sept. 1997- 2002
- Chairman/Organizer of International Workshops for NEC Pelletron Users 1994-2005
- **Member of Graduate Council of AAMU** 1988- 1995
- **Member of Haz/Mat Committee of AAMU** Mid-1990
- **Member of Research Council of AAMU** 1989 – 1999
- **AAMU Rep. for the Alabama Sup. Computer Authority** 1988 - 1995

Supervisory/Past Leadership Experience:

Supervisory Experience

nearly 150 personnel

Budget responsibility	(State \$17.5M/year, University \$10.5M/year)
Associate Vice Chancellor for Research	2011-Now
Executive Director of the State of Alabama EPSCoR Program	2007-2010
Executive Director of the Research Institute (<150 employees)	1999-2010
Director of Alabama DoD EPSCoR, Alabama A&M University,	2001 - 2009
Chair of Membership Committee of Materials Research Society (MRS)	1990-1995
Chair of the Graduate Student Award Committee at MRS	2003-2008
Chair of Recruitment Committee of Dept. of Physics	Sept. 1997- 2002
Campus Director, NASA-Alabama Space Grant Consortium	1991- 2008
Chair of the IT Taskforce at MRS	1990s
Chairman/Organizer of International Workshops for NEC Pelletron Users	1994-2005
Graduate Students: (supported)	>25 M.S., >30 Ph.D.
Undergraduates: (ASGC, CIM/Physics and AAMURI)	>100
Post Doctoral Research:	>15
Co.-Investigators:	>40
Faculty/Staff/consultants	>140
Industry partners	>50
Employees (Senior/junior/engineers/researchers/..)	>120

MS and PhD Student SUPERVISORY EXPERIENCE

Graduate Students and Their Projects 22 Grad. Students:

1. Cydale Smith, Ph.D. Materials Fall 2012 (Supervised the Ph.D. Dissertation and funded the research) -
2. M. Abunaemeh, Ph.D. Materials Fall 2012 (Supervised the Ph.D. Dissertation and funded the research) – SUNY Faculty
3. B. Chhay, Ph.D. Materials Summer 2008 (Supervised the Ph.D. Dissertation and funded the research) – Faculty-France
4. B. Zhang, Ph.D. Materials May 2007 (Supervised the Ph.D. Dissertation and funded the research) – Senior Engineer
5. Iulia C. Muntele, PhD Materials Spring 2003 (Supervised the Ph.D. Dissertation and funded the research) – Senior Engineer
6. A. Elsamadicy, Ph.D. Materials Spring 2002 (Supervised the Ph.D. Dissertation and funded the research) – UAH Faculty
7. Claudiu Muntele, Ph.D. Materials Fall 2001 (Supervised the Ph.D. Dissertation and funded the research) President/CEO of a small business
8. A. Leslie Evelyn, Ph.D. Materials Fall 1997 (Supervised the Ph.D. Dissertation and funded the research). FSU-Staff
9. Thomas Taylor, Ph.D. Materials Fall 1997 (Supervised the Ph.D. Dissertation and funded the research). - TSU Faculty
10. Eric K. Williams, Ph.D. Materials Fall 1996 (Supervised the Ph.D. Dissertation and funded the research). Ratheon Senior Engineer
11. Melvin Spurlock, Ph.D. Materials/Optics , Patricia Harris Program + MRCE, "Ion Beam modification of Optical Fibers".
12. M. Denty, Ph.D. Materials, ARO, "Ion Beam Assisted Deposition for enhanced surface properties". AAMU Faculty
13. Marcello Ridrigouses PhD student from USP (Zimmerman USP – ILA AAMU – co-supervised) -USP Faculty
14. Marco Aurelio Parada PhD student USP (de-Almada USP – ILA AAMU – co-supervised)
15. Lucas Nonato de Oliveira PhD student from USP (de-Almada USP – ILA AAMU –member of Dissertation defense) – USP Faculty
16. A. Hollerman, Ph.D. Materials (Co-Supervised) – ULA Faculty
17. R. Jones, Ph.D. Optics/Materials (Co-supervised) – NASA program Manager
18. A. Leslie Evelyn, M.S. Materials, RIMI-NSF, "Study of the Thermal History of Polymeric Carbon by RBS".(M.S. Fall 1992).

19. Deon T. Williams, M.S. Materials, NASA-KSFC Employee NASA-ASGC, "RBS Study of Zinc Diffusion into Undoped GaAs<100> at Temperatures Below 600°C". (M.S. Fall 1992). – NASA Senior Engineer
20. Florence E. Egbe, M.S. Materials, NSF-MRCE "Study of Tin Diffusion into GaAs<100> at Temperatures Below 600°C". (M.S. Spring 1992).
21. Yolanda Powell, M.S. Optics/Materials, MTA-Employee DOE-ORNL, "Ultrasonic Cavitation Effects on the Physical and Optical Properties of Ceramics". (M.S. Spring 1993). MTA Senior Engineer
22. Trent Griffin, M.S. Materials, - NASA-MSFC Employee
23. Cydale C. Smith, M.S. Materials, NASA Employee, "Optical Properties of Au, Ag and Sn Implanted Quantum Dots in Silica".
24. Z. Wu, M.S. Engineering, EPSCoR-SIP/Alabama Consortium for Optical Technology.
25. Y. Qian, M.S. Materials-Optics, NSF-EPSCoR-Alabama "Optical Properties of Ag Quantum Dots in MgO <100> by MeV Implantation".
26. Ruimin He MS Student (MS 2006)
27. Jan Wang MS Student (2004 – 2006)
28. Xiaoli Wu MS Student (2003 to 2004)
29. Zhigiang Wu MS Student (2000 to 2002)
30. Angelo Karavolos MS Student (2000 to 2005)
31. Wenshuo Cheng MS Student (2003-2007)
32. Kambiz Payvand (2001 to 2005)
33. Fernando Antonio Calzzani (ILA & Sharma) (MS, 2006 to 2008)
34. R. Migasawa MS student (MS, May 2008) – ABA Senior Engineer.
35. Tomeka Coleman, MS Student (May 2011)
36. **Supporting several PhD through NSF Grant –EPSCoR.**
37. **Over 40 French summer trainees** from Univ. of Claude Bernard (1993 to 2007)
38. **Several Brazilian summer trainees** from University of San Paulo, Brazil (2008 to 2008)
39. Koji Takada Summer trainee from Univ. of Kyoto, Japan (1998)
40. Volha Abidzina (PhD) trainee from the Russian University in Belarus (2005 to 2007)
41. **Two Turkish PhD trainees** from Again (Ege) University in Izmir, Turkey (2005 to 2009)
42. Co Supervision of several PhD and MS students from UAH, UAB, USP, and others (2005 to now)
43. **Four Summer Trainees** from Univ. West Luisiana (2000)

Professional Activities and Organizations:

1. Member of Awards Committee of Materials Research Society (MRS), 2000-2008
2. Chair of the Graduate Student Award Committee of MRS, 2003- 2008
3. Chair of the Membership Committee of Materials Research Society, 1990-1995
4. Member of Membership Committee of MRS, 1989-2011
5. President of the Alabama Section of the Materials Research Society, 1989-2011.
6. Member of the Bound Volume Committee of MRS, 1995 - 2002
7. Member of the Publication Committee of the Journal of Materials Research, 1991- 1996
8. Chair of the Professional Development Committee of MRS, Spring 1997- 2001.
9. Member of Entrepreneurship Committee of MRS, 2005-2009
10. International Scientific Member of Surf. Mod. of Materials by Ion Beams, 2005 to Now.
11. President of Alabama Section of MRS (late 80s to 2011)
12. more

Memberships:

Sigma Xi member	2003-Present
Society of Research Administrators	2005 - Present
Materials Research Society	1986-Present
American Physical Society	1978- 2007
American Society of Materials	1989-2007
American Electrochemical Society	1985-1990
American Vacuum Society	1985-1995
National Space Society (L5)	1978-1990
Alabama Academy of Sciences	1988-1991

Most recent Large Awards (New – Over 100K):

AGENCY	CONTRACT #	TYPE	AMOUNT
NSF - MRI: Cathodoluminescence Spectrometer	2016		\$201,900
Defense University Research Instrumentation Program	2015		\$530,000
Environmental and Forensics Research Instrumentation (Pending)			\$8,500,000.
NRL- Instrumentation transfer (FSU rejected the award)			\$5,000,000. (due to Space requirement)
NSF - Research and Education Cyberinfrastructure Investment			\$1,749,000.
NSF-RII-3 Nano-Bio Sci. & Sens. Grant			\$3,000,000/y (\$15,000,000. Total)
NSF - Partnership for Integration of NanoBiotechnology			\$300,000
ACHE ALEPSCoR Grant			\$1.5M/Year
NASA Propulsion Materials Grant			\$488,000
NASA Propulsion Materials Grant			\$450,000
NASA Propulsion Materials Grant			\$500,000
NSF Interdisciplinary Mat. Res. & Education			\$400,000
DISA HC1047-05-D-4011 IDIQ			\$800,000/Year
NASA PULM -NCC8 250 Federal Contract			\$619,758.
NASA PROP- NASG-1933 Federal Grant			\$447,000.00
NASA PROP -NNMO5AA14G Federal Grant			\$841,000.00
DOE DOE IERS-GSE TRAINING			\$141,000.00
DOE IERS – Analytical & Elemental Analysis of Paint, water, and soil samples			
Facility and public outreach (Grant-)			\$478,999
Dept. of Education FIPSE Ph V			
CFDA 84.115Z Grant			\$595,200.00
Dept. of Education FIPSE Grant 2003			\$546,424.00
SBA Small Business Training in Frontiers of Nanotechnology & Business Opportunities through STTR/SBIR			\$200,000
DoD-ARO Upgrade of X-Ray EDS system			\$54,000
IND-State-EDA (support staff) RCC			\$20k-150k
NSF-GaTech (MRSEC-Sub)			\$55k/year for 6 years
BOEING MSFC NASA NAS9-0209 RCC			\$25,000.00
NASA BOEING NAS15-10000 RCC			\$35,000.00
NASA BOEING 5HO6842 RCC			\$50,000.00
Vanderbilt University DMR 0513048 RCC			\$33,822.00
SRS CIM Beam Time 2004 RCC			\$9,655.12
Several SBIR and one STTR (Shared) 2000-20006			>\$250k
DISA-MITSS-II (ID/IQ) 2005-2009			~\$4M Approximately \$800k/year

Past Large Awards (before 2000):

NSF EPSCoR	Total Value of the Award		<u>\$1,350,000</u>
NSF Laboratory Renovation & Modernization	Total Value of the Award		<u>\$1,260,000</u>
DoD Instrumentation and Infrastructure	Total Value of the Award		\$250,000
DoD EPSCoR (Four Projects)	Total Value of the Award		<u><\$1,500,000</u>
DoD University Research Instrumentation Program	Total Value of the Award		\$250,000
DOD (ID/IQ)	DISA	Valued at	<u>\$25,000,000</u>
NASA		Approx.	<u>>\$2,800,000</u>

Books, Book Chapter, Refereed papers and Invited talks:

Nearly 300 Refereed manuscripts, More than 150 Presentations, More than 50 Invited Talks

eleven Books and two Book Chapters
* STUDENT, # POST DOCTORAL RESEARCH

Books:

1. David B. Poker, **Daryush ILA**, Yang-Tse Cheng, Lloyd R. Harriott, Thomas W. Sigmon, ***Ion-Solid Interactions for Materials Modification and Processing***, ISBN:1-55899-299-5- (MRS, Pittsburgh, 1996).
2. Steve Moss and **Daryush ILA**, Cammarata, R. C. , Chason, E.H., Einstein, T. L., Williams, ***Thin Films: Structures and Morphology***, ISBN:1-55899-342-2 (MRS, Pittsburgh, 1997).
3. J. C. Barbour, **D. ILA**, S. Roorda, ***Atomistic Mechanisms in Beam Synthesis and Irradiation of Materials***, ISBN: 1-55899-409-2 (MRS, Pittsburgh, 1998).
4. S. Moss, **D. ILA**, H. Lee, ***Semiconductor Quantum Dots***, ISBN: 1-55899-478-5 , Vol. 571 (MRS, Pittsburgh, 1999)
5. S. Moss, D. B. Poker, **Daryush ILA**, ***Growth, Evolution and Properties of Surfaces, Thin Films and Self-Organized Structures***, ISBN: 1-55899-558-7 (MRS, Pittsburg, 2001)
6. A. Oztarhan, Ian G. Brown, J. E. E. Baglin and **D. ILA**, Elsevier/ *Surface & Coatings Technology Vol. 201* (2007).
7. **D. ILA**, C. Mailhot, and P. B. Saganti, ***Materials for Extreme Environments***, CODEN: MRSPDH (MRS, Warrendale, PA, 2006). *Mater. Res. Soc. Symp. Proc. Vol. 929* © 2006 Materials Research Society 0929-II03-03.
8. **D. ILA**, J. Baglin, N. Kishimoto, P. Chu, ***Ion Beam Based Nanofabrication***, MRS Proc. Vol. 1020 (MRS, Warrendale, PA, 2007)
9. **D. ILA**, P. Chu, N. Kishimoto, Jörg K. N. Lindner, and J. Baglin, ***Ion Beams and Nano-Engineering***, *Mater. Res. Soc. Symp. Proc. Vol. 1181* © 2011 MRS- Cambridge University Press 2010, Vol. 1267)
10. J. Baglin, **D. ILA**, G. Marletta, A. Oztarhan, ***Ion Beams--New Applications from Mesoscale to Nanoscale***, *Mater. Res. Soc. Symp. Proc. Vol. 1354* © 2012 MRS- Cambridge University Press 978-1-606511-331-9
11. J.K.N. Lindner. J. Baglin, **D. ILA**, and N. Kishimoto, ***Ion Beam Applications: New and Innovative Approaches***, Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, **Volume 341**, (December 2014)
12. **Four more books as Co-Author/invited editor (in proress).**

Book Chapter:

1. Evelyn*, A. L. (PhD Student 1997), and **ILA, D.**, "***Ion Beam Processing of Polymers: Basics and Applications***" (Chapter 6), *Advanced Functional Molecules and Polymers*, **Vol. 4**, 199-217 (2001).
2. R. A. Minamisawa* (MS Student 2008), R. L. Zimmerman, C. Muntele and **D. ILA**, "***Advanced PFA thin porous membranes***" in the "Polymer Thin Films " book, ISBN 978-953-7619-X-X.
3. A. Abunameh* (PhD Student 2011), M. Seif, A. Batra, A. Elsamadecy*, Y. Yang, L. Wang, C. Muntele#, and **D. ILA**, "***Characterization of Au Irradiated Glassy Polymeric Carbon at 2000C for Nuclear Applications: Irradiation of GPC After Irradiation***" , NATO Science for Peace and Security Series – A: Chemistry and Biology, Springer Series – Library of Congress control No.: 2011940795 , 2010.

