

DR PANAGIOTIS DIMITRAKIS
SHORT CURRICULUM VITAE

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EDUCATION

- **B.Sc. in Physics**, University of Athens, Physics Department, Greece, 1995
- **M.Sc. in Condensed Mater Physics**, University of Athens, Physics Department, Greece, 1997
- **Ph.D.**, National Technical University of Athens, [Department of Applied Physics, Greece](#), 2006 (Thesis title "[Nanoparticles for Electronics](#)")

PROFESSIONAL EXPERIENCE

- 2011 - present, Cleanroom Facility Manager, Research Staff, Department of Microelectronics, Institute of Advanced Materials, Physicochemical Processes, Nanotechnology & Microsystems, NCSR "Demokritos"
- 2007 – 2011, Electrical Characterization Facility Manager, Research Staff, Institute of Microelectronics, NCSR "Demokritos"
- 2004 - 2006, PhD Candidate Fellow, National Technical University of Athens and Institute of Microelectronics, NCSR "Demokritos"
- 2001 - 2004, Institute of Microelectronics, NCSR "Demokritos", Greece
- 2001 – 2007, Lecturer Laboratory Physics, Technological Educational Institute of Athens,
- 2000-2001, Research Associate, Institute of Electronic structure and Lasers, Foundation of Research and Technology Hellas (IESL-FORTH)
- 1998 – 2000, Military Service (Infantry Second Lieutenant, Hellenic Army Research & Technology Office)

PROJECT COORDINATION

"Graphene controlled electrochemical interfaces for nanoscaled ReRAM devices (G-ReRAM)", Greek-German Bilateral Research Projects, 2013-2015 (200.000 Euro)

PARTICIPATION IN EUROPEAN RESEARCH PROJECTS

- a) GROWTH – NEON (Nanoparticles for Electronic Applications) [1/2/2001-30/12/2004], Research Associate. The scope of the project was to develop SiNC-NVMs by Ultra-Low-Energy Ion-Beam-Synthesis technique and make the technology transfer to STMicroelectronics, Agrate, Italy. The first Si-NC-NVM cells by ULE-IBS were demonstrated and manufactured by ST.

- b) FET – FRACTURE (Nanoelectronic Devices and Fault-Tolerant Architecture), [1/1/2001 – 31/12/2003], Research Associate. The scope of the project was to realize hybrid organic/Si memory cells.
- c) ESA – QD-GAN- RTD (Investigations of the use of III-Nitrides Quantum Dot-RTD structures as UV-VIS tunable photodetectors), [28/11/2007 – 31/10/2008] Principal Investigator. The scope of the project was to realize a Resonant Tunneling Diode with GaN QDs for spectroscopic applications.
- d) REGPOT-MiNaSys-CoE (Micro and Nano Systems - Center of Excellence), [2009-2012], Researcher. The scope of the project was to install a high resolution e-beam lithography system.

PARTICIPATION IN NATIONAL RESEARCH PROJECTS

- a) “Nanoparticles for Electronics”, GSRT-HERAKLEITOS I, (2003-2005), Research Associate
- b) “Memory characteristics of pure polymeric materials and polymer/metal nanoparticles blends”, GSRT-Bilateral Greece-UK 2003 [2004-2006], Research Associate
- c) “Si-Nanocrystal Synthesis by Plasma-Immersion Ion-Implantation”, GSRT-Bilateral Greece-France 2005-2007, Researcher
- d) “Process Technology Development for new photovoltaics based on Si nanomaterials”, GSRT-SYNERGASIA, Researcher
- e) “Spontaneous growth, properties and devices of III-V semiconductor nanowires” (NanoWIRE)”, GSRT-THALIS, Researcher (2012-2015)
- f) “Plasma directed assembly of nanostructures and applications” (Plasma NanoFactory) (<http://www.imel.demokritos.gr/projects/plasmananofactory/index.php/en/>), GSRT-ARISTEIA I (2012-2014)
- g) “3-D Junctionless Si-Nanowire Memory Devices” (NanoWireMemory), GSRT-ARISTEIA II (2013-2015)
- h) “Nanoparticle Assemblies for Resistive Memories» (NanoARM), GSRT-ARISTEIA II (2013-2015)

