CURRICULUM VITAE

Arie Ruzin
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Education

1984-1989 B.Sc. in Electrical Engineering, Technion Israel Institute of Technology, Haifa, Israel

1989-1992 M.Sc. in Electrical Engineering, Technion Israel Institute of Technology, Haifa, Israel

1992-1997 D.Sc. in Science (Dept. of Electrical Engineering), Technion Israel Institute of Technology, Haifa, Israel

Positions and Employment

1985-1989 Teacher, Bosmat (Technical College), Haifa, Israel

1989-1996 Teaching Assistant, Technion Israel Institute of Technology, Haifa, Israel

1992-1996 Research – graduate D.Sc. student, Technion Israel Institute of Technology, Haifa, Israel

1997-1999 Research Fellow, CERN, (European Laboratory for Particle and Nuclear Physics), Geneva, Switzerland

1999-2006 Senior Lecturer, Tel-Aviv University, Faculty of Engineering, Dept. of Physical Electronics

2006- Associate Professor, Tel-Aviv University, Faculty of Engineering, School of Electrical Engineering, Dept. of Physical Electronics

Awards

- *Special Technion award for continuing excellence in teaching 1996*
- *Fellowship at CERN 1997-1999*
- *Citation for excellence in teaching, Tel Aviv University 2000*
- *Citation for excellence in teaching, Tel Aviv University 2001*
- *Rector list of top lecturers, Tel Aviv University, 2013*
- *Excellence teaching award, EE, Tel Aviv University, 2013*

Relevant Publications

1. Y. Nemirovsky, D. Goren, A. Ruzin, "A model for the growth of CdTe by Metal Organic Chemical Vapor Deposition", J. Electron. Mater. 20, No.8, pp. 609-613 (1991).
2. A. Ruzin and Y. Nemirovsky, "Photon assisted growth of HgTe by Metalorganic Chemical Vapor Deposition", J. Electron. Mater. 22, pp. 281-288 (1993).
3. Y. Nemirovsky, A. Ruzin and A. Bezinger, "UV photon assisted control of interface charge between CdTe substrates and Metalorganic Chemical Vapor Deposition CdTe epilayers", J. Electron. Mater. Vol. 22, No. 8, pp. 977-983 (1993).
4. A. Ruzin, A. Bezinger and Y. Nemirovsky, "Photon assisted reduction of interface charge between CdTe substrates and metalorganic chemical vapor deposition CdTe epilayers", J. Appl. Phys. Vol. 73, No. 2, pp. 995-997 (1993).
5. Y. Nemirovsky ,A. Ruzin, G. Asa and J. Gorelik, "Study of the charge collection efficiency of CdZnTe radiation detectors", J. Electron. Mater. Vol. 25, No. 8, pp. 1221-1231 (1996).
6. R. Sudharsanan, T. Parodos, N. K. Karam, A. Ruzin and Y. Nemirovsky "CdZnTe photodiode arrays for medical imaging", J. Electron. Mater. Vol. 25, No. 8, pp. 1318-1322 (1996).
7. Y. Nemirovsky ,A. Ruzin, G. Asa and J. Gorelik, "Study of contacts to CdZnTe radiation detectors", J. Electron. Mater. Vol. 26, No. 6, pp. 756-764 (1997).
8. A. Ruzin and Y. Nemirovsky, "Statistical Models for Charge Collection Efficiency and Variance in Semiconductor Spectrometers", J. Appl. Phys. Vol. 82, No. 6, pp. 2754-2758 (1997).
9. A. Ruzin and Y. Nemirovsky, "Methodology for evaluation of mobility-lifetime product by spectroscopy measurements in CdZnTe spectrometers", J. Appl. Phys. Vol. 82, No. 9, pp. 4166-4171 (1997).
10. A. Ruzin and Y. Nemirovsky, "Passivation and surface leakage in CdZnTe spectrometers", Appl. Phys. Lett, Vol. 71, No. 15, pp. 2214-2215 (1997).
11. A. Ruzin and Y. Nemirovsky, "Performance study of CdZnTe spectrometers", Nucl. Inst. Meth. A 409, pp. 232-235 (1998).
12. Y.Nemirovsky, G.Asa, C.G.Jacobson, A. Ruzin and J.Gorelik, " Dark noise currents and energy resolution of CdZnTe spectrometers", J. Electron. Mater, Vol.27, No.6; pp.800-806 (1998).
13. Y.Nemirovsky, G.Asa, A. Ruzin and J.Gorelik, "Characterization of dark noise in CdZnTe spectrometers", J. Electron. Mater, Vol.27, No.6; pp.807-812 (1998).
14. G. Casse, M. Glaser, E. Grigoriev, F. Lemeilleur, A. Ruzin, B. Sopko, A. Taffard, "Impact of mesa and planar processes on radiation hardness of Si detectors", Nuovo Cimento, Vol. 112 A, N. 1-2, pp. 1-12 (1999).
15. A. Ruzin, G. Casse and F. Lemeilleur and M. Glaser, "Studies of Radiation Hardness of Oxygen Enriched Silicon Detectors", Nucl. Instr. and Meth. A 426,