Journals and Proceedings (Selected & Known Publications) (Last Update 2016):

* Student, # Post Doctoral

1. Larissa Stewart*, Weigang Lu#, Zhang-Wen Wei, **Daryush Ila**, Carla Padilla and Hong-Cai Zhou, "A zirconium metal–organic framework with an exceptionally high volumetric surface area", Dalton Transactions, Issue 41, 2017.
2. **D. ILA**, "Ion Beam Assisted Deposition Enhanced Thermoelectric Properties (with Figure of Merit above 3.0)", Physics Procedia, Science Direct ELSEVIER, 2015
3. **D. ILA**, J. E. E. Baglin, and R. L. Zimmerman, "Nano-Crystal Formation and Growth from High-Fluence Ion Implantation of Au, Ag, or Cu in Silina", Physics Procedia, Science Direct ELSEVIER, 2015
4. S. Budak, S. Guner, C. Muntele, and **D. ILA**, "Thermoelectric Generation from AgBiTe and AgSbTe Thin Films Modified by High-Energy Beam", Jr. of Elec. Mat., 2015.
5. S. Budak, K. Heidary, R. B. Johnson, T. Colon, C. Muntele, **D. ILA**, " MeV Si Ion Modifications on the Thermoelectric Generator from Si/Si+Ge Nanolayered Films", Journal of Applied Surface Science, Volume 310, 221-225 (2014)
6. S. Guner, S. Budak, B. Gibson, **D. ILA**, "Optical properties of Ag nanoclusters formed by irradiation and annealing of SiO₂/SiO₂: Ag thin films", Journal of Applied Surface Science, Volume 310, 180-183 (2014)
7. S. Budak, S. Guner, R. A. Minamisawa, C. I. Muntele, **D. ILA**, "Thermoelectric Properties of Zn₄Sb₃/CeFe(4-x)Co_xSb₁₂ Nano-layered Superlattices Modified by MeV Si ions Beam", Journal of Applied Surface Science, Volume 310, 226-229 (2014)
8. **D. ILA**, "Thermoelectric systems: Ion beam enhanced thermoelectric properties "Journal of Applied Surface Science, Volume 310, 217-220 (2014).
9. S. R. Allayarov, Yu. A. Olkhov, C. I. Muntele, D. A. Dixon, **D. ILA**, "Effect of MeV protons on the phase behaviour and thermal stability of polytetrafluoroethylene ", High Energy Chemistry, May 2014, Springer, Volume 48, Issue 3, pp 162-173.
10. S. R. Allayarov, Y. A. Olkhov, C. I. Muntele, D. A. Dixon, **D. ILA**, "Effect of MeV protons on the phase behaviour and thermal stability of polytetrafluoroethylene", High Energy Chemistry, May 2014, Springer, Volume 48, Issue 3, pp 162-173.
11. S. Budak#, R. Parker, C. Smith*, C. Muntele#, K. Heidary, R. B. Johnson and **D. ILA**, "Superlattice multilayered thin films of SiO₂/SiO₂ + Ge for thermoelectric device applications", (2013) Journal of Intelligent Material Systems and Structures 24 (11) PP. 1357 - 1364 , doi: 10.1177/1045389X13483022
12. S. Budak#, C. Smith*, K. Heidary, B. Johnson, C. Muntele#, and **D. ILA**, "Thermoelectric Properties of SiO₂/SiO₂+CoSb Multi-nanolayered Thin Films Modified by MeV Si Ions", Journal of Intelligent Material Systems and Structures, Online ISSN: 1530-8138 - published online (2013).
13. S. R. Allayarov, Yu. A. Ol'khov, I. N. Shtefan, K. I. Muntele#, **D. ILA**, and D. A. Dixon, High Energy Chemistry, Vol. 46 No. 2, 84-90 (2012)
14. S. R. Allayarov, Yu. A. Ol'khov, I. N. Shtefan, C. I. Muntele#, D. A. Dixon and **D. ILA**, (Wiley Blackwell Publisher – in print, 2012)
15. S. Budak, C. Smith*, M. Pugh*, K. Heidary, T. Colon*, R.B. Johnson, C. Muntele#, **D. ILA**, "MeV Si ions bombardments effects on thermoelectric properties of SiO₂/SiO₂+Ge nanolayers", Radiation Physics and Chemistry **81** (2012) 410–413.
16. Budak, S., Chacha*, J., Smith*, C., Pugh*, M., Colon*, T., Heidary, K., Johnson, R.B., **ILA, D.** , "Effects of MeV Si ions bombardment on the thermoelectric generator from SiO₂/SiO₂ + Cu and SiO₂/SiO₂ + Au nanolayered multilayer films", (2011) Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms 269 (24) PP. 3204 - 3208
17. **D. ILA**, "Challenges and Barriers for Small Business Success", ADVANCES IN MARKETTING, K. Joonas, V. Lukosius, K. P. Marshall, Page 115 Proceedings of The Association of Collegiate Marketing Educators (2012).
18. Lassiter*, J., Chacha*, J., Muntele#, C., Budak, S., Elsamadicy, A., **ILA, D.** , "Modeling of approximated electron transport across ion beam patterned quantum dot nanostructures ", (2012) Materials Research Society Symposium Proceedings 1354 PP. 135 - 139 , doi: 10.1557/opl.2011.1209
19. John E. E. Baglin and **Daryush ILA**, "Future Directions for Ion Beam Technology and Research: Forum Report", Cambridge University Press, MRS Proceedings Volume 1354, 2012.

20. Smith*, C., Budak#, S., Jordan*, T., Chacha*, J., Chhay#, B., Heidary, K., Johnson, R.B., **ILA, D.**, "5 MeV Si ion modification on thermoelectric SiO₂/SiO₂+Cu multilayer films", (2012) Materials Research Society Symposium Proceedings 1354 PP. 121 – 125, doi: 10.1557/opl.2011.1344
21. Robert Zimmerman, Claudiu Muntele#, and **Daryush ILA**, "Materials science education: Ion beam modification and analysis of materials ", (2012) Radiation Effects and Defects in Solids 167 (8) PP. 577 - 582
22. S. Budak, C. Smith*, J. Chacha*, C. Muntele#, and **D. ILA**, "Characterization of gold nanodots arrangements in SiO₂/SiO₂+Au nanostructured metamaterials ", (2012) Radiation Effects and Defects in Solids 167 (8) PP. 607 - 611.
23. Malek Abunaemeh*, Mohamed Seif, Abdalla Elsamadicy, and **Daryush ILA**, "Structural and mechanical characterization of ion-irradiated glassy polymeric carbon for TRISO fuel nuclear application ", (2012) Radiation Effects and Defects in Solids 167 (8) PP. 541 - 547
24. L. F. Pirani, L. N. De Oliveira, P. C. D. Petchevist, M. V. Moreira and **D. ILA**, et al., "New chemical Fricke gel radiation dosimeter", Journal of Radioanalytical and Nuclear Chemistry, 2009, Volume 280, Number 2, Pages 259-264
25. M. Abunaemeh*, M. Seif, A. Batra, A. Elsamadicy, Y. Yang, L. Wang, C. Muntele# and **D. ILA**, "Characterization of Au Irradiated Glassy Polymeric Carbon at 2,000°C for Nuclear Applications - Characterization of GPC After Ion Irradiation", NATO Science for Peace and Security Series A: Chemistry and Biology, Technological Innovations in Sensing and Detection of Chemical, Biological, Radiological, Nuclear Threats and Ecological Terrorism, Part 7, Pages 373-378. 2012
26. S. Budak, J. Chacha*, C. Smith*, M. Pugh*, K. Heidary, R. B. Johnson and **D. ILA**, "Effects of MeV Si Ions Bombardment on the Thermoelectric Generator from SiO₂/SiO₂+Cu and SiO₂/SiO₂+Au Nanolayered Multilayer films ", Nuc. Inst. & Meth. B, **269 (2011) 3204–3208**.
27. **D. ILA**, R. L. Zimmerman and C. Muntele#, "MATERIALS SCIENCE EDUCATION: ION BEAM MODIFICATION AND ANALYSIS OF MATERIALS ", **Journal of Materials Education Vol. 32 (1-2) 2010**
28. Abunaemeh*, M., Seif, M., Elsamadicy, A., Muntele#, C., **ILA, D.**, "Structural modifications and mechanical degradation of ion irradiated Glassy Polymer Carbon ", (2011) AIP Conference Proceedings 1336 PP. 219 - 221.
29. Chacha, J., Budak, S., Smith, C., McElhaney, D., Pugh, M., Ogbara, K., Heidary, K., (...), **ILA, D.**, "Thermoelectric properties of SiO₂/SiO₂+Au nano-layered superlattices modified by MeV Si ions beam", (2011) AIP Conference Proceedings 1336 PP. 257 - 259 , doi: 10.1063/1.3586099
30. S. Budak, Cydale Smith*, John Chacha*, Marcus Pugh*, Hervie Martin*, T. Langham*, B. Harrell*, Kaveh Heidary, R. B. Johnson, Ying Yang, Claudiu Muntele# and **D. ILA** (2010). Thermoelectric Properties of SiO₂/SiO₂+Ag Nanolayered Multilayer Films Effected by MeV Si Ions. MRS Proceedings, 1267, 1267-DD05-16 doi:10.1557/PROC-1267-DD05-16
31. John Chacha*, S. Budak, Cydale Smith*, Marcus Pugh*, Kudus Ogbara*, Kaveh Heidary, R. B. Johnson, Claudiu Muntele# and **D. ILA** (2010). Effects of MeV Si Ions Modification on the Thermoelectric Properties of SiO₂/SiO₂+Cu Multilayer Thin Films. MRS Proceedings, 1267, 1267-DD05-15 doi:10.1557/PROC-1267-DD05-15
32. Marcus Pugh*, S. Budak, Cydale Smith*, John Chacha*, Kudus Ogbara*, Kaveh Heidary, R. B. Johnson, Claudiu Muntele# and **D. ILA** (2010). MeV Si Ions Bombardment Effects on the Thermoelectric Properties of Si/Si+Ge Multi-Layer Superlattice Nanolayered Films. MRS Proceedings, 1267, 1267-DD05-14 doi:10.1557/PROC-1267-DD05-14
33. Renato Amaral Minamisawa*, Bopha Chhay* and Daryush ILA, "Electrical Transport Behavior in Phenolic Resin-based Composites Doped with Multi-walled Carbon Nanotubes", Cambridge University Press, Proceeding of MRS, Vol. 1006, 2007
34. S. Budak, Cydale Smith*, John Chacha*, Marcus Pugh*, Kudus Ogbara*, Kaveh Heidary, R. B. Johnson, Claudiu Muntele# and **D. ILA** (2010). Thermoelectric Properties of SiO₂/SiO₂+CoSb₃ Multi Nanolayered Films Modified by MeV Si ions Bombardment. MRS Proceedings, 1267, 1267-DD05-13 doi:10.1557/PROC-1267-DD05-13
35. L. N. de Oliveira*, R. L. Zimmerman, M. V. Moreira, **D. ILA**, A. Almeida, "Determination of diffusion coefficient in Fricke Xylenol gel dosimeter after electron beam bombardment", **Surface and Coatings Technology, Volume 203, Issues 17-18, 15 June 2009, Pages 2367-2369**