RESEARCH TRIPS

- 14/8 – 14/9/2006: Visitor Research Scientist at Centre of Molecular and Nanoscale Electronics, University of Durham, Durham, UK
- 3/9 – 16/11/1997: Visitor Postgraduate Fellow at Laboratoire de Physique des Composants a Semiconducteurs, ENSERG, Institut National Polytechnique, Grenoble, FRANCE

PROFESSIONAL MEMBERSHIPS

- Member of Institute of Electron and Electronic Engineers (IEEE), Life-member of Electron Device Society
- Member of Material Research Society (MRS)

RESEARCH INTERESTS

- Graphene-based devices and related technology
- Nanowire transistors
- Quantum-dots for memory devices
- Charge storage memory devices utilizing novel gate dielectric stacks

- Molecular and Hybrid Organic-Inorganic Memory devices (e.g., Bistable Resistive NVM devices)
- Quantum Dots for Electronic and Optoelectronic applications
- Silicon-On-Insulator FET devices
- Device Reliability

RESEARCH ACHIEVEMENTS

- “A hybrid memory of nanoparticles”, *Materials Today*, Vol. **6**(12), 7 (2003) (<http://www.sciencedirect.com>)
- Invited to Intel® 10th EMEA Academic Forum (Poland, 2005)
- Best Poster Award, Micro & Nano–Engineering, Vienna, 2005 (http://www.mne05.org/poster_winner3.html)

PUBLICATIONS – PATENTS – RESEARCH METRICS

(www.researcherid.com/rid/B-1789-2008)

- 50 articles in international peer-review journals
- 65 paper and conference announcements (peer-review)
- 840 citations (h–index:14 Scopus), 773 citations (h–index:14, ISI)
- 7 invited talks in International Conferences
- 2 invited tutorial talks in International Conferences
- Reviewer in several international journals of AIP, Elsevier, IOP and IEEE
- 1 Patent GR1005905 (B2) — 2008-05-15 “Method of Oxidizing silicon nitride materials at low thermal budgets.”

BOOK EDITING AND CHAPTERS

- C. Bonafos, Y. Fujisaki, **P. Dimitrakis**, E. Tokumitsu, «Materials and Physics of Nonvolatile Memories II» *Mater. Res. Soc. Symp. Proc.* **Vol. 1250**, Warrendale, PA, 2010
- D. Wouters, E. Tokumitsu, O. Auciello, **P. Dimitrakis**, Y. Fujisaki, «New Functional Materials and Emerging Device Architectures for Nonvolatile Memories» *Mater. Res. Soc. Symp. Proc.* **Vol. 1337**, Warrendale, PA, 2011
- Y. Fujisaki, P. Dimitrakis, E. Tokumitsu, M. Kozicki, «Materials and Physics of Emerging Nonvolatile Memories» *Mater. Res. Soc. Symp. Proc.* **Vol. 1430**, Warrendale, PA, 2012
- **P. Dimitrakis**, P. Normand and D. Tsoukalas, *Silicon Nanocrystal Memories*, **Ch. 8** (pp.211-241), **Silicon Nanophotonics**, ed. L.Khriachtchev (ISBN-13 978-981-4241-11-3), World Scientific Publishing (Singapore, 2008)
- **P. Dimitrakis**, S. Schamm-Chardon, C. Bonafos, P. Normand, *Nanoparticle-Based Memories: Concept and Operation Principles*, **Ch. 2, Applications of Nanomaterials**, Eds. R.S. Chughule and S.C. Watawe, American Scientific Publishers. ISBN: 1-58883-181-7 (2011)

CONFERENCE ORGANIZATION

- **ESSDERC/ESSCIRC 2009**, Poster session, 14-18 September, Athens, Greece
- **International Workshop** on “Nanotechnology for electronic and photonic applications”, 18 September 2009, Athens, Greece