pp. 94-98 (1999).
16. A. Ruzin, G. Casse, M. Glaser, R. Talamonti, A. Zanet, F. Lemeilleur, "Radiation Hardness of Silicon Detectors Manufactured on Epitaxial Material and FZ Bulk Enriched with Oxygen, Carbon, Tin and Platinum", Nucl. Phys. B, vol. 78, pp. 645-649 (1999).
17. A. Ruzin, G. Casse, M. Glaser, R. Talamonti, A. Zanet, F. Lemeilleur, S. Watts, "Comparison of Radiation Damage in Silicon for Proton and Neutron Irradiations", IEEE Trans. Nucl. Sci., Vol. 46, No. 5, pp. 1310-1313 (October, 1999).
18. G. Casse, M. Glaser, F. Lemeilleur, A. Ruzin, M. Wegrzecki, "Introduction of high oxygen concentrations into silicon wafers by high-temperature diffusion", Nucl. Instr. and Meth. A 438, pp. 429-432 (1999).
19. L. Fonseca, M. Lozano, F. Campabadal, C. Martínez, M. Ullán, B. S. Avset, A. Ruzin, F. Lemeilleur, E. Nossarzewska-Orlowska, "Silicon wafer oxygenation from SiO2 layers for radiation hard detectors", Journal of Microelectronics Reliability, Volume 40, Issues 4-5, pp. 791-794 (April 2000).
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22. A. Ruzin, Y. Rosenwaks, N. Croitoru, G. Lubarsky, "Nano-Scale Potential Profiles of Silicon Particle Detectors Measured by Atomic Force Microscopy", Nucl. Instr. and Meth. A 461, pp. 229-232 (2001).
23. G. Lindstrom, .. A. Ruzin, et al., "Radiation hard silicon detectors – developments by the RD48 (ROSE) collaboration", Nucl. Instr. and Meth. A 466, pp. 308-326 (2001).
24. G. Lindstrom, .. A. Ruzin, et al., "Developments for radiation hard silicon detectors by defect engineering – results by the CERN RD48 (ROSE) collaboration", Nucl. Instr. and Meth. A 465, pp. 60-69 (2001).
25. A. Ruzin, S. Marunko, "Current mechanisms in silicon PIN structures processed with various technologies", Nucl. Instr. and Meth. A 492, pp. 411-422 (2002).
26. A. Ruzin, "On Thermal Activation of Interface Generated Currents in High Resistivity Silicon Devices", Nucl. Instr. and Meth. A 512, pp. 8-20 (2003).
27. A. Ruzin, S. Marunko, T. Tilchyn*, "Comparison of bulk and interface generation in silicon PIN detectors", Nucl. Instr. and Meth. A 512, pp. 21-29 (2003).
28. M. Nathan1, O. Levy, I. Goldfarb, and A. Ruzin, "Monolithic coupling of a SU8 waveguide to a silicon photodiode", J. Appl. Phys. 94 (12), pp. 7932-7934 (DEC 15 2003).
29. A. Ruzin, "Novel X- and gamma- ray sensors based on bulk-grown silicon-germanium", IEEE Trans. Electron. Dev. 50 (12), pp. 2581-2583 (DEC 2003).
30. A. Ruzin, S. Marunko, Y. Gusakov*, "Study of bulk grown silicon-germanium

radiation detectors", J. Appl. Phys., Vol.95, No.9, pp. 5081-5087, (1 May 2004).
31. A. Ruzin, I. Torchinski*, I. Goldfarb, "Electrical measurements of structural defects in Cd0.9Zn0.1Te by Atomic Force Microscopy based methods", Semicond. Sci. Technol. Vol. 19, pp. 644-647 (2004).
32. A. Ruzin, S. Marunko, N.V. Abrosimov, H. Riemann, "Dark properties and transient current response of Si0.95Ge0.05 n+p devices", Nucl. Instr. and Meth. A 518, pp. 373-375 (2004).
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34. M. Bruzzi, .. A. Ruzin, et al., "Radiation-hard semiconductor detectors for SuperLHC", Nucl. Instr. and Meth. A 541 (1-2), pp. 189-201 (2005).
35. M. Moll, .. A. Ruzin, et al., "Development of radiation tolerant semiconductor detectors for the Super-LHC ", Nucl. Instr. and Meth. A 546 (1-2), pp. 99-107 (2005).
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39. I. Yaroslavski*, A. Ruzin, "Characterization of radiation related damage in bulk-grown silicon-germanium detectors", Nucl. Instr. and Meth. A 562 (1), pp. 311-319 (2006).
40. R. Daniel*, A. Ruzin and Y. Roizin, "Trap generation in cycled hot electron injection programmed/hot hole erased silicon–oxide-nitride–oxide–silicon memories", J. of Appl. Phys, 99 (4): Art. No. 044502 (FEB 15 2006).
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Goldfarb, " Atomic structure and electrical properties of In(Te) nano-contacts on CdZnTe(110) by scanning probe microscopy", Adv. Funct. Mater., Vol. 20(2), 215(2010).

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46. Arie Ruzin, Nikolai Abrosimov, Piotr Litovchenko, "Study of lithium diffusion into silicon-germanium crystals", Nucl. Instr. and Meth. A 617, pp. 588-590 (2010).
47. A. Ruzin, "Simulation of Schottky and Ohmic Contacts on CdTe", J. Appl. Phys., 109(1), 014509(2011).
48. A. Ruzin, "Current simulation of symmetric contacts on CdTe", Nucl. Instr. And Meth. A., 658(1), 118(2011).
49. A. Affolder, A. Aleev, .. A. Ruzin, et. al., "Silicon detectors for the sLHC", Nucl. Instr. And Meth. A, 658(1), 11(2011).
50. A. Ruzin, "Simulating Downscaling of Ohmic Contacts on Wide-Bandgap Low-Resistivity Semiconductors", IEEE Trans. On Elect. Dev., Vol. 59(6), 1668(2012).
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52. A. Ruzin, O. Sinkevich*, G. Cohen-Taguri, I. Goldfarb, "Anomalous behavior of epitaxial indium nano-contacts on cadmium-zinc- telluride", Appl. Phys. Lett., Vol. 101, 132108 (2012).
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62. A. Brovko*, A. Ruzin, "Study of material uniformity in high-resistivity Cd_{1-}

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