36. R. A. Minamisawa*, R. L. Zimmerman, **D. ILA**, "Characterization of nanopores in PFA thin films", *Surface and Coatings Technology*, Volume 203, Issues 17-18, 15 June 2009, Pages 2493-2496
37. R. A. Minamisawa, R. L. Zimmerman, **D. ILA**, "Feedback-controlled ion beam system for nanoporous membrane fabrication", *Surface and Coatings Technology*, Volume 203, Issues 17-18, 15 June 2009, Pages 2780-2783
38. S. Budak, S. Guner#, C. Smith*, R.A. Minamisawa*, B. Zheng, C. Muntele#, **D. ILA**, "Surface modification of Si/Ge multi-layers by MeV Si ion bombardment", *Surface and Coatings Technology*, Volume 203, Issues 17-18, 15 June 2009, Pages 2418-2421
39. S. Budak, S. Guner#, R.A. Minamisawa*, **D. ILA**, "MeV Si ions bombardment effects on the thermoelectric properties of nano-layers of nanoclusters of Ag in SiO₂ host", *Surface and Coatings Technology*, Volume 203, Issues 17-18, 15 June 2009, Pages 2479-2481
40. R. Zimmerman, C. Muntele#, I. Gurhan, F. Ozdal-Kurt, B.H. Sen, M. Rodrigues, **D. ILA**, "Investigation of cell growth on ion beam patterns on GPC surface", *Surface and Coatings Technology*, Volume 203, Issues 17-18, 15 June 2009, Pages 2558-2561
41. S. Güner#, S. Budak, C. Muntele#, **D. ILA**, "Effects of MeV Si ions bombardment on the thermoelectric properties of Zn₄Sb₃ and CeFe₂Co₂Sb₁₂ thin films", *Surface and Coatings Technology*, Volume 203, Issues 17-18, 15 June 2009, Pages 2664-2666
42. B. Zheng#, Z. Xiao, B. Chhay*, R.L. Zimmerman, M. E. Edwards#, **D. ILA**, "Thermoelectric properties of MeV Si ion bombarded Bi₂Te₃/Sb₂Te₃ superlattice deposited by magnetron sputtering", *Surface and Coatings Technology*, Volume 203, Issues 17-18, 15 June 2009, Pages 2682-2686
43. Bopha Chhay#, Lynn Bowman and **Daryush Ila** (2009). Effects of Carbon Ion on Glassy Carbon Electrode as Chemical Sensor. MRS Proceedings, 1204, 1204-K14-27 doi:10.1557/PROC-1204-K14-27
44. S. Güner#, S. Budak, C.I. Muntele#, **D. ILA**, "High energy Si ions bombardment effects on the properties of nano-layers of SiO₂/SiO₂ + Ag", *Nuc. Instr. and Meth. B*, Volume 267, Issues 8-9, 1 May 2009, Pages 1353-1355
45. S. Güner#, S. Budak, R. A. Minamisawa*, C.I. Muntele#, **D. ILA**, "MeV Si ions bombardment effects on the thermoelectric properties of Co_{0.1}Sb_xGe_y thin films", *Nuc. Instr. and Meth. B*, Volume 267, Issues 8-9, 1 May 2009, Pages 1588-1591
46. S. Budak, S. Guner#, C. Muntele#, **D. ILA**, "MeV Si ion beam modification effects on the thermoelectric generator from Er_{0.1}Fe_{1.9}SbGe_{0.4} thin film", *Nuc. Instr. and Meth. B*, Volume 267, Issues 8-9, 1 May 2009, Pages 1592-1595
47. A. Oztarhan, E. Sokullu Urkac, F. Tihminlioglu, N. Kaya, **D. ILA**, S. Budak, B. Chhay, C. Muntele#, E. Oks, A. Nikolaev, "Structural and Thermal Characterization of Ti+O Ion Implanted Ultra High Molecular Weight Polyethylene (UHMWPE)", AIP Conference Proceedings Volume 1099, (2009), pp. 545-547.
48. E. S. Urkac*, A. Oztarhan, F. Tihminlioglu, **D. ILA**, S. Budak, B. Chhay*, C. Muntele#, E. Oks, A. Nikolaev, "Thermal Behaviour of W+C Ion Implanted Ultra High Molecular Weight Polyethylene (UHMWPE)", AIP Conference Proceedings Volume 1099, (2009), pp. 542-544.
49. E. S. Urkac*, A. Oztarhan, F. Tihminlioglu, I. D. Gurhan, S. Gulce Iz, E. Oks, A. Nikolaev, and **D. ILA**, "The Effect of Ag and Ag+N Ion Implantation on Cell Attachment Properties", AIP Conference Proceedings Volume 1099, (2009), pp. 528-530.
50. N. Sathish*, S. Dhamodaran, A. P. Pathak, C. Muntele#, **D. ILA**, S. A. Khan, and D. K. Avasthi, "RBS/Channeling Studies of Swift Heavy Ion Irradiated GaN Layers", AIP Conf. Proc. 1099, (2009), pp. 385-388.
51. B. Zheng*, Z. Xiao, W. Wang, Choon Keat Lee, R.B. Goldner, H.J. Caulfield, R.L. Zimmerman, **D. ILA**, "An effective configuration for interferometric measurement of pulsed laser-induced plasma densities", *Optik - International Journal for Light and Electron Optics*, Volume 119, Issue 15, November 2008, Pages 733-737
52. S. Güner, S. Budak, R. A. Minamisawa*, C. Muntele#, **D. ILA**, "Thickness and MeV Si ions bombardment effects on the thermoelectric properties of Ce₃Sb₁₀ thin films", *Nuc. Instr. and Meth. B*, Volume 266, Issue 8, April 2008, Pages 1261-1264

53. S. Budak, S. Guner#, R. A. Minamisawa*, C. Muntele#, **D. ILA**, "Formation of Au nanoparticles in silica by post-irradiation and thermal annealing", Nuc. Instr. and Meth. B, *Volume 266, Issue 8, April 2008, Pages 1574-1577*
54. B. Zheng*, Z. Xiao, B. Chhay*, R. Zimmerman, **D. ILA**, "Improvement on thermoelectric properties of multilayered Si_{1-x}Ge_x/Si by ion beam bombardment", Nuc. Instr. and Meth. B, *Volume 266, Issue 1, January 2008, Pages 73-78*
55. R. A. Minamisawa*, R. L. Zimmerman, S. Budak, **D. ILA**, "Study on evolution of gases from fluoropolymer films bombarded with heavy ions", Nuc. Instr. and Meth. B, *Volume 266, Issue 8, 2008, Pages 1269-1272*
56. R. A. Minamisawa*, R. L. Zimmerman, **D. ILA**, "Creation mechanism of pores by ion beam modification of fluoropolymer film membranes", Nuc. Instr. and Meth. B, *Volume 266, Issue 8, 2008, Pages 1273-1275*
57. C. Muntele# and **D. ILA**, "Platinum vs. Palladium in Catalyst-Based Hydrogen Sensors Used for Wide Temperature Range Hydrazine Leak Detection", AIP Conf. Proc. 1066, (2008) 251-253.
58. S. Guner#, S. Budak, C. Muntele#, and **D. ILA**, "THERMOELECTRIC GENERATOR FROM SEQUENTIALLY DEPOSITED SiO₂/Gd_{0.1}Fe₄Sb_{0.1}Ge_{4.23} NANOLAYERS MODIFIED BY MEV Si IONS BOMBARDMENT", Supplemental Proceeding: Volume I: Materials Processing and Properties, TMS (The Minerals, Metals & Materials Society), 51 2008.
59. S. Guner#, S. Budak, C. Muntele#, and **D. ILA**, "TEMPERATURE AND HIGH ENERGY Si IONS BOMBARDMENT EFFECTS ON THE THERMOELECTRIC PROPERTIES OF GdFe₄Sb_{6-y}Ge_y THIN FILMS", Supplemental Proceeding: Volume I: Materials Processing and Properties, TMS (The Minerals, Metals & Materials Society), 45 2008.
60. S. Budak, S. Guner#, C. Muntele#, and **D. ILA**, "Temperature, Thickness and MeV Si ions bombardment effects on the thermoelectric generator from Er_{0.1}Fe_{1.9}SbGe_{0.4} thin film", Supplemental Proceeding: Volume I: Materials Processing and Properties, TMS (The Minerals, Metals & Materials Society), 117 2008.
61. L. Wilkinson, C. Muntele#, S. Budak, and **D. ILA**, "Characterization of tungsten carbide electrical contacts for high temperature electronics", Supplemental Proceeding: Volume I: Materials Processing and Properties, TMS (The Minerals, Metals & Materials Society), 643 2008
62. S. Guner#, S. Budak, C. I. Muntele#, C. C. Smith* and **D. ILA**, "MeV Si ions bombardment effects on the properties of nano-layers of SiO₂/SiO₂+Ag", Mater. Res. Soc. Symp. Proc. Vol. 1074© 2008 Materials Research Society 1074-I03-25.
63. S. Guner#, S. Budak, C. I. Muntele#, and **D. ILA**, "Thermoelectric Properties of YbBiPt and YBiPt thin films", Mater. Res. Soc. Symp. Proc. Vol. 1100© 2008 Materials Research Society 1100-JJ04-22.
64. S. Budak, S. Guner#, T. Hill, M. Black, S. B. Judah, C. Muntele#, and **D. ILA**, "Fabrication and Characterization of Thermoelectric Generators From SiGe Thin Films", Mater. Res. Soc. Symp. Proc. Vol. 1102E © 2008 Materials Research Society 1102-LL05-03.
65. S. Budak, S. Guner#, C. Muntele#, and **D. ILA**, "MeV Si Ions Bombardment Effects on SiO₂/SiO₂+ZrNiSn Nano-layered Thermoelectric Generator", Mater. Res. Soc. Symp. Proc. Vol. 1102E © 2008 Materials Research Society 1102-LL04-27.
66. R. Zimmerman, I. Gürhan, C. Muntele#, **D. ILA**, M. Rodrigues, F. Özdal-Kurt, B.H. Sen, "Enhanced biocompatibility of GPC by ion implantation and deposition", *Surface and Coatings Technology, Volume 201, Issues 19-20, 2007, Pages 8020-8023*
67. Robert Lee Zimmerman, Ismet Gurhan and **Daryush ILA** (2007). Patterned Adhesion of Cells. MRS Proceedings, 1020, 1020-GG05-01 doi:10.1557/PROC-1020-GG05-01
68. M.A. Parada*, A. de Almeida, P.N. Volpe, C. Muntele#, **D. ILA**, "Damage effects of 1 MeV proton bombardment in PVDC polymeric film", *Surface and Coatings Technology, Volume 201, Issues 19-20, 2007, Pages 8052-8054*
69. M.A. Parada*, R.A. Minamisawa*, M.V. Moreira, A. de Almeida, I. Muntele#, **D. ILA**, "Damage effects of gamma and X-rays in polymer film electrets", *Surface and Coatings Technology, Volume 201, Issues 19-20, 2007, Pages 8246-8249*
70. C.I. Muntele#, R. Ichou*, I.C. Muntele#, S. Sarkisov, **D. ILA**, "Surface characterization of silicon carbide following shallow implantation of platinum ions", *Surface and Coatings Technology, Volume 201, Issues 19-20, 2007, Pages 8339-8342*

71. W.A. Hollerman, N.P. Bergeron, S.M. Goedeke, S.W. Allison, C.I. Muntele#, **D. ILA**, R.J. Moore, Annealing effects of triboluminescence production on irradiated ZnS:Mn, *Surface and Coatings Technology, Volume 201, Issues 19-20, 2007, Pages 8382-8387*
72. B. Zheng*, S. Budak, R.L. Zimmerman, C. Muntele#, B. Chhay*, **D. ILA**, Effect of layer thickness on thermoelectric properties of multilayered Si_{1-x}Ge_x/Si after bombardment by 5 MeV Si ions, *Surface and Coatings Technology, Volume 201, Issues 19-20, 2007, Pages 8531-8533*
73. I. Muntele#, C. Muntele#, P. Thevenard, **D. ILA**, ZnO nanocluster formation in SiO₂ by low energy ion implantation, *Surface and Coatings Technology, Volume 201, Issues 19-20, 2007, Pages 8557-8559*
74. R. Hawrami*, M.D. Aggarwal, A.K. Batra, C. Muntele#, B. Chhay*, **D. ILA**, Study of Fe, Mn and Eu doped LiNbO₃ by combined Rutherford backscattering and nuclear reaction analysis, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 549-552*
75. L. Bowman, D. Spencer, C. Muntele#, I. Muntele#, **D. ILA**, Cyclic voltammetry and RBS study of paint components, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 557-560*
76. P. da Cunha, T.D. Walker, R.A. Sims, B. Chhay, C.I. Muntele#, I. Muntele#, A. Elsamadicy, **D. ILA**, Characterization of W₁C_x electrical contacts on silicon carbide using RBS and AFM/SEM, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 561-565*
77. C. Muntele#, R. Zimmerman, **D. ILA**, V. Castillo, G. Quarles, J. Johnson, Proton induced X-ray analysis of Nd:YAG, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 566-569*
78. S. Budak, C.I. Muntele#, R.A. Minamisawa*, B. Chhay*, **D. ILA**, Effects of MeV Si ions bombardments on thermoelectric properties of sequentially deposited Bi_xTe₃/Sb₂Te₃ nano-layers, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 608-611*
79. V. Abidzina*, I. Deliloglu-Gürhan, F. Özdal-Kurt, B.H. Sen, I. Tereshko, I. Elkin, S. Budak, C. Muntele#, **D. ILA**, Cell adhesion study of the titanium alloys exposed to glow discharge, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 624-626*
80. V. Abidzina*, I. Tereshko, I. Elkin, S. Budak, C. Muntele#, **D. ILA**, Plasma ion induced Au nanocluster formation on silica, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 674-677*
81. S. Budak, C. Muntele#, I. Muntele#, H. Guo, A. Gupta, **D. ILA**, RBS study of epitaxially grown thin films of the double perovskite La₂NiMnO₆, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 686-689*
82. C. I. Muntele#, S. R. Allayarov, I. C. Muntele#, **D. ILA**, Studying the destruction of various fluoropolymers caused by MeV protons, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 694-698*
83. E. S. Urkac*, A. Oztarhan, F. Tihminlioglu, N. Kaya, **D. ILA**, C. Muntele#, S. Budak, E. Oks, A. Nikolaev, A. Ezdesir, Z. Tek, Thermal characterization of Ag and Ag + N ion implanted ultra-high molecular weight polyethylene (UHMWPE), *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 699-703*
84. B. Chhay*, R. Minamisawa*, B. Zheng*, S. Budak, **D. ILA**, Proton beam effects on phenolic-based composites reinforced with nanopowders, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 704-707*
85. N. Kaya*, A. M. Oztarhan, E.S. Urkac, **D. ILA**, S. Budak, E. Oks, A. Nikolaev, A. Ezdesir, F. Tihminlioglu, Z. Tek, S. Cetiner, C. Muntele#, Polymeric thermal analysis of C + H and C + H + Ar ion implanted UHMWPE samples, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 711-714*
86. R. A. Minamisawa, V. Abidzina, A. Almeida, S. Budak, I. Tereshko, I. Elkin, **D. ILA**, Radiation effects on ETFE polymer exposed to glow discharge, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 715-718*
87. R. Zimmerman, I. Deliloglu-Gurhan, F. Ozdal-Kurt, B.H. Sen, M. Rodrigues, **D. ILA**, Ion implantation inhibits cell attachment to glassy polymeric carbon, *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 760-762*
88. R. A. Minamisawa, A. Almeida, S. Budak, V. Abidzina, **D. ILA**, Surface damage studies of ETFE polymer bombarded with low energy Si ions (≤ 100 keV), *Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 1159-1161*