- **MRS Spring Meeting 2010**, Symposium G “Materials and Devices for Non-Volatile Memories”, 5-9 April San Francisco, USA
- **MRS Spring Meeting 2011**, Symposium Q “New Functional Materials and Emerging Device Architectures for Nonvolatile Memories”, 25-29 April San Francisco, USA
- **MRS Spring Meeting 2012**, Symposium E «Materials and Physics of Emerging Nonvolatile Memories», 9-13 April San Francisco, USA
- **MRS Spring Meeting 2013**, Symposium DD “Emerging Materials and Devices for Future Nonvolatile Memories”, 1-5 April San Francisco, USA
- **International Workshop** on “Nanowires and Nanostructures: Fabrication, Characterization, Applications”, 4th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems, **IC4N 2013**, June 6-13, Corfu, Greece
- **Workshop on Compound Semiconductor Devices and Integrated Circuits (WOCSDICE) 2014**, 15 - 18th June 2014, Delphi, Greece
- **MRS Spring Meeting 2014**, Symposium M “Materials and Technology for Nonvolatile Memories”, 30 November - 5 December Boston, USA
- Member of the International Technical Program Committee, **Micro & Nano Engineering (MNE)** 2008, 2009, 2010, 2011, 2012, 2013, 2014
- Member of the International Scientific Committee, **E-MRS 2012 Spring Meeting**, Symposium L, “Novel Functional Materials and Nanostructures for innovative non-volatile memory devices”, May 14-18, Strasbourg, France
- Member of the International Scientific Committee, **E-MRS 2014 Fall Meeting**, Symposium B, “Organized nanostructures and nano-objects: fabrication, characterization and applications”, September 15-19, Warsaw University of Technology, Poland

SELECTED PUBLICATIONS

- **P. Dimitrakis**, E. Kapetanakis, P. Normand, D. Skarlatos, D. Tsoukalas, K. Beltsios, A. Claverie, G. Benassayag, C. Bonafos, D. Chassaing, V. Soncini, “MOS Memory Structures by Very-Low Energy Implantated Si in thin SiO₂”, *Material Science & Engineering B*, 101, 14-18 (2003)
- S. Paul, C. Pearson, A. Molloy, M. A. Cousins, M. Green, S. Kolliopoulou, **P. Dimitrakis**, P. Normand, D. Tsoukalas and M. C. Petty, “Langmuir-Blodgett Film Deposition of Metallic Nanoparticles and their Application to Electronic Memory Structures”, *Nano Letters*, 3(4), 533-536 (2003)
- S. Kolliopoulou, **P. Dimitrakis**, P. Normand, H. L. Zhang, N. Cant, S. D. Evans, S. Paul, C. Pearson, A. Molloy, M. C. Petty and D. Tsoukalas, “A hybrid silicon-organic nanoparticle memory device”, *Journal of Applied Physics* 94 (8), 5234 (2003)
- **P. Dimitrakis**, E. Kapetanakis, D. Tsoukalas, D. Skarlatos, C. Bonafos, G. Ben Assayag, A. Claverie, M. Perego, M. Fanciulli, V. Soncini, R. Sotgiu, A. Agarwal, M. Ameen, P. Normand, “Silicon nanocrystal memory devices obtained by ultra-low-energy ion-beam-synthesis”, *Solid-State Electronics*, 48, 1511-1517, (2004)
- C. Bonafos, M. Carrada, N. Cherkashin, H. Coffin, D. Chassaing, G. Ben Assayag, A. Claverie, T. Müller, K. H. Heinig, M. Perego, M. Fanciulli, **P. Dimitrakis**, and P. Normand, “Manipulation of two-dimensional arrays of Si nanocrystals embedded in thin SiO₂ layers by low energy ion implantation”, *Journal of Applied Physics* 95 (10), 5696-5702 (2004)