89. S. Budak, C. Muntele#, B. Zheng*, **D. ILA**, MeV Si ions bombardment effects on thermoelectric properties of sequentially deposited SiO₂/Au_xSiO_{2(1-x)} nano-layers, Nuc. Instr. and Meth. B, Volume 261, Issues 1-2, 2007, Pages 1167-1170
90. S. R. Allayarov, S. V. Konovalikhin, Y.A. Olkhov, V.E. Jackson, Lowell D. Kispert, David A. Dixon, **D. ILA**, Uwe Lappan, Degradation of γ -irradiated linear perfluoroalkanes at high dosage, *Journal of Fluorine Chemistry*, Volume 128, Issue 6, 2007, Pages 575-586
91. C.S. Xu, Y.C. Liu, R. Mu, C. Muntele#, **D. ILA**, Structural and optical properties of GaAs quantum dots formed in SiO₂ matrix, *Materials Letters*, Volume 61, Issues 14-15, 2007, Pages 2875-2878
92. V. Abidzina*, I. Tereshko, I. Elkin, I. Muntele#, C. Muntele#, R.A. Minamisawa*, **D. ILA**, Investigations of low-energy ion irradiation influence on glassy polymeric carbon, Nuc. Instr. and Meth. B, Volume 257, Issues 1-2, 2007, Pages 523-526
93. Bopha Chhay, Renato Amaral Minamisawa and **Daryush ILA** (2007). Effects of Al₂O₃ Nanopowder Filler Size on Glassy Polymeric Carbon Electrical Transport Behavior. MRS Proceedings, 1006, 1006-R07-09 doi:10.1557/PROC-1006-R07-09
94. R.A. Minamisawa*, A. De Almeida, V. Abidzina*, M.A. Parada*, I. Muntele#, **D. ILA**, Effects of low and high energy ion bombardment on ETFE polymer, Nuc. Instr. and Meth. B, Volume 257, Issues 1-2, 2007, Pages 568-571
95. B. Zheng*, S. Budak, R. L. Zimmerman, C. Muntele#, B. Chhay*, **D. ILA**, "Effect of layer thickness on thermoelectric properties of multilayered Si_{1-x}Ge_x/Si after bombardment by 5 MeV Si ions", *Surface and Coatings Technology* 201, 8531-533(2007).
96. M.A. Parada*, N. Delalez, A. de Almeida, C. Muntele#, I. Muntele and **D. ILA**, "Low energy ion beam induced changes in ETFE polymer", *Nucl. Instr. and Meth. in Phys. Res. B* **242**, Issues 1-2 (2006) 550
97. M. A. Parada*, R. A. Minamisawa*, M.V. Moreira*, A. de Almeida, I. Muntele#, **D.ILA**, "Damage Effects of Gamma and X-rays in Electrets Polymeric Films", *Surface and Coatings Technology* 201, 8246-8249 (2007).
98. R.A. Minamisawa*, A.D. Almeida, S. Budak, V. Abidzina, **D. ILA**, "Surface Damage Studies of ETFE polymer Bombarded with Low Energy Si ions (≤ 100 keV)", *Nucl. Instr. and Meth. in Phys. Res. B* (2007), doi: 10.1016/j.NIMB.2007.04.034
99. V. Abidzina, I. Tereshko, I. Elkin, I. Muntele#, C. Muntele#, R. A. MINAMISAWA* and **D. ILA** "Investigations of low-energy ion irradiation influence on Glassy Polymeric Carbon", *Nuc. Instr. and Meth. B* Volume 257, Issues 1-2, April 2007, Pages 523-526
100. B. Chhay*, R. Minamisawa*, B. Zheng*, S. Budak, **D. ILA**, "Proton beam effects on phenolicbased composites reinforced with nano-powders", *Nucl. Instr. and Meth. in Phys. Res. B* (2007), 10.1016/j.NIMB. 2007.04.031
101. R.A. MINAMISAWA*, A. de Almeida, V. Abidzina, M.A. Parada*, I. Muntele#, **D. ILA**, "Effects of Low and High Energy Ion Bombardment on ETFE Polymer", *Nuc. Instr. and Meth. B* Volume 257, Issues 1-2, April 2007, Pages 568-571
102. W.A. Hollerman, N.P. Bergeron, S.M. Goedeke, S.W. Allison, C.I. Muntele#, **D. ILA**, R.J. Moore, "Annealing Effects of Triboluminescence Production on Irradiated ZnS:Mn", *Surface & Coatings Technology* **201**, (2007).
103. C. I. Muntele#, R. Ichou, I.C. Muntele#, S. Sarkisov, **D. ILA**, " Surface characterization of silicon carbide following shallow implantation of platinum ions", *Surface & Coatings Technology* **201**, 8339-8342 (2007)
104. R. Zimmerman, I. G"urhan, C. Muntele#, **D. ILA**, M. Rodrigues, F. "Oz dal-Kurt, B.H. Sen, "Enhanced biocompatibility of GPC by ion implantation and deposition", *Surface & Coatings Technology* **201**, (2007).
105. I. Muntele#, C. Muntele#, P. Thevenard, **D. ILA**, "ZnO nanocluster formation in SiO₂ by low energy ion implantation", *Surface & Coatings Technology* **201**, 8557-8559 (2007)

106. M.A. Parada*, A. de Almeida, P.N. Volpe*, C. Muntele#, **D. ILA**, "Damage effects of 1 MeV proton bombardment in pvdc polymeric film", *Surface & Coatings Technology* **201**, 8052-8054 (2007).
107. Sadulla R. Allayarov, Sergey V. Konovalikhin, Yurii A. Olkhov, Virgil E. Jackson, Lowell D. Kispert, David A. Dixon, **Daryush ILA** and Uwe Lappan, "Degradation of γ -irradiated linear perfluoroalkanes at high dosage", *Journal of Fluorine Chemistry*, Volume 128, Issue 6, June 2007, Pages 575-586.
108. C.S. Xu, Y.C. Liu, R. Mu, C. Muntele#, **D. ILA**, "Structural and optical properties of GaAs quantum dots formed in SiO₂ matrix", *Materials Letters* Volume 61, Issues 14-15, June 2007, Pages 2875-2878
109. R. L. Zimmerman, C. Muntele#, **D. ILA**, I. Gurhan, F. Ozdal-Kurt*, B. H. Sen, "Ion implantation inhibits cell attachment to GPC", Accepted for publication *NIMB* Vol. 241 (2007).
110. C. I. Muntele#, R. L. Zimmerman, **D. ILA**, V. Castillo, G. Quarles, J. Johnson, "Proton induced X-ray analysis of Nd:YAG", Accepted for publication *NIMB* Vol. 241 (2007).
111. V. Abidzina, I. Tereshko, I. Elkin, R. L. Zimmerman, S. Budak, C. I. Muntele#, and **D. ILA**, "Nanostructural Evolution of Au on Silica Surfaces Exposed to Low Energy Ion Irradiation in Glow Discharge Plasma", Accepted for publication *NIMB* Vol. 241 (2007).
112. S. Dhamodaran, N. Sathish, A.P. Pathak, S.V.S.N. Rao, A.M. Siddiqui, S.A. Khan, D.K. Avasthi, T. Srinivasan, R. Muralidharan, C. Muntele#, and **D. ILA**, "Ion beam irradiation and characterization of GaAs based hetero-structures", *Nucl. Instr. and Meth. in Phys. Res.* **B 242**, Issues 1-2 (2006) 538
113. I. Muntele#, P. Thevenard, C. Muntele#, B. Chhay*, R.L. Zimmerman, S. Sarkisov and **D. ILA**, "Properties of zinc oxide thin films bombarded with 5 MeV silicon ions", *Nucl. Instr. and Meth. in Phys. Res.* **B 242**, Issues 1-2 (2006) 512
114. M. A. Parada*, R.A. MINAMISAWA*, Adelaide de Almeida, C. Muntele#, I. Muntele#, **D. ILA**, "Structural Changes in Polymer Films by Fast ion Implantation", 978-0-7354-0365-9, *Ion Implantation Technology Conference Proceedings AIP*, v. 866, p. 304-307, 2006.
115. Z. Xiao, R.L. Zimmerman, L.R. Holland, B. Zheng, C.I. Muntele and **D. ILA**, "Nanoscale Bi_xTe₃/Sb₂Te₃ multilayer thin film materials for reduced thermal conductivity", *Nucl. Instr. and Meth. in Phys. Res.* **B 242**, Issues 1-2 (2006) 201-
116. M. A. Parada*, R. A. Minamisawa*, M. V. Moreira, A. de Almeida, I. Muntele#, and **D. ILA**, "Damage Effects of Ionizing Radiation in Polymer Film Effects", *Materials in Extreme Environments*, *Mat. Res. Soc. Symp. Proc.*, **Vol. 929**, (2006) Page 203-210
117. M. A. Parada*, R. A. MINAMISAWA*, M. V. Moreira, A. de Almeida, I. Muntele#, **Daryush ILA**, "Damage Effects of Ionizing Radiation in Polymer Film Electrets", *MRS Proceeding Book*, 929, p. 203-210, 2006
118. R. Zimmerman, I. Gurhan, S. Sarkisov, C. Muntele#, **D. ILA**, M. Rodrigues, "Enhanced Biocompatibility of GPC by MeV Ion Bombardment", *Mater. Res. Soc. Symp. Proc.* **Vol. 873E** (2005)
119. C. I. Muntele#, S. Sarkisov, I. Muntele#, **D. ILA**, "Surface Characterization of Silicon Carbide Following Shallow Implantation of Palladium Ions", *Mater. Res. Soc. Symp. Proc.* **Vol. 900E** (2006) O12-15
120. C. Muntele#, S. Budak, I. Muntele#, **D. ILA**, "Surface Characterization of Silicon Carbide Following Shallow Implantation of Platinum Ions for High Temperature Hydrogen Sensing Applications", *Mater. Res. Soc. Symp. Proc.* **Vol 929** (2006) I103-03
121. V. Abidzina, I. Tereshko, I. Elkin, R.L. Zimmerman, I. Muntele#, C. Muntele#, R. A. Minamisawa, B. Chhay, and **D. ILA**, "Surface Modification of Glassy Polymeric Carbon by Glow Discharge", *Materials in Extreme Environments*, *Mat. Res. Soc. Symp. Proc.*, **Vol. 929**, (2006) 185-190

122. B. Zheng*, S. Budak, C. Muntele#, Z. Xiao, C. Celaschi, I. Muntele#, B. Chhay*, R. L. Zimmerman, L. R. Holland, and **D. ILA**, "Improvement on Thermoelectric Characteristics of Layered Nanostructure by Ion Beam Bombardment", *Materials in Extreme Environments*, **Vol. 929**, Materials Research Society, Page 81, 2006
123. R. L. Zimmerman, I. Gurhan, **D. ILA**, F. Ozdal-Kurt, B. H. Sen, M. Rodrigues, "Patterning of Cell Attachment to Biocompatible Glassy Polymeric Carbon by Silver Ion Implantation", *Mater. Res. Soc. Symp. Proc.* **Vol. 942E** (2006) W11-28
124. R. A. Minamisawa, B. Chhay*, I. Muntele#, L. Holland, R. L. Zimmerman, C. Muntele#, and **D. ILA**, "Study of the Effects of Various Nanopowders in the Properties of GPC", *Materials in Extreme Environments*, *Mat. Res. Soc. Symp. Proc.*, **Vol. 929**, (2006) 135-140
125. I. C. Muntele*, C. I. Muntele#, R. Minamisawa*, B. Chhay*, and **D. ILA**, "Chemical, Mechanical and Electrical Properties of Glassy Polymeric Carbon", *Materials in Extreme Environments*, *Mat. Res. Soc. Symp. Proc.*, **Vol. 929**, (2006) 141-146
126. R. L. Zimmerman, C. I. Muntele#, **D. ILA**, I. Gurhan, F. Ozdal-Kurt, B. H. Sen, "Enhanced Biocompatibility of GPC by Ion Implantation and Deposition", *Mater. Res. Soc. Symp. Proc.* **908E** (2006) OO16-04
127. V. Abidzina, I. Tereshko, I. Elkin, R. L. Zimmerman, S. Budak, B. Zheng, C. Muntele#, and **D. ILA**, "Nanostructural Evolution of Au on Silica Surfaces Exposed to Low Energy Ions", *Materials in Extreme Environments*, *Mat. Res. Soc. Symp. Proc.*, **Vol. 929**, (2006) 191-195
128. S. Budak, B. Zheng*, C. Muntele#, Z. Xiao#, I. Muntele#, B. Chhay*, R.L. Zimmerman, L.R. Holland, and **D. ILA**, "Effect of MeV Si Ion Bombardment on Thermoelectric Characteristics of Sequentially Deposited SiO₂/AuxSiO₂(1-x)", *Materials in Extreme Environments*, *Mat. Res. Soc. Symp. Proc.*, **Vol. 929**, (2006) 197-202
129. M. A. Parada*, H. Zaias, A. de Almeida and D.ILA, "Charge Density Limits in Polymer Film Electrets" , 12th International Symposium on Electrets 11-14 (september 2005) 304-306
130. M. A. Parada*, P. C. D. Petchevist, A. de Almeida, N. C. Silva, J. S. C. Campos and **D. ILA**, "New Electret Charger and Charge Reader Systems", 12th International Symposium on Electrets 11-14 (september 2005) 428-430
131. M. G. Rodrigues*, N. C. da Cruz, E. C. Rangel, R. L. Zimmerman, **D. ILA**, D. B. Poker and D. K. Hensley , "Effects of Ion Beam on Nanoindentation Characterists of Glassy Polymeric Carbon Surface", *Surface & Coating Technology* **196** (2005) 251-256
132. G. Savigny*, J. R. Currie Jr.* , **D. ILA**, R. L. Zimmerman, C. I Muntele#, R. Mu and A. Ueda, "Ion Beam Induced Modification of Nanolayers Containing Vanadium and Silica", *Surface & Coating Technology* **196**(2005) 113-117
133. M.A. Parada, A. de Almeida, C. Muntele#, I. Muntele and **D. ILA**, "Effects of MeV proton bombardment in thin film PFA and FEP polymers", *Surface and Coatings Technology*, Vol. 196, Issues 1-3, 22 June 2005, Pages 378-382
134. D. Denmark, A. Ueda, C.L. Shao, M.H. Wu, R. Mu, C.W. White, B. Vlahovic, C.I. Muntele#, **D. ILA** and Y.C. Liu, "Indium phosphide nanocrystals formed in silica by sequential ion implantation", *Surface and Coatings Technology*, **Vol. 196**, Issues 1-3, 2005, Pages 123-129
135. G. Savigny, J.R. Currie, Jr., **D. ILA**, R.L. Zimmerman, C.I. Muntele#, R. Mu and A. Ueda, "Ion beam induced modification of nanolayers containing vanadium and silica", *Surface and Coatings Technology*, **Vol. 196**, Issues 1-3, 22 June 2005, Pages 113-117
136. Z. Gu, R. Mu, A. Ueda, M.H. Wu, S. Morgan, W.E. Collins, C.I. Muntele#, **D. ILA** and B. Vlahovic, "The origin of photon absorption below and above surface plasmon resonance of gold colloids confined in dielectric media", *Surface and Coatings Technology*, **Vol.196**, Issues 1-3, 22 June 2005, Pages 89-95

137. R. L. Zimmerman, C. I. Muntele and **D. ILA**, "MeV ion beam induced change in the linear optical properties of MgO", Surface and Coatings Technology, **Vol.196**, Issues 1-3, 2005, Pages 85-88
138. W.A. Hollerman, S.M. Goedeke, N.P. Bergeron, C.I. Muntele#, S.W. Allison and **D. ILA**, "Effects of proton irradiation on triboluminescent materials such as ZnS:Mn", Nucl. Instr. and Meth. in Phys. Res. **B 241**, Issues 1-4 (2005) 578
139. Z. Xiao, R.L. Zimmerman, L.R. Holland, B. Zheng, C.I. Muntele and **D. ILA**, "MeV Si ion bombardments of thermoelectric Bi_xTe₃/Sb₂Te₃ multilayer thin films for reducing thermal conductivity", Nucl. Instr. and Meth. in Phys. Res. **B 241**, Issues 1-4 (2005) 568
140. M.A. Parada, A. de Almeida, C. Muntele#, I. Muntele#, N. Delalez and **D. ILA**, "Study of the surface activation of ETFE by low energy (keV) Si and N bombardment", Nucl. Instr. and Meth. in Phys. Res. **B 241**, Issues 1-4 (2005) 521
141. M.A. Parada, A. de Almeida, I. Muntele#, C. Muntele#, N. Delalez and **D. ILA**, "ETFE polymer bombarded with 1 MeV proton", Nucl. Instr. and Meth. in Phys. Res. B 241, Issues 1-4 (2005) 517
142. R.L. Zimmerman, **D. ILA**, C. Muntele and I. Muntele#, "Ion beam assisted formation of nanolayers", Nucl. Instr. and Meth. in Phys. Res. **B 241**, Issues 1-4 (2005) 506
143. M. A. Parada*, R. A. Minamisawa*, A. de Almeida, C. Muntele#, R. L. Zimmerman, I. Muntele#, and **D. ILA**, "Fluoropolymer Studies for Radiation Dosymetry", Brazilian Jr. of Physics, **Vol. 34**, No. 3A, 948 (2004)
144. C. Muntele#, I. Muntele#, R. Zimmerman, **D. ILA**, "Nitrogen beam RBS for concentration uniformity measurements of SiO₂:Au thin layer co-depositions", Nucl. Instr. and Meth. in Phys. Res. **B 219-220**, 759 (2004)
145. O. Innegraeve*, X. Blanchet*, C. I. Muntele#, I. C. Muntele#, R. L. Zimmerman, L. Popa-Simil, D. Voiculescu, P. M. Racolta, and **D. ILA**, "PIXE Pollution Studies Across Europe", Nucl. Instr. and Meth. in Phys. Res. **B 219-220**, 191 (2004)
146. Claudiu Muntele#, Iulia Muntele#, Robert Zimmerman, Daryush ILA, "Nitrogen beam RBS for concentration uniformity measurements of SiO₂:Au thin layer co-depositions", Nucl. Instr. And Meth **B219-220** ,759 (2004).
147. M. A. Parada*, A. de Almeida, C. Muntele#, I. Muntele#, R. L. Zimmerman , **D. ILA**, "Effects of 1 MeV Proton Bombardment for Several Fluences in Thin Films of ETFE Polymer," Radiation Effects in Polymers XII, Brazil (2003)
148. I. Muntele#, C. Muntele#, R. Jones, R. L. Zimmerman, **D. ILA**, "RBS and PIXE ion Beam Methods for Characterizing Ni-Co Alloys", AIP Conf. Proc. **680**, 408 (2003)
149. C. I. Muntele*, **D. ILA**, L. Zimmerman, "Low Energy Palladium Implantation in Silicon Carbide: Solid State Gas Sensors", AIP Conf. Proc. 680, 621 (2003)
150. A. Bouyard*, X. Blanchet*, **D. ILA**, C. I. Muntele*, I. C. Muntele*, R. L. Zimmerman, "Application of MeV ion bombardment to create micro-scale annealing of Silica-Gold films", AIP Conf. Proc. **680**, 643 (2003)
151. S. V. S. Nageswara Rao, A. P. Pathak, A. M. Siddiqui, D. K. Avasthi, C. Muntele*, **D. ILA**, B. N. Dev, R. Muralidharan, F. Eichorn, R. Groetzschel, A. Turos, "Ion beam characterization and engineering of strain in semiconductor multi-layers", Nucl. Instr. and Meth. in Phys. Res. **B 212**, 442 (2003)
152. C. I. Muntele*, I. C. Muntele*, **D. ILA**, L. R. Holland, R. L. Zimmerman, D. Nisen, M. Schilloff, "In-line/in-situ doping monitoring facility using ion beams at Alabama A&M University", Ion Implantation Technology Conf. Proc., IEEE, 356 (2003)
153. X. Blanchet*, I. Muntele*, C. I. Muntele*, **D. ILA**, "Gold nanoclusters formation in silicon carbide using ion implantation", Ion Implantation Technology Conf. Proc., IEEE, 709 (2003)

154. I. Muntele*, C. I. Muntele*, **D. ILA**, D. B. Poker, D. K. Hensley, "Raman and FTIR studies on nanostructure formation on silicon carbide", Ion Implantation Technology Conf. Proc., IEEE, 713 (2003)
155. Shen Zhu, Ching-Hua Su, S. Lehoczky, I. Muntele*, **D. ILA**, "Carbon nanotube growth on carbon fibers", Diamond and Related Materials **12**, 1825-1828(2003).Muntele*, C. Muntele*, R. Jones, R. L. Zimmerman, **D. ILA**, "RBS and PIXE ion Beam Methods for Characterizing Ni-Co Alloys", **AIP Conf. Proc. 680**, 408 (2003).
157. A. Bouyard*, X. Blanchet*, **D. ILA**, C. I. Muntele*, I. C. Muntele*, R. L. Zimmerman, "Application of MeV ion bombardment to create micro-scale annealing of Silica-Gold films", AIP Conf. Proc. **680**, 643 (2003).
158. M. A. Parada*, A. de Almeida, C. Muntele*, I. Muntele*, R. L. Zimmerman, and **D. ILA**, "Effects of 1 MeV Proton Bombardment for Several Fluences in Thin Films of ETFE Polymer", Radiation Effects in Polymers XII, Brazil 2003
159. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, P. Thevenard, F. Orucevic, C. L. Santamaria, P. S. Guichard, S. Schiestel, C. A. Carosella, G. K. Hubler, D. B. Poker and D. K. Hensley, "Nano-Cluster Engineering: A Combined Ion Implantation/Co-Deposition and Ionizing Radiation," REI11, Lisbon, Portugal, September 2001, Nuclear Instruments and Methods in Physics Research **B191**, 416-421(2002)
160. M. G. Rodrigues*, N. C. da Cruz, E. C. Rangel, R. L. Zimmerman, **D. ILA**, D. B. Poker and D. K. Hensley, "Nanoindentation mechanical properties characterization of glassy polymeric carbon treated with ion beam", REI-11 Lisbon, Portugal, September 2001, Nuclear Instruments and Methods in Physics Research **B191**, 524-529(2002)
161. R. Zimmerman, **D. ILA**, C. Muntele*, M. Rodrigues, D.B. Poker and D. Hensley "Enhanced Tissue Adhesion by Increased Porosity and Surface Roughness of Carbon Based Biomaterials," REI-11 Lisbon, Portugal, September 2001, Nucl. Instr. and Meth. in Phys. Res. **B191**, 825-829 (2002).
162. I. Muntele*, C. Muntele*, R Jones, R. L. Zimmerman, **D. ILA**, "RBS and PIXE Ion Beam Methods for Characterizing Ni-Co Alloys", Application of Accelerators in Research and Industry **680**, 408-410 (2002)
163. C. I. Muntele*, **D. ILA**, R. L. Zimmerman, "Low Energy Palladium Implantation in Silicon Carbide: Solid State Gas Sensors", Application of Accelerators in Research and Industry **680**, 621-624. (2002).
164. A. Bouyard*, X. Blanchet*, **D. ILA**, C. I. Muntele*, I. C. Muntele*, R. L. Zimmerman, "Applicaton of MeV Ion Bombardment to Create Micro-Scale Annealing of Silica-Gold Films", Application of Accelerators in Research and Industry **680**, 643-646 (2002).
165. M. C. Rodrigues, N. C. da Cruz, E. C. Rangel, R. L. Zimmerman, **D. ILA**, D. B. Poker, D. K. Hensley, "Ion Beam Optimized Mechanical Characteristics of Glassy Polymeric Carbon for Medical Applications", Application of Accelerators in Research and Industry **680**, 408-410 (2002)
166. C. I. Muntele*, I. C. Muntele*, **D. ILA**, D. B. Poker, D. K. Hensley, "Optical Methods for Defect Characterization in Light-Ion Implanted Silicon Carbide", Materials Research Society Conf. Proc. **719**, F8.17.1 (2002)
167. C. I. Muntele*, I. C. Muntele*, **D. ILA**, D. B. Poker, and D. K. Hensley, "Raman and optical absorption studies of silicon carbide structure damage by ion implantation", Materials Research Society Conf. Proc. **719**, F8.15.1 (2002)
168. R. D. Jones, I. Muntele*, C. Muntele*, R. L. Zimmerman, **D. ILA**, "Study of lightweight Ni-Co alloy mirrors obtained by electroforming techniques", Proc. SPIE Int. Soc. Opt. Eng. **4849**, 77 (2002)
169. C. I. Muntele*, I. C. Muntele*, **D. ILA**, D. B. Poker, D. K. Hensley, "Optical Methods for Defect Characterization in Light-Ion Implanted Silicon Carbide", Materials Research Society Conf. Proc. **719**, F8.17.1 (2002).

170. C. I. Muntele*, I. C. Muntele*, **D. ILA**, D. B. Poker, and D. K. Hensley, "Raman and optical absorption studies of silicon carbide structure damage by ion implantation", Materials Research Society Conf. Proc. 719 , F8.15.1 (2002)
171. C. Muntele*, **D. ILA**, C. I. Muntele*, D. B. Poker, and D. K. Hensley, "Raman and FTIR studies on nanostructure formation on silicon carbide", Ion Implantation Technology, New Mexico 2002 Proceedings, 713-715.
172. X. Blanchet*, I. Muntele*, C. I. Muntele*, **D. ILA**, "Gold nanoclusters formation in silicon carbide using ion implantation", Ion Implantation Technology, New Mexico 2002 Proceedings, 709-712.
173. C. I. Muntele*, **D. ILA** and R. L. Zimmerman, "Enhanced Hydrogen Detection and Depth Profiling System using Coincidence Techniques," Application of Accelerators in Research and Industry 576, 484-486(2001)
174. **D. ILA**, R. L. Zimmerman and C. I. Muntele*, "Application of Ionizing Radiation for Nano-Cluster Engineering," Application of Accelerators in Research and Industry **576**, 1015-1019 (2001)
175. R. L. Zimmerman, **D. ILA**, C. Muntele*, I. Muntele*, A. L. Evelyn, D. H. Hensley and D. B. Poker, "Formation and Application of Metal Nanoclusters in SiC", Application of Accelerators in Research and Industry **576**, 1020-1023 (2001)
176. **D. ILA**, R. L. Zimmerman, C. Muntele*, S. Schiestel, C. A. Carosella, G. K. Hubler, D. B. Poker, D. K. Hensley, "Ion Beam Assisted Nucleation of Nano-Crystals", Materials Research Society Symposium Proceedings **647** (2001).
177. Zimmerman, R. L., **ILA, D.**, Evelyn, L., Poker, D. B. and Hensley, D. K., "Enhancement of Porosity and Surface Roughness of Cured Phenolic Resin by Ion Implantation", Materials Research Society Symposium Proceedings **647** (2001).
178. C. I. Muntele*, **D. ILA**, D. J. Larkin, D. B. Poker, D. K. Hensley, "Post Implantation Treatment of Silicon Carbide-Based Sensors for Hydrogen Detection Properties Enhancement", Materials Research Society Conf. Proc. **647**, O5.15.1 (2001).
179. C. I. Muntele*, **D. ILA**, and R. L. Zimmerman, "Enhanced hydrogen detection and depth profiling system using coincidence techniques", AIP Conf. Proc. **576**, 484 (2001)
180. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, D. B. Poker, and D. K. Hensley, "Application of Ionizing Radiation for Nano-Cluster Engineering", AIP Conf. Proc. **576**, 1015 (2001)
181. R. L. Zimmerman, **D. ILA**, C. Muntele*, I. Muntele*, A. L. Evelyn, D. K. Hensley, and D. B. Poker, "Formation and Application of Metal Nanoclusters in SiC", AIP Conf. Proc. 576, 1020 (2001)
182. R. L. Zimmerman, **D. ILA**, C. Muntele*, M. Rodrigues, D. B. Poker, and D. K. Hensley, "Enhanced Tissue Adhesion by increased Porosity and Surface Roughness of Carbon based Biomaterials", Nucl. Instr. and Meth. in Phys. Res. **B 191**, 825 (2002)
183. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, P. Thevenard, F. Orucevic*, C. L. Santamaria*, P. S. Guichard*, S. Schiestel, C.A. Carosella, G. K. Hubler, D. B. Poker, and D. K. Hensley, "Nano-Cluster Engineering: A Combined Ion Implantation/Co-Deposition and Ionizing Radiation", Nucl. Instr. and Meth. in Phys. Res. **B 191**, 416 (2002).
184. A. M. Siddiqui, S. V. S. N. Rao, A. P. Pathak, V. N. Kulkarni, R. K. Murthy, E. K. Williams, **D. ILA**, C. Muntele*, K. S. Chandrasekaran, and B. M. Arora, "Ion Channeling, High Resolution X-Ray Diffraction and Raman Spectroscopy in Strained Quantum Wells", J. Appl. Phys. **90**, 2824 (2001)
185. Iulia C. Muntele*, **D. ILA**, Claudiu I. Muntele*, David B. Poker, and Dale K. Hensley, "Depth Profiling of SiC Lattice Damage Using Micro-Raman Spectroscopy", Materials Research Society Conf. Proc. **692**, H6.6.1 (2001)
186. Shen Zhu, Ching-Hua Su, J. B. Cochrane, S. Lehoczky, I. Muntele*, D. ILA "Growth of carbon nanostructure materials using laser vaporization", Diamond and Related Materials 10, 1190-1194 (2001).