- **P. Dimitrakis**, P. Normand, "Parasitic memory effects in shallow-trench-isolated nanocrystal memory devices", *Solid-State Electronics* 51, 125-136 (2007)
- V. Ioannou-Sougleridis, **P. Dimitrakis**, V.E. Vamvakas, P. Normand, C. Bonafos, S. Schamm, N. Cherkashin, G. Ben Assayag, M. Perego, M. Fanciulli, "Wet oxidation of nitride layer implanted with low-energy Si ions for improved oxide-nitride-oxide memory stacks", *Applied Physics Letters* 90, 263513 (2007)
- **P. Dimitrakis**, P. Normand, D. Tsoukalas, C. Pearson, J. H. Ahn, M. F. Mabrook, D. A. Zeze, M. C. Petty, K. T. Kamtekar, C. Wang, M. R. Bryce and M. Green, "Electrical behaviour of memory devices based on fluorine-containing organic thin films", *Journal of Applied Physics*, **104**, 044510 (2008)
- **P. Dimitrakis**, A. Mouti, C. Bonafos, S. Schamm G. Ben Assayag, V. Ioannou-Sougleridis, B. Schmidt, J. Becker, P. Normand, "Ultra-low-energy ion-beam-synthesis of Ge nanocrystals in thin ALD Al₂O₃ layers for memory applications", *Microelectronic Engineering* **86**, 1838-1841 (2009)
- V. Ioannou-Sougleridis, N. Kelaidis, D. Skarlatos, C. Tsamis, S.N. Georga, C.A. Krontiras, Ph. Komninou, Th. Speliotis, **P. Dimitrakis**, B. Kellerman, M. Seacrist, M. "Influence of thermal oxidation on the interfacial properties of ultrathin strained silicon layers", *Thin Solid Films*, 519, 5456-5463 (2011)
- N. Nikolaou, **P. Dimitrakis**, P. Normand, V. Ioannou-Sougleridis, K. Giannakopoulos, K. Mergia, K. Kukli, J. Niinisto, M. Ritala, M. Leskela, "Influence of atomic layer deposition chemistry on high-k dielectrics for charge trapping memories", *Solid-State Electronics*, **68**, 38-47 (2012)
- R. Diaz, J. Grisolia, G. BenAssayag, S. Schamm-Chardon, C. Castro, B. Pecassou, **P. Dimitrakis**, P. Normand, "Extraction of the characteristics of Si nanocrystals by the charge pumping technique", *Nanotechnology*, **23**, 085206 (2012)
- C. Bonafos, M. Carrada, G. Benassayag, S. Schamm-Chardon, J. Groenen, V. Paillard, B. Pecassou, A. Claverie, **P. Dimitrakis**, E. Kapetanakis, V. Ioannou-Sougleridis, P. Normand, B. Sahu, A. Slaoui, "Si and Ge nanocrystals for future memory devices", *Materials Science in Semiconductor Processing*, **15**, 615-626 (2012)
- **P. Dimitrakis**, P. Normand, C. Bonafos, E. Papadomanolaki, and E. Iliopoulos, "GaN quantum-dots integrated in the gate dielectric of metal-oxide-semiconductor structures for charge-storage applications", *Appl. Phys. Lett.* **102**, 053117 (2013)
- **P. Dimitrakis**, P. Normand, V. Ioannou-Sougleridis, C. Bonafos, S. Schamm-Chardon, G. Benassayag, E. Iliopoulos, "Quantum dots for memory applications", *Physica Status Solidi (A)* **210**, 1490-1504 (2013)

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List of Publications

Journal Publications

1. V. Ioannou - Sougleridis, G. J. Papaioannou, **P. Dimitrakis**, S. Cristoloveanu, «*Characterization of the buried oxide in SOI structures by a rate window method*», J.Appl.Phys., **74**(5), 3298 (1993)
2. D.Tsoukalas, **P.Dimitrakis**, J.Stoemenos and G.J.Papaioannou, «*Electrical and structural characterization of wafer bonded non-annealed SIMOX*», Microelectr. Engineering, **28**, 471-474, (1995)
3. I.Thurzo, E.Pincik, G.Papaioannou, **P.Dimitrakis**, N.Arpatzani, «*Experimental study of passivation ion-beam-induced distributed energy levels in n-GaAs by hydrogen species from boiling water*», Appl.Surf.Science, **90** (1995), 39-45
4. **P.Dimitrakis**, G.J.Papaioannou, S.Cristoloveanu, «*On the electrical properties of buried oxide-silicon substrate interface in SIMOX structures*», Journal of Applied Physics, **80**(3), 1605, (1996)
5. **P.Dimitrakis**, S.Hatzandroulis, D.Tsoukalas, J.Stoimenos and G.J.Papaioannou, «*Electrical characterization of silicon wafer bonding structures*», Solid-State Electronics **42**(2), 201, (1998)
6. **P. Dimitrakis**, E. Kapetanakis, P. Normand, D. Skarlatos, D. Tsoukalas, K. Beltsios, A. Claverie, G. Benassayag, C. Bonafos, D. Chassaing, V. Soncini, «*MOS Memory Structures by Very-Low Energy Implantated Si in thin SiO₂*», Material Science & Engineering B, **101**, 14-18 (2003)
7. P. Normand, E. Kapetanakis, **P. Dimitrakis**, D. Skarlatos, D. Tsoukalas, K. Beltsios, A. Claverie, G. Benassayag, C. Bonafos, M. Carrada, N. Cherkashin, V. Soncini, A. Agarwal, Ch. Sohl, M. Ameen «*Effects of annealing conditions on charge storage of Si nanocrystal memory devices obtained by low-energy ion beam synthesis*», Microelectronic Engineering, **67–68** (2003) 629–634
8. S.Paul, C. Pearson, A. Molloy, M. A. Cousins, M. Green, S. Kolliopoulou, **P.Dimitrakis**, P. Normand, D. Tsoukalas and M. C. Petty, «*Langmuir-Blodgett Film Deposition of Metallic Nanoparticles and their Application to Electronic Memory Structures*», Nano Letters, **3**(4), 533-536 (2003)
9. S. Kolliopoulou, **P. Dimitrakis**, P. Normand, H. L. Zhang, N. Cant, S. D. Evans, S. Paul, C. Pearson, A. Molloy, M. C. Petty and D. Tsoukalas, «*A hybrid silicon-organic nanoparticle memory device*»,