187. R. L. Zimmerman, **D. ILA**, C. Muntele*, I. Muntele*, A. L. Evelyn, D. K. Hensley, and D. B. Poker, "Formation and Application of Metal Nanoclusters in SiC", AIP Conf. Proc. **576** ,1020(2001).
188. I. C. Muntele*, **D. ILA**, C. I. Muntele*, D. B. Poker, and D. K. Hensley, "Depth Profiling of SiC Lattice Damage Using Micro-Raman Spectroscopy", Materials Research Society Conf. Proc. **692** , H6.6.1 (2001).
189. R. L. Zimmerman, **D. ILA**, E. K. Williams#, B. Gasic, A. Elsamadicy, A. L. Evelyn, D. B. Poker, D. K. Hensley and David J. Larkin, "Gold, Silver and Copper Nanocrystal Formation in SiC by MeV Implantation," Radiation Effects on Insulators, Beam Interactions with Materials & Atoms, Jena, Germany, 18-21 July 1999, Nuclear Instruments and Methods B 166-167 ,892-896 (2000)
190. **D. ILA**, E. K. Williams#, R. L. Zimmerman, D. B. Poker and D. K. Hensley "Radiation Induced Nucleation of Nanoparticles in Silica," Radiation Effects on Insulators, Beam Interactions with Materials & Atoms, Jena, Germany, 18-21 July 1999, Nuclear Instruments and Methods B166-167 ,845-850 (2000)
191. R. L. Zimmerman, **D. ILA**, M. G. Rodrigues, C. Smith, C. I. Muntele*, A. L. Evelyn, D. B. Poker and D. K. Hensley, "Enhancement of Porosity and Surface Roughness of Cured Phenolic Resin by Ion Implantation," Materials Research Society Symposium FF Proceedings , Boston, (2000).
192. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, D. B. Poker and D. K. Hensley, "Application of Ionizing Radiation for Nano-Cluster Engineering," Materials Research Society Symposium FF Proceedings, Boston (2000).
193. **D. ILA**, R. L. Zimmerman and C. I. Muntele*, S. Schiestel, C. A. Carosella, G. R. Hubler, D. B. Poker and D. K. Hensley, "Ion Beam Assisted Nucleation of Nano-Crystals," Materials Research Society Symposium FF Proceedings, Boston (2000).
194. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, D. B. Poker and D. K. Hensley, "Nano-Cluster Engineering: A Combined Ion Implantation/Co-Deposition and Ionizing Radiation," Institute of Electrical and Electronic Engineers IIT, 801-804 (2000).
195. C. I. Muntele*, **D. ILA**, E. K. Williams, D. B. Poker, and D. K. Hensley, "Fabrication of SiC hydrogen sensor by Pd-implantation", Materials Science Forum Vols. 338 – 342, 1443 (2000)
196. C. I. Muntele*, **D. ILA**, E. K. Williams, D. B. Poker, D. K. Hensley, "KeV Ion Beam Induced Surface Modification of SiC Hydrogen Sensor", Materials Research Society Conf. Proc. 585, 135 (2000)
197. C. I. Muntele*, **D. ILA**, E. K. Williams#, Iulia C. Muntele*, A. L. Evelyn, D. B. Poker, and D. K. Hensley, "Improved Sensitivity SiC Hydrogen Sensor", Materials Research Society Conf. Proc. 622, T6.6.1 (2000)
198. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, D. B. Poker and D. K. Hensley, "Nano-Cluster Engineering: A Combined Ion Implantation and Ionizing Radiation", Ion Implantation Technology Conf. Proc., 801 (2000)
199. **D. ILA**, E. K. Williams#, C. I. Muntele*, M. A. George, D. B. Poker, D. K. Hensley, D. J. Larkin, "Surface Intensive Materials Processing for Multi-Functional Purposes", Fabrication and Characterization of Atomic scale Structures, 157 (2000)
200. C. I. Muntele*, **D. ILA**, E. K. Williams, Iulia C. Muntele*, A. L. Evelyn, D. B. Poker, and D. K. Hensley, "Improved Sensitivity SiC Hydrogen Sensor", Materials Research Society Conf. Proc. 622 , T6.6.1(2000).
201. A. L. Evelyn, **D. ILA**, R. L. Zimmerman and K. Bhat "Ion Beam Modification of Polymers Containing Cross Linking Enhancers," Ion Beam Modification of Materials, Amsterdam, 31-5 September 1998
202. **D. ILA**, R. L. Zimmerman, E. K. Williams, C. C. Smith, S. Sarkisov, D. B. Poker and D. K. Hensley, "Ion Beam Induced Change in the Optical Properties of Photorefractive Materials", Ion Beam Modification of Materials, Amsterdam, 31-5 September 1998.

203. A. L. Evelyn*, **D. ILA**, R. L. Zimmerman, K. Bhat, D. B. Poker, D. K. Hensley, C. Klatt, S. Kalbitzer, N. Just and C. Drevet, "Ion Beam Modification of PES, PS and PVC Polymers," Ion Beam Modification of Materials, Amsterdam, 1998, Nuclear Instruments and Methods in Physics Research B148, 1141-1145 (1999)
204. R. L. Zimmerman, **D. ILA**, E. K. Williams, D. B. Poker, D. K. Hensley, C. Klatt and S. Kalbitzer, "Ion Beam Synthesis of Au and Cu Nanoclusters in MgO", Ion Beam Modification of Materials, Amsterdam, Nuclear Instruments and Methods in Physics Research B148, 1064-1068 (1999)
205. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, P. Thevenard, F. Orucevic, C. L. Santamaria, P. S. Guichard, S. Schiestel, C. A. Carosella, G. H. Hubler, D. B. Poker, D. K. Hensley, "Nano-cluster Engineering: A combined ion implantation/co-deposition and ionizing radiation", Nucl. Instr. & Meth. In Phys. Res. **B 191** (2002) 416-421.
206. **D. ILA**, R. L. Zimmerman, C. Muntele*, S. Schiestel, C. A. Carosella, G. K. Hubler, D. B. Poker, D. K. Hensley, "Ion Beam Assisted Nucleation of Nano-Crystals", Materials Research Society Conference Proceedings **Vol 647**, Ion Beam Synthesis and Processing of Advanced Materials, 2001.
207. C. I. Muntele*, **D. ILA**, D. J. Larkin, D. B. Poker, D. K. Hensley, "Post Implantation Treatment of Silicon Carbide-Based Sensors for Hydrogen Detection Properties Enhancement", Materials Research Society Symposium Proceedings Vol. 647, Ion Beam Synthesis and Processing of Advanced Materials, 2001.
208. I. C. Muntele*, C. I. Muntele*, **D. ILA**, and R. L. Zimmerman, "Double Alignment channeling at CIM – Alabama A&M University", AIP Conference Proceedings **Vol. 576** "Accelerators and Their Applications in Research and Industry", 2001, p. 451.
209. C. I. Muntele*, **D. ILA**, and R. L. Zimmerman, "Enhanced hydrogen detection and depth profiling system using coincidence techniques", AIP Conference Proceedings **Vol. 576** "Accelerators and Their Applications in Research and Industry", 2001, p. 484.
210. **D. ILA**, R. L. Zimmerman, C. I. Muntele*, D. B. Poker, and D. K. Hensley, "Application of Ionizing Radiation for Nano-Cluster Engineering", AIP Conference Proceedings **Vol. 576** "Accelerators and Their Applications in Research and Industry", 2001, p. 1015.
211. R. L. Zimmerman, **D. ILA**, C. Muntele*, I. Muntele*, A. L. Evelyn, D. K. Hensley, and D. B. Poker, "Formation and Application of Metal Nanoclusters in SiC", AIP Conference Proceedings Vol. 576 "Accelerators and Their Applications in Research and Industry", 2001, p. 1020.
212. R. L. Zimmerman, **D. ILA**, C. Muntele*, M. Rodrigues, D. B. Poker, and D. K. Hensley, "Enhanced Biocompatibility by increased Porosity and Surface Roughness of Carbon based Biomaterials", in Proceedings of Radiation Effects on Insulators Conference, 2001.
213. A. M. Siddiqui, S. V. S. N. Rao, A. P. Pathak, V. N. Kulkarni, R. K. Murthy, E. K. Williams, **D. ILA**, C. Muntele*, K. S. Chandrasekaran, and B. M. Arora, "Ion Channeling, High Resolution X-Ray Diffraction and Raman Spectroscopy in Strained Quantum Wells", Journal of Applied Physics **Vol. 90(6)**, 2001, p. 1-7.
214. I. C. Muntele*, **D. ILA**, C. I. Muntele*, D. B. Poker, and D. K. Hensley, "Depth Profiling of SiC Lattice Damage Using Micro-Raman Spectroscopy", Materials Research Society Symposium Proceedings **Vol. 692**, Progress in Semiconductor Materials for Optoelectronic Applications, 2001.
215. **D. ILA**, E. K. Williams, D. B. Poker and D. K. Hensley, "Post Implantation Irradiation Induced Nucleation of Nano-crystals", Nucl. Instr. & Meth. in Phys. Res. **B166-167**, 845-850 (2000).
216. S. Sarkisov, M.J. Curley, E.K. Williams, **D. ILA**, V.L. Svetchnikov, H.W. Zandbergen, G.A. Zykov, C. Banks, J.-C. Wang, D.B. Poker, and D.K. Hensley, "Nonlinear optical waveguides produced by MeV ion implantation in LiNbO3", Nucl. Instr. & Meth. in Phys. Res. **B166-167**, 750-757 (2000).

217. R. L. Zimmerman, **D. ILA**, E. K. Williams, B. Gasic, A. Elsamadicy, A. L. Evelyn, D. B. Poker, D. K. Hensley and David J. Larkin, "Gold, silver and copper nanocrystal formation in SiC by MeV implantation", Nucl. Instr. & Meth. in Phys. Res. **B166-167**, 892-896 (2000).
218. E. K. Williams, **D. ILA**, D. B. Poker, D. K. Hensley and David J. Larkin, Proceedings of ICSCRM'99, Int'l Conf. on SiC and Related Materials, held October 10-15, 1999, Research Triangle Park, NC.
219. C. I. Muntele*, **D. ILA**, E. K. Williams, D. B. Poker, D. K. Hensley, David J. Larkin, (Mat. Res. Soc. Symp. Proc. **585**, Pittsburg, PA, 2000).
220. S. S. Sarkisov, M. J. Curley, E. K. Williams, **D. ILA**, V. L. Svetchnikov, H. W. Zandbergen, D. B. Poker, D. K. Hensley, "Optical Composite Nanostructures Produced by Silver Ion Implantation of Lithium Niobate", Proc. Of SPIE **Vol. 4097**, (2000) 186-197.
221. E. K. Williams, **D. ILA**, D. B. Poker, D. K. Hensley, Mat. Res. Soc. Symp. Proc. **588**, 215-220 (2000).
222. C. I. Muntele*, **D. ILA**, E. K. Williams, D. B. Poker, D. K. Hensley, David J. Larkin, Iulia Muntele*, Proceedings of ICSCRM'99, Int'l Conf. on SiC and Related Materials, held October 10-15, 1999, Research Triangle Park, NC.
223. George, M. A., Ayoub, M.A., **ILA, D.**, Larkin, D. J., "Elevated Temperature Silicon Carbide Chemical Sensors", Mat. Res. Soc. Proc. **Vol.572**, 123 (1999).
224. **ILA, D.**, Williams*, E. K., Sarkisov, S., Smith*, C. C., Poker, D. B. and Hensley, D. K., "Formation of Metallic Nanoclusters in Silica by Ion Implantation", Nucl. Instr. & Meth. in Phys. Res. **B141** (1998) 289-293.
225. Darwish, A., **ILA, D.**, Poker, D.B. and Hensley, D.K., "Investigation of Mn Implanted LiNbO3 Applying Electron Paramagnetic Resonance", Nucl. Instr. & Meth. in Phys. Res. **B141** (1998) 679-683.
226. Williams*, E.K., **ILA, D.**, Sarkisov, S., Curley*, M., Cochrane, J.C., Poker, D.B., Hensley, D.K. and Borel*, C., "Study of the Effects of MeV Ag and Au Implantation on the Optical Properties of LiNbO3", Nucl. Instr. & Meth. in Phys. Res. **B141** (1998) 268-273.
227. Taylor*, T., **ILA, D.**, Zimmerman, R.L., Cochrane, J.C., Ashley, P.R., Poker, D.B. and Hensley, D.K., "Temperature Effects on the Fabrication of Optical Channels in Planar GaAs/AlGaAs Waveguides using MeV Ions", Nucl. Instr. & Meth. in Phys. Res. **B141** (1998) 704-708.
228. Zimmerman, R.L., **ILA, D.**, Williams*, E.K., Sarkisov, S., Poker, D. B. and Hensley, D. K., "Fabrication of Copper and Gold Nanoclusters in MgO (100) by MeV Ion Implantation", Nucl. Instr. & Meth. in Phys. Res. **B141** (1998) 308-311.
229. Evelyn*, A. L., ILA, D., Zimmerman, R. L. and Bhat, K., Poker, D.B., Hensley, D.K., "Effects of MeV Ions on PE and PVDC", Nucl. Instr. & Meth. in Phys. Res. **B141** (1998) 164-168.
230. Sarkisov, S. S., Williams*, E., Smith*, C., **ILA, D.**, Venkateswarlu, P., Poker, D. B. and Hensley, "Nonlinear optical waveguides based on metal nanocluster composites produced by ion beam implantation", Proceedings of SPIE **3283** (1998).
231. C. C. Smith*, **D. ILA**, S. Sarkisov, E. K. Williams, D. B. Poker and D. K. Hensley, "THE OPTICAL PROPERTIES OF ION IMPLANTED SILICA", Mat. Res. Soc. Proc. **Vol.504**, (1998).
232. **D. ILA**, E. K. Williams, S. S. Sarkisov, D. B. Poker and D. K. Hensley, "CHANGE IN THE OPTICAL PROPERTIES OF SAPPHIRE INDUCED BY ION IMPLANTATION", Mat. Res. Soc. Proc. **Vol.504**, (1998).
233. E. K. Williams, D.ILA, S. Sarkisov, C. C. Smith, P. Venkateswarlu, D.B. Poker and D. K. Hensley, "STUDY OF EFFECTS OF MeV Cu, Sn, Ag AND Au IMPLANTATION ON OPTICAL PROPERTIES OF LiNbO₃", Mat. Res. Soc. Proc. **Vol.504**, (1998).

234. E. K. Williams, D.ILA, T. R. Watkins, D. K. Hensley, and D. B. Poker, "MeV He ION BEAM INDUCED DISORDER IN LiNbO₃ CRYSTAL", *Mat. Res. Soc. Proc.* **Vol.504**, (1998).
235. S. S. Sarkisov, D.ILA, R. L. Zimmerman, E. K. Williams, P. Venkateswarlu, D.B. Poker and D.K. Hensley, "THIRD ORDER OPTICAL NONLINEARITY OF COLLOIDAL METAL NANOCCLUSERS FORMED BY MeV ION IMPLANTATION", *Mat. Res. Soc. Proc.* **Vol.504**, (1998).
236. A. L. Evelyn, D. ILA, R. L. Zimmerman, K. Bhat, D. B. Poker and D. K. Hensley, "STUDY OF THE EFFECTS OF MeV IONS ON PS AND PES", *Mat. Res. Soc. Proc.* **Vol.504**, (1998).
237. R. L. Zimmerman, D. ILA, E. K. Williams, S. Sarkisov, D. B. Poker and D. K. Hensley, "FORMATION OF NANOCCLUSERS COLLOIDS OF TIN, GOLD, and COPPER IN MAGNESIUM OXIDE BY MeV ION IMPLANTATION", *Mat. Res. Soc. Proc.* **Vol.504**, (1998).
238. Williams*, E.K., ILA, D., Sarkisov, S., Venkateswarlu, P., Poker, D.B., and Hensley, D.K., "Loss measurements and stoichiometric dependence of Ti and O implanted LiNbO₃ waveguides," *Nuclear Inst. and Methods in Physics Research B* **127/128** (1997) 512-514
239. Zimmerman, R. L., ILA, D., Jenkins, G. M., Hirvonen, J. K., and Maleki#, H., "NRA of Hydrogen in Glassy Polymeric Carbon", in *Application of Accelerators in Research and Industry*, eds. J. L. Duggan and I. L. Morgan, CP392 (AIP Press, New York, 1997) 685-688.
240. ILA, D., Wu*, Z., Zimmerman, R. L., Sarkisov, S., Qian, Y., Poker, D. B. and Hensley, D. K., "Formation of Silver Metal Nanoclusters in MgO by MeV Ag Implantation", in *Modification and Synthesis by Ion Beam Processing*, eds. D. E. Alexander, N. W. Cheung, B. Park, and W. Skorupa, *MRS Sym. Proc.* 438, 417-422 (1997).
241. ILA, D., Wu*, Z., Smith*, C.C., Poker, D.B., Hensley, D.K., Klatt, C., Kalbitzer, S., "Post bombardment enhanced optical absorption in gold implanted silica," *Nuclear Inst. and Methods in Physics Research B* 127 (1997) 570-573.
242. Evelyn*, A.L., ILA, D., Zimmerman, R. L., Bhat, K., Poker, D. B. and Hensley, D. K., "Effects of MeV Ion Beam on Polymers", in *Materials Modification and Synthesis by Ion Beam Processing*, eds., D.E. Alexander, N.W. Cheung, B. Park, and W. Skorupa, *MRS Sym. Proc.* 438 (1997) 499-504 .
243. Zimmerman, R. L., ILA, D., Poker, D. B. and Withrow, S. P., "Permeability Control of GPC Drug Delivery by Ion Implantation", in *Application of Accelerators in Research and Industry*, eds. J.L. Duggan and I.L. Morgan, CP392 (AIP Press, New York, 1997)957-959.
244. Zimmerman, R. L., ILA, D., Poker, D. B. and Withrow, S. P., "Permeability control of GPC drug Delivery System", *Nucl. Inst. & Meth.* **B127/128**, (1997) 1023-1026
245. Taylor*, T., ILA, D., and Zimmerman, R. L., Ashley, P.R., Poker, D.B., Hensley, D.K., "Optical changes induced in GaAs/AlGaAs waveguides by MeV ion bombardment", *Nucl. Inst. & Meth.* **B 127/128** (1997) 442-445
246. Evelyn*, A. L., ILA, D., Zimmerman, R. L. and Bhat, K., Poker, D.B., Hensley, D.K., "Resolving the electronic and nuclear effects of MeV ions in polymers", *Nucl. Inst. & Meth.* **B127/128** (1997) 694-697
247. Qian*, Y., ILA, D., Zimmerman, R. L. Poker, D.B., Boatner, L.A., Hensley, D.K., "MeV silver ion implantation induced changes in optical properties of MgO(100)", *Nucl. Inst. & Meth.* **B 127/128** (1997) 524-527
248. E.K. Williams*, D. ILA, S. Sarkisov, P. Venkateswarlu, D.B.Poker, P.R. Ashley, "Loss Measurements of Stoichiometric Ti and O Implanted LiNbO₃ Channel Waveguides", *Mat. Res. Soc. Symp.* **396**, 361 (1996).
249. S.S. Sarkisov, E.K. Williams*, D. ILA, and P. Venkateswarlu, D.B. Poker, "Vanishing Optical Isolation Barrier in Double Ion-Implanted Lithium Niobate Waveguide" *Appl. Phys. Lett.* **68 (17)**, 2329 (1996).

250. A.L. Evelyn*, **D. ILA**, J. Fisher*, "Ion Beam Modification of PVDC and PE Polymers", Mat. Res. Soc. Symp. **396**, 323 (1996).
251. Y. Qian*, **D. ILA**, K.X. He, M. Curley*, D.B. Poker, "Ion Beam-Induced Changes in Optical Properties of MgO", Mat. Res. Soc. Symp. **396**, 423 (1996).
252. T. Taylor*, **D. ILA**, P.R. Ashley, D.B. Poker, "MeV Ion Beam Induced Index of Refraction Changes in Layered GaAs/AlGaAs", Mat. Res. Soc. Symp. **396**, 371 (1996).
253. H. Maleki#, **D. ILA**, R. L. Zimmerman, G.M. Jenkins, D.B. Poker, "A Carbon Drug Delivery System for Lithium", Mat. Res. Soc. Symp. Proc. **414**, 107-112 (1996)
254. T. Taylor*, **D. ILA**, R.L. Zimmerman, P.R. Ashley and D.B. Poker, "Fabrication of Optical Channel Waveguides in GaAs/AlGaAs System by MeV Ion Beam Bombardment", Mat. Res. Soc. Symp. Proc. **373**, (1996).
255. W.F. Seng*, P.A. Barnes, M.L. Lovejoy, L.P. Fu*, G.D. Gilliland, **D. ILA**, "The Effect of Low Energy Ion-Beam Milling on the Physical and Electrical Properties of n-GaAs", Mat. Res. Soc. Symp. **396**, 807 (1996).
256. **D. ILA**, R.L. Zimmerman, G. M. Jenkins, A. L. Evelyn*, H. Maleki, J.H. Fisher* and D. B. Poker, "Ion Beam Enhanced Electrical Conductivity in Polymers", Nucl. Instr. & Meth., **B106**, (1995).
257. W.A. Hollerman*, J.H. Fisher*, **D. ILA**, G.M. Jenkins and L.R. Holland, "Proton Induced Fluorescence Properties of Terbium Gallium Garnet", J. Mater. Res., **Vol. 10**, No. 8 1861-1863 (1995).
258. R.L. Zimmerman, **D. ILA**, G.M. Jenkins, H. Maleki# and D.B. Poker, "Ion Beam Promoted Lithium Absorption in Glassy Polymeric Carbon", Nucl. Instr. & Meth. **B106**, 550-554 (1995).
259. R.L. Zimmerman, **D. ILA** and V.K. Hirvonen, "Optimized System for Hydrogen Detection", Nucl. Instr. & Meth. **B106**, (1995).
260. **D. ILA**, R.L. Zimmerman and N. Kukhtarev, "Application of RBS, (p, α) and (p, α) NRA in the Fabrication of Holographic Grating in LiNbO₃", Nucl. Instr. & Meth. **B106**, (1995).
261. E.K. Williams*, **D. ILA**, R.L. Zimmerman, S. Sarkisov, P. Venkateswarlu and D.B. Poker, "Application of NRA/Channeling to Study Deeply Buried Waveguides", Nucl. Instr. & Meth. **B106**, (1995).
262. A.L. Evelyn*, **D. ILA** and G.M. Jenkins, "RBS and Raman Spectroscopy Study of Heat-Treatment Effect of Phenolformaldehyde Resin", Nucl. Instr. & Meth. **B85**, 861-863 (1994).
263. **D. ILA**, A.L. Evelyn* and G.M. Jenkins, "Ion Beam Induced Carbonization of Partially Cured Phenolic Resin", Nucl. Instr. & Meth. **B91**, 580-583 (1994).
264. **D. ILA**, A.L. Evelyn* and G.M. Jenkins, "Ion Beam Induced Graphitization of Phenolformaldehyde", Mat. Res. Soc. Symp. Proc., **321**, 441-446 (1994).
265. **D. ILA**, R.L. Zimmerman and G.M. Jenkins, "Controlled Formation of Buried Layers of Carbon", Mat. Res. Soc. Symp. Proc., **349**, 25-30 (1994).
266. **D. ILA**, G.M. Jenkins, L.R. Holland, A.L. Evelyn and H. Jena, "A Study of the Thermally Induced Carbonization of Phenolformaldehyde by Combined Ion Beam and Surface Specific Analysis. **VACCUM 45**, No. 4, 451 (1994).
267. **D. ILA**, R.L. Zimmerman and G.M. Jenkins, "Controlled Formation of Buried Layers of Carbon", Mat. Res. Soc. Symp. Proc., **349**, 25-30 (1994).
268. **D. ILA**, A.L. Evelyn* and Y. Qian*, "Embedded Circuitry in Polymeric Films by Linear Energy Transfer (LET) of MeV Ions". Mat. Res. Soc. Symp. Proc., **338**, 613-618 (1994).
269. **D. ILA**, G.M. Jenkins, R.L. Zimmerman and A.L. Evelyn*, "High Porosity Polymeric Carbon for Controlled Release of Drugs", Proc. Mat. Res. Soc. Symp., **331**, 281-285 (1994).

270. **D. ILA**, A.L. Evelyn* and G.M. Jenkins, "Ion Beam Induced Carbonization of Partially Cured Phenolic Resin", *Nucl. Instr. & Meth.*, **B91**, 580-583 (1994).
271. G.M. Jenkins, **D. ILA**, M. Rizzatti#, R.L. Zimmerman and H. Maleki#, "Absorption of Lithium Salts in Polymeric Carbons", *Carbon'94*, 580-581 (1994).
272. N. Kukhtarev, T. Kukhtareva, **D. ILA**, E.K. Williams*, R.L. Zimmerman and H.J. Caulfield, "Channeling in LiNbO₃:Fe Modulated By Holographic Stress Field Superlattice", *Mat. Res. Soc. Symp. Proc.*, **316**, 661-665 (1994).
273. H. Maleki#, G.M. Jenkins, **D. ILA**, R.L. Zimmerman and A.L. Evelyn*, "Storage of Lithium in Carbon," *Advances in Porous Materials, Mat. Res. Soc. Symp. Proc.*, **371**, (1994).
274. H. Maleki#, **D. ILA**, L.R. Holland, R.L. Zimmerman and G.M. Jenkins, "Process Dependence of Orientation of Ribbon-Like Aromatic Molecules in Glassy Carbon", *Mat. Res. Soc. Symp. Proc.*, **349**, 15-18 (1994).
275. T. Taylor*, **D. ILA** and J.C. Cochrane, "RBS, AES, EDX and ESCA Investigation of Heat Treatment Effects on Stainless Steel Alloy 440C", *Nucl. Instr. & Meth.*, **B85**, 904-906 (1994).
276. E.K. Williams*, **D. ILA** and R.L. Zimmerman, "Simultaneous Application of (p,□) and (p,□) Channeling to the Detection of Light Elements in Crystals". *Nucl. Instr. & Meth.*, **B85**, 537-540 (1994).
277. R.L. Zimmerman, **D. ILA** and C.C. Smith*, "Resonant Scattering Assisted Light Element Analysis", *Nucl. Instr. & Meth.*, **B85**, 68-70 (1994).
278. **D. ILA**, A.L. Evelyn* and G.M. Jenkins, "Oxygen Ion Bombardment of Polymer Carbon", *Carbon '93*, June 13-18, 374-375 (1993).
279. **D. ILA**, A.L. Evelyn*, G.M. Jenkins and H. Jena*, "Analysis of Trace Impurities and their Gradients in Glassy Carbon using Rutherford Backscattering Spectrometry". *Carbon '93*, **31(7)** 1209-1218 (1993).
280. **D. ILA**, E.K. Williams*, and G.M. Jenkins, "Irradiation Induced Carbonization of Phenolic Resin Films", *Carbon '93*, 320-321 (1993).
281. D.ILA, E.K. Williams* and G.M. Jenkins, "Irradiation induced Carbonization of Phenolic Resin Films", *21st Biennial American Carbon Conf.*, **No. 4.16** (1993).
282. D.ILA, E.K. Williams*, and G.M. Jenkins, "Oxygen Bombardment Induced Activation of Glassy Carbon", *Mat. Res. Soc. Symp. Proc.*, **304**, 173 (1993)
283. E.K. Williams*, D.ILA and R.L. Zimmerman, "Concentration Profiling of Various Ployments Using ERA, NRA, and RBS". *Nucl. Instr. & Meth.*, **##B**, 537-540 (1993).
284. **D. ILA**, G. M. Jenkins, L. R. Holland, J. Thompson, A. L. Evelyn*, A. Hodges*, R. L. Zimmerman and I. Dalins, "Measurement of Accumulated Contaminants in Glassy Carbon by RBS", *Nucl. Inst. and Meth.*, **B64**, 439-442 (1992).
285. I. Dalins, M. Karimi# and **D. ILA**, "Violent Oxidation of Lithium Containing Aluminum Alloys in Liquid Oxygen", *Appl. Surf. Sci.* **48/49**, 509 (1991).
286. M. Karimi#, **D. ILA**, I. Dalins and G. Vidali, "Interaction of Heavier Rare Gas Atoms With Metal Surface: A Model Based on the Effective Medium Theory", *Springer-Verlag Series in Surface Science*, **Vol. III**, 1991.
287. M. Karimi#, **D. ILA**, I. Dalins and G. Vidali, "Interaction of H₂ with Simple Metal Surfaces: A Model based on the Anisotropic Effective Medium Theory", *Surf. Sci. Lett.*, **239**, L505 (1990).
288. G. Vidali, W. Li, P. A. Dowben, M. Karimi#, C. W. Hutchings, J. Lin, C. Moses, **D. ILA** and I. Dalins, "Structural and Electronic Characterization of Metals Overlayers on Metals and Semiconductors: an Atom Beam Scattering, LEED and UPS Study", *Proceeding of MRS*

Spring Conference **Vol. 187**, (1990), "Thin Film Structure and Phase Stability- Epitaxy and Multilayer Structure".