- Journal of Applied Physics **94** (8), 5234 (2003)
10. P. Normand, E. Kapetanakis, **P. Dimitrakis**, D. Tsoukalas, K. Beltsios, N. Cherkashin, C. Bonafos, G. Benassayag, H. Coffin, A. Claverie, V. Soncini, A. Agarwal, M. Ameen “*Effect of annealing environment on the memory properties of thin oxides with embedded Si nanocrystals obtained by low-energy ion-beam synthesis*”, Applied Physics Letters, **83**, 168-170 (2003)
 11. P. Normand, E. Kapetanakis, **P. Dimitrakis**, D. Tsoukalas, K. Beltsios, C. Bonafos, G. Benassayag, A. Claverie, V. Soncini, A. Agarwal, M. Ameen, M. Perego, M. Fanciulli (invited), “*Nanocrystals manufacturing by ultra-low-energy ion-beam-synthesis for nonvolatile memory applications*”, Nuclear Instruments and Methods in Physics Research B **216**, 228 (2004)
 12. S. Koliopoulou, **P. Dimitrakis**, P. Normand, H.-L. Zhang, N. Cant, S.D. Evans, S. Paul, C. Pearson, A. Molloy, M.C. Petty and D. Tsoukalas, “*Integration of organic insulator and self-assembled gold nanoparticles on Si MOSFET for non-volatile memory cells*”, Microelectronic Engineering, **73-74**, 725-729 (2004)
 13. P. Normand, **P. Dimitrakis**, E. Kapetanakis, D. Skarlatos, K. Beltsios, D. Tsoukalas, C. Bonafos, H. Coffin, G. Benassayag, A. Claverie, V. Soncini, A. Agarwal, Ch. Soh, M. Ameen, “*Processing issues in silicon nanocrystal manufacturing by ultra-low-energy ion-beam-synthesis for non-volatile memory applications*”, Microelectronic Engineering, **73-74**, 730-735 (2004)
 14. **P. Dimitrakis**, E. Kapetanakis, D. Tsoukalas, D. Skarlatos, C. Bonafos, G. Ben Assayag, A. Claverie, M. Perego, M. Fanciulli, V. Soncini, R. Sotgiu, A. Agarwal, M. Ameen, P. Normand, “*Silicon nanocrystal memory devices obtained by ultra-low-energy ion-beam-synthesis*”, Solid-State Electronics, **48**, 1511-1517, (2004)
 15. C. Bonafos, M. Carrada, N. Cherkashin, H. Coffin, D. Chassaing, G. Ben Assayag, A. Claverie, T. Müller, K. H. Heinig, M. Perego, M. Fanciulli, **P. Dimitrakis**, and P. Normand, “*Manipulation of two-dimensional arrays of Si nanocrystals embedded in thin SiO₂ layers by low energy ion implantation*”, Journal of Applied Physics **95** (10), 5696-5702 (2004)
 16. Koliopoulou S, **Dimitrakis P**, Goustouridis D, Chatzandroulis S, Normand P, Tsoukalas D, Radamson H, “*A Si/SiGe MOSFET utilizing low-temperature wafer bonding*”, Microelectronic Engineering, **78-79**,

- 244-247 (2005)
17. A. Kanjilal, J.L. Hansen, A Nylandsted Larsen, P. Normand, **P. Dimitrakis**, D. Tsoukalas, N. Cherkashin, A. Claverie, "***Size and aerial density distributions of Ge nanocrystals in a SiO₂ layer produced by molecular beam epitaxy and rapid thermal processing***", Applied Physics A, **81**, 363-366 (2005)
 18. N. Cherkashin, C. Bonafos, H. Coffin, M. Carrada, S. Schamm, G. Ben Assayag, D. Chassaing, **P. Dimitrakis**, P. Normand, M. Perego, M. Fanciulli, T. Muller, K. H. Heinig, A. Claverie, "***Fabrication of nanocrystal memories by ultra low energy ion implantation***", physica status solidi (c), **2**, 1907-1911 (2005)
 19. **P. Dimitrakis**, P. Normand, E. Vontitseva, K. H. Stegemann, K. H. Heinig and B. Schmidt, "***Memory devices obtained by Si⁺ irradiation through poly-Si/SiO₂ gate stack***", Journal of Physics: Conference Series, **10**, 7-10 (2005)
 20. S. Koliopoulou, D. Tsoukalas, P. Dimitrakis, **P. Normand**, S. Paul, C. Pearson, A. Molloy and M. C. Petty, "***Field effect devices with metal nanoparticles integrated by Langmuir–Blodgett technique for non-volatile memory applications***", Journal of Physics: Conference Series, **10**, 57-60 (2005)
 21. C. Bonafos, H. Coffin, S. Schamm, N. Cherkashin, G. Ben Assayag, **P. Dimitrakis**, P. Normand, M. Carrada, V. Paillard and A. Claverie, "***Si nanocrystals by ultra-low-energy ion beam-synthesis for non-volatile memory applications***", Solid-State Electronics, **49**, 1734-1744 (2005)
 22. H. Coffin, C. Bonafos, S. Schamm, M. Carrada, N. Cherkashin, G. Ben Assayag, **P. Dimitrakis**, P. Normand, M. Respaud and A. Claverie, "***Si nanocrystals by ultra-low energy ion implantation for non-volatile memory applications***", Material Science & Engineering B, **124-125**, 499-503 (2005)
 23. D. Tsoukalas, **P. Dimitrakis**, S. Koliopoulou and P. Normand, "***Recent advances in nanocrystals memories***", Material Science & Engineering B, **124-125**, 93-101 (2005)
 24. H. Coffin, C. Bonafos, S. Schamm, N. Cherkashin, G. Ben Assayag, A. Claverie, M. Respaud, **P. Dimitrakis**, and P. Normand, "***Oxidation of Si nanocrystals fabricated by ultralow-energy ion implantation in thin SiO₂ layers***", **Journal of Applied Physics**, **99**, 044302 (2006)
 25. S. Koliopoulou, **P. Dimitrakis**, D. Goustouridis, P. Normand, C.