289. P. Tibbits, M. Karimi#, **D. ILA**, I. Dalins and G. Vidali, "Surface Disordering of Pb(110)", J. Vac. Sci. Tech., **A9 (3)**, 1937 (1991).

CONFIDENTIAL

INVITED, KEYNOTE and PLENARY speech:

1. **D. ILA (Invited Speaker), MRS-Japan, December 2018**
2. **D. ILA (Invited talk), Nanosmat USA 2018, Texas**
3. **D. ILA (Plenary), Thermam 2016, Izmir, Turkey**
4. **D. ILA (Invited talk), Nanosmat USA 2016, Arlington, TX**
5. **D. ILA (Invited talk), J-MRS Dec. 2015, "Production of High Volume Fraction Quantum Dots by Ion Beam ", Yokohama, Japan**
6. **D. ILA (Invited talk), ICMAT – Singapore MRS 2015, "High Impact Flipped Classrooms for Graduate Materials and Graduate Physics Education ", Singapore**
7. **D. ILA (Keynote Speaker), Thermam 2014, "Ion Beam Assisted Enhanced Thermoelectric Properties", Cesme, Turkey, June 2014**
8. **D. ILA (Invited), CAARI 2014, "Ion Beam Assisted Enhanced Thermoelectric Properties (with Figure of Merit above 2.0)", San Antonio, TX, May 2014**
9. **D. ILA (Plenary), "Ion Beam facility for Research, Service and Education", International Conference on Surface Modification of Materials by Ion Beam", Izmir, Turkey, September 2013.**
10. **D. ILA (Invited talk), "Thermoelectric Systems: Ion Beam enhanced Thermoelectric Properties", International Conference on Surface Modification of Materials by Ion Beam", Izmir, Turkey, September 2013.**
11. **D. ILA (invited talk), "Ion Beam Modification and Bio Applications", Harvard Medical School, DIVISION OF BIOMEDICAL ENGINEERING, Nov. 29, 2012.**
12. **D. ILA (Keynote Speaker), Ion Beam & Materials Education, Research and Services Network, International Union of Materials Research Society (IUMRS-ICEM2012), Yokohama, Japan, September 23 to 28, 2012.**
13. **D. ILA, Challenges and Barriers for Small Business Success, ASSOCIATION OF COLLEGIATE MARKETING EDUCATORS (ACME), New Orleans, LA, 28 February-2 March 2012**
14. **D. ILA, Pseudo-crystals consisting Nano-materials for Thermoelectric Applications, NanoSmat-USA, Tampa Florida, March 27-30, 2012.**
15. **D. ILA, Ion Beam Assisted Fabrication of High Efficiency Thermoelectric materials, Materials Research Society of Japan, December 19-22, 2011.**
16. **D. ILA, Enhanced Thermoelectric Efficiency by MeV Ion Beam, European MRS, Nice (France) from May, 2011.**
17. **D. ILA, (Plenary) New Directions of the Ion Beam Modification of Materials, C-International Conference on Surface Engineering, Xi'an, China, May, 2011.**
18. **D. ILA, Next Generation Application of Ion Beam for Improving Biocompatible Materials , 5th International Bioengineering Congress, Izmir, Turkey, 15-18 June 2010.**
19. **D. ILA, New Directions of the Ion Beam Modification of Materials, Conference on Application of Accelerators in Research and Industry (CAARI), Fort Worth, TX, 8-13 August 2010.**
20. **D. ILA, Formation of pseudo-crystals using MeV Ion Beam track, 10th European Conference on Accelerators in Applied Research and Technology, Athens, Greece, 13-17 September 2010.**

21. D. ILA, **Materials Science and Engineering Research and Training at the Center for Irradiation of Materials of Alabama A&M University**, 10th European Conference on Accelerators in Applied Research and Technology, Athens, Greece, 13-17 September 2010.
22. D. ILA, **How to write a winning grant**, MSI Technical Assistance and Capacity Building Conference, Dallas, Texas, 21-24 September 2009.
23. D. ILA, **Formation of pseudo-crystals consisting of nano-crystals using MeV Ion Beam Track**, Surface Modification of Materials by Ion Beam (SMMIB09), Tokyo, Japan, 13-18 September 2009.
24. D. ILA, **Application of Ion Beam for Thermoelectric Device Fabrication: Layered Sheets of Quantum Dots**, IMRC 2009: XVII International Materials Congress, Cancun, Mexico, 16-20 August 2009.
25. D. ILA, **MeV Ion Beam Assisted formation pseudo-crystals**, International Conf. on Application of Nuclear Techniques, Crete, Greece, 14-20 June 2009.
26. D. ILA, **Research and Education at the Center for Irradiation of Materials of Alabama A&M University**, METH.& APP. OF RAD. CHEM. – VIII (MARC VIII), Education Session, KAILUA-KONA, HAWAI'I, USA APRIL 6-10, 2009.
27. D. ILA, **Ion Beam Track Assisted formation of pseudo-crystal consisting of nano-crystals**, V Int. Symp. of the Rad. Phys. Div. on Nuclear Tracks, to be held in Ixtapan de la Sal, Edo. Mex., Mexico, March 8-11, 2009.
28. D. ILA, **Next Generation of Materials and Device Engineering: Innovative Ion Beam Approach**, IUMRS-ICA 2008, Nagoya, Japan, 9-14 Dec. 2008.
29. D. ILA, **Highly Efficient Thermoelectric Materials**, NanoSmat2008 – 3rd International Conference on Surface, Coating and Nanostructured Materials, Barcelona, Spain, 21-24 Oct. 2008.
30. D. ILA, **Fabrication of Nanoscale Nano-systems by MeV Ion Beam**, Conference on Application of Accelerators in Research and Industry (CAARI), Fort Worth, TX, 10-15 August 1008.
31. D. ILA, **Application of MeV Ions for fabricating nano-layers of nano-structures: Optical & Thermoelectric Materials**, International Conf. on Application of Nuclear Techniques, Crete, Greece, 8-14 June 2008.
32. D. ILA, **Institutional Leadership in Contracting and Effective Research Development**, MSIRP, New Orleans, LA, May 2008.
33. D. ILA, **Nanoscale Nano-systems by MeV Ion Beam**, TMS Meeting in New Orleans, LA, April 2008.
34. D. ILA, **MeV ION IRRADIATION EFFECTS TO TAILOR THE THERMOELECTRIC PROPERTIES OF MATERIALS**, Int. Nucl. Chemistry Congress, Cancun, Mexico, 13-18 April 2008.
35. D. ILA, **Highly Efficient Thermoelectric Materials: Nanolayered Nano-Crystals**, Direct Energy Conversion Workshop (P&E IPT), ARL-Adelphi, MD, 9 April 2008.
36. D. ILA, **Highly Efficient Thermoelectric Materials: Nano-layered Nanoclusters**, Japan-MRS, Dec. 2007.
37. D. ILA, **Highly Efficient Thermoelectric Materials: Nanolayered Nanocrystals**, Inter. Microelec. & Packaging Society (IMAPS), 11-15 Nov. 2007.
38. D. ILA, **Highly Efficient Thermoelectric Generators and Peltier Devices: Novel Ion Beam Technique**, SMMIB 30 Sept.- 5 Oct. 2007, Mumbai India 2008.

39. D. ILA, Research and Services at the Center for Irradiation of Materials of AAMU, UNESP, Araraquara, Brazil, August 2007.
40. D. ILA, Prototype of an Industrial Level Nanolithography System, Reconf. Syst., Microsys., & Nanotech. 8 & 9 May 2007.
41. D. ILA, Application of Nanoscale Regimented Nanocrystals for Energy Production and Conversion, Reconf. Syst., Microsys., & Nanotech. 8 & 9 May 2007.
42. D. ILA, Highly Efficient Thermoelectric Materials: Nanolayered Nanocrystals, International Planetary Probe Workshop (IPPW07), Bordeaux, France, 23-29 June 2007.
43. D. ILA, Ion beams for nano-scale synthesis, International Meeting on Recent Developments in the study of Radiation Effects in Matter (REM-UNAM), , Mexico, Dec. 2006”
44. D. ILA, Ion Beam Study of Nano-Materials: Synthesis, Modification and Characterization, ICTP-UN-Treiste, Italy, June&July 2006.
45. D. ILA, Nanolayer Formation by Ion Beam, PASI-NSF February 2006 Buenos Aires, Argentina (Focused Ion Beams for the Nano Era)
46. D. ILA, Application of Ion Beams for Nano-Syatems – NRIM-Tsukuba – Japan February 2006
47. D. ILA, Application of Ion Beam in Production of Nanoscale Nanomaterials, International Conference on Surface Modification of Materials by Ion Beam (SMMIB) September 2005 – Turkey
48. D. ILA, Formation of Nanolayers of Nanomaterials and their applications, Materials Research Society Conference Fall 2005,
49. D. ILA, Ionizing Radiation Effects on Polymers: Fundamental and Basics, Symposium NN, Fall 2004 Meeting of Materials Research Society. Boston, Mass. Nov. 29-Dec. 3, 2004,
50. D. ILA& J. Hirvonen (ARL), Ion Beam Assisted Deposition: A Review and Applications”, Bursa, Turkey, June 2004.
51. D. ILA, Ion Beam Modification and Ion Beam Ananalysis of Materials: A review talk, Izmir, Turkey, June 2004.
52. D. ILA, “Ion Beam Modification of Polymers”, Brazilian Condensed Matter Conference, Pocos de Caldas, Brazil, May 2004.
53. D. ILA, “Ion Beam Modification and Ion Beam Analysis of Materials”, Santos, Brazil, September 2003.
54. D. ILA, “Nano-Cluster Engineering: A Combined Ion Implantation/Co-Deposition and Ionizing Radiation”, SMMIB 2003, San Antonio, Texas.
55. D. ILA, “Nanoscale Nanocrystal Layers Formation Induced by Ion Beams”, Luisiana Materials Research Conference, Nov. 2003.
56. D. ILA, “Applications and Production of Layered Nano-Cluster Systems”, Int. Symp. Nano-Intelligent Materials/Systems (ISNIMS), Oct. 2002, Tokyo, Japan.
57. D. ILA, “Ion Beam Modification and Ion Beam Analysis of Materials Training at the Center for Irradiation of Materials of Alabama A&M University”, Application of Accelerators in Teaching Workshop, Seventeenth International Conference on Application of Accelerators in Research and Industry, Denton, Texas, November 2002.
58. D. ILA, “Surface Intensive Materials Processing for Multi-Functional Purposes”, 5th International Symposium on Advanced Physical Fields (APF5), Tsukuba-shi, Japan, March 2000.

59. **D. ILA**, " *Irradiation Assisted Formation of Metallic Nanoclusters in silicon*", Surface Modification of Materials by Ion Beam (SMMIB), Beijing, China, Sept. 1999.
60. **D. ILA**, "Summer Training Program on IBMM and IBA", Application of Accelerators in Teaching Workshop, Fifteenth International Conference on Application of Accelerators in Research and Industry, Denton, Texas, November 1998.
61. **D. ILA**, "MeV Alpha Particle Effects on Polymers", The Fourteenth International Conference on Application of Accelerators in Research and Industry, Denton, Texas, November 1996.
62. **D. ILA**, "*Fabrication of Metallic Quantum Dots in Photorefractive Materials By MeV Ion Implantation*", Max Planck Institute, Heidelberg, Germany, May 1996.
63. **D. ILA**, "Research and Development at the Center for Irradiation of Materials of Alabama A&M University", Max Planck Institute, Heidelberg, Germany, July 1996.
64. **D. ILA** "Ion Beam Modification of Materials I", Application of Accelerators in Teaching Workshop, Thirteenth International Conference on Application of Accelerators in Research and Industry, Denton, Texas, November 1994.
65. **D. ILA**, "Ion Beam Modification of Polymers", Thirteenth International Conference on Application of Accelerators in Research and Industry, Denton, Texas, November 1994.
66. **D. ILA**, "Novel Ion Beam Analysis and Applications", Thirteenth International Conference on Application of Accelerators in Research and Industry, Denton, Texas, November 1994.
67. **D. ILA**, " Ion Beam Induced Carbonization of Partially Cured Phenolic Resin", Seventh International Conference on Radiation Effects on Insulators, Nagoya, Japan Sept. 1993.
68. **D. ILA**, "Ion Beam Analysis of Materials I", Application of Accelerators in Teaching Workshop, Twelve International Conference on Application of Accelerators in Research and Industry, Denton, Texas, November

HONORS AND AWARDS

1. Member of the Board of North Carolina Science, Technology and Innovation, appointed by honorable Pat McCrory, Governor of the State of North Carolina (2015-2019)
2. Member of North Carolina "University Innovation Council", appointed by NC Governor (2015-17)
3. Member of an Independent Assessment Committee appointed by OSD, congressionally mandated committee (2010-2011)
4. Member of the National Academies' Committee of Emerging Research Institutions (2007)
5. Invited for scientific advisor and speaker at the Japanese National Research Institute for Metals (Now Nano-technology) Since 2000 – Most recent Feb. 2006, Dec. 2007 & Dec. 2008
6. Invited for scientific research to the Max-Plank-Institute for Nuclear Physics at Heidelberg, Germany, 1992, 1994, 1995, 1997, and 1998.
7. Chair of the MRS-GSA and member of Awards Committee of Materials Research Society (2000-2010)
8. Certificate of recognition of activities as the Chairman of the Membership subcommittee of Materials Research Society, Dec. 1999.
9. Certificate of recognition of activities as the Chairman of the Professional Development Sub-Committee of MRS, Dec. 1998.
10. Various Certificates from MRS and ASM.
11. Certificate of recognition for Organizing Symposium A-Fall 1995 MRS, Dec. 1995.
12. Certificate of recognition for Organizing Symposium KK-Fall 1997 MRS, Dec. 1997.