- Pearson, M.C. Petty, H. Radamson, D. Tsoukalas, "*Metal nano-floating gate memory devices fabricated at low temperature*", *Microelectronic Engineering*, **83**, 1563-1566 (2006)
26. A. Florakis, D. Tsoukalas, I. Zergioti, K. Giannakopoulos, **P. Dimitrakis**, D.G. Papazoglou, G. Bennassayag, H. Bourdon and A. Halimaoui, "*Laser annealing of plasma implanted boron for ultra-shallow junctions in Silicon*", *Nuclear Instruments and Methods in Physics Research B*, **253**, 13-17 (2006)
 27. **P. Dimitrakis**, P. Normand, "*Parasitic memory effects in shallow-trench-isolated nanocrystal memory devices*", *Solid-State Electronics* **51**, 125-136 (2007)
 28. E. Verrelli, I. Anastassiadis, D. Tsoukalas, M. Kokkoris, R. Vlastou, **P. Dimitrakis**, P. Normand, "*Proton radiation tolerance of nanocrystal memories*", *Physica E: Low-Dimensional Systems and Nanostructures* **38**, 67-70 (2007)
 29. V. Ioannou-Sougleridis, **P. Dimitrakis**, V.E. Vamvakas, P. Normand, C. Bonafos, S. Schamm, N. Cherkashin, G. Ben Assayag, M. Perego, M. Fanciulli, "*Oxide-nitride-oxide memory stacks formed by low-energy Si ion implantation into nitride and wet oxidation*", *Microelectronic Engineering* **84**, 1986-1989 (2007)
 30. V. Ioannou-Sougleridis, **P. Dimitrakis**, V.E. Vamvakas, P. Normand, C. Bonafos, S. Schamm, A. Mouti, G. Ben Assayag, V. Paillard, "*Oxide-nitride-oxide dielectric stacks with Si nanoparticles obtained by low-energy ion beam synthesis*", *Nanotechnology* **18**, 215204 (2007)
 31. V. Ioannou-Sougleridis, **P. Dimitrakis**, V.E. Vamvakas, P. Normand, C. Bonafos, S. Schamm, N. Cherkashin, G. Ben Assayag, M. Perego, M. Fanciulli, "*Wet oxidation of nitride layer implanted with low-energy Si ions for improved oxide-nitride-oxide memory stacks*", *Applied Physics Letters* **90**, 263513 (2007)
 32. E. Verrelli, D. Tsoukalas, M. Kokkoris, R. Vlastou, **P. Dimitrakis** and P. Normand, "*Proton radiation effects on nanocrystal non-volatile memories*", *IEEE Trans Nuclear Science* **54**, 975-981 (2007)
 33. C. Pearson, J.H. Ahn, M.F. Mabrook, D.A. Zeze, M.C. Petty, K.T. Kamtekar, C. Wang, M.R. Bryce, **P. Dimitrakis**, D. Tsoukalas, "*Electronic memory device based on a single-layer fluorene-containing organic thin film*", *Appl. Phys. Lett.* **91**, 123506 (2007)
 34. M.E. Vlachopoulou, **P. Dimitrakis**, A. Tserepi, V.Em. Vamvakas, S. Koliopoulou, P. Normand, E. Gogolides, D. Tsoukalas, "*High-density*

- plasma silicon oxide thin films grown at room-temperature*", Microelectronic Engineering **85**, 1245-1247 (2008)
35. **P. Dimitrakis**, P. Normand, D. Tsoukalas, C. Pearson, J. H. Ahn, M. F. Mabrook, D. A. Zeze, M. C. Petty, K. T. Kamtekar, C. Wang, M. R. Bryce and M. Green, "*Electrical behaviour of memory devices based on fluorine-containing organic thin films*", **Journal of Applied Physics**, **104**, 044510 (2008)
 36. N. Nikolaou, **P. Dimitrakis**, P. Normand, S. Schamm, C. Bonafos, G. Ben Assayag, A. Mouti, V. Ioannou-Sougleridis, "*Temperature-dependent low electric field charging of Si nanocrystals embedded within oxide-nitride-oxide dielectric stacks*", **Nanotechnology**, **20**, **305704** (2009)
 37. **P. Dimitrakis**, A. Mouti, C. Bonafos, S. Schamm G. Ben Assayag, V. Ioannou-Sougleridis, B. Schmidt, J. Becker, P. Normand, "*Ultra-low-energy ion-beam-synthesis of Ge nanocrystals in thin ALD Al₂O₃ layers for memory applications*", Microelectronic Engineering **86**, 1838-1841 (2009)
 38. I. Zergioti, M. Makrygianni, **P. Dimitrakis**, P. Normand, S. Chatzandroulis, "*Laser printing of polythiophene for organic electronics*", Applied Surface Science **257**, 5148-5151 (2011)
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69. **P.Dimitrakis (Tutorial lecture)**, “*Nanoparticle Memories: CMOS, Organic and hybrid approaches*”, Winter School on Nanoelectronics and Nanophotonics, Bilkent University, Ankara, Turkey, January 20-25, 2009
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90. A. Smyrnakis, A. Zeniou, E. Gogolides, P. Normand, **P. Dimitrakis**, "Electrical Properties of Axially Modulated p-n Si Nanowires", Materials Research Society Fall Meeting, Symposium DD "Group IV Semiconductor Nanostructures and Applications", November 25 - 30, 2012, Boston, USA
91. A. Smyrnakis, A. Zeniou, E. Almpanis, N. Papanikolaou, **P. Dimitrakis**, E. Gogolides, "*High aspect ratio, plasma etched silicon nanowires for photovoltaic application: Fabrication and characterization*" (**Invited**)

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