
Curriculum Vitae:

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Education

STANFORD UNIVERSITY

9/84 -9/88 Ph.D. in Materials Science and Engineering
6/85 -9/88 M.S. in Electrical Engineering

UNIVERSITY OF TORONTO

1/83-2/84 M.A.Sc. in Metallurgy and Materials Science
9/78-5/82B.A.Sc. in Metallurgy and Materials Science

Refereed Journal Articles

1. D.C. Paine, G.C. Weatherly, and K.T. Aust, "A STEM study of grain boundary segregation in Al-6.5wt% Mg alloy", *J. of Mat. Sci.*, 21, p4257 (1986).
 2. D.C. Paine, J.C. Bravman, and C.Y. Yang, "Observations of β -tungsten deposited by low pressure chemical vapor deposition", *Appl. Phys. Lett.*, 50(9), p498 (1987).
 3. M. Wong, N. Kobayashi, R. Browning, D. Paine, and K.C. Saraswat, "The effects of chemical oxide on the deposition of tungsten by the silicon reduction of tungsten hexafluoride", *J. Electrochem. Soc.*, 134(9), p2339 (1987).
 4. D.C. Paine, D.J. Howard, N. Stoffel, and J. Horton "Solid phase heteroepitaxy of strained $\text{Si}_{1-x}\text{Ge}_x$ alloys on $\langle 001 \rangle$ silicon", *J. of Mat. Res.*, 5(5), p1023(1990).
 5. D.C. Paine, J.J. Rosenberg, S. Martin, D. Luo, and M. Kawasaki, "Evaluation of device quality germanium/germanium oxynitride interfaces by high resolution TEM", *Appl. Phys. Lett.*, 57(14), pp 1443-1445(1990).
 6. D.J. Howard, D.C. Paine, and R.N. Sacks, "Large area plan view sample preparation for GaAs-based systems", *J. of Electron. Microscopy Tech.*, 18, pp.117-120 (1991).
 7. M. Dudley and D.C. Paine, "Combined TEM/X-ray synchrotron topography study of dislocation structures in strained-layer $\text{In}_x\text{Ga}_{1-x}\text{As}$ ", B10, pp. 75-84, *J. of MS&E*"B", (1991).
 8. D.C. Paine, N. Evans, and N.G. Stoffel, "A study of the effect of misfit induced strain on the kinetics of solid phase epitaxy in the $\text{Si}_{1-x}\text{Ge}_x$ on $\langle 001 \rangle$ Si system", *J. Appl. Phys.*, 70(8), pp. 4278-4286(1991).
 9. D.C. Paine, D.J. Howard, and N.G. Stoffel, "Formation of strained $\text{Si}_{1-x}\text{Ge}_x$ alloys by high dose ion implantation of Ge into $\langle 001 \rangle$ silicon", *J. Electronic Materals*, 20(10), pp. 735-746(1991).
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10. D.C. Paine, C. Caragianis, and A. F. Schwartzman, "Oxidation of $\text{Si}_{1-x}\text{Ge}_x$ alloys at atmospheric and elevated pressure", *J. Appl. Phys.*, 70(9), pp. 5076-5084(1991).
11. D.C. Paine, C. Caragianis, and Y. Shigesato, "Hydrothermal oxidation of alloys of $\text{Si}_{1-x}\text{Ge}_x$ for the synthesis of nanocrystalline germanium", *Appl. Phys. Letts*, 60(23), pp. 2886-2888(1992).
12. Y. Shigesato, T. Haynes and D.C. Paine, "A study of the effect of ion implantation on the electrical properties of tin-doped indium oxide thin films ", *J. Appl. Phys.*, 73(8), pp. 3805-3811(1993).
13. D.C. Paine, "Interface stability and defect generation during strained solid phase epitaxy", *JOM*, 45(2), p. 55-60(1993).
14. Y. Shigesato and D.C. Paine, "A study of the effect of Sn doping on the electronic transport properties of thin film indium oxide", *Appl. Phys. Letts*, 62(11)1993.
15. D.C. Paine and B.W. Wessels, "Low dimensional structures and interface stability", *JOM*, 45(2), p. 45(1993)
16. D.C. Paine, C. Caragianis, T.-Y. Kim, Y. Shigesato and T. Ishahara "Visible photoluminescence from nanocrystalline Ge formed by H_2 reduction of $\text{Si}_{0.6}\text{Ge}_{0.4}\text{O}_2$ ", *Appl. Phys. Lett.*, 62(22), p. 2842(1993)
17. D.C. Paine, C. Caragianis, T.-Y. Kim, and Y. Shigesato, "Chemical reduction of $\text{Si}_{1-x}\text{Ge}_x\text{O}_2$ for the synthesis of nanocrystalline Ge", *J. Electronic Materials*, 23(9), p.901-906(1994).
18. C. Caragianis, Y. Shigesato, and D.C. Paine, "High pressure oxidation for low temperature passivation of $\text{Si}_{1-x}\text{Ge}_x$ alloys", *J. Electronic Materials*, 23(9), pp.883-888(1994).
19. M.E.Zvanut, W. E. Carlos, D. C. Paine and C. Caragianis, "Atomic structure of Ge-related point defects in Ge-incorporated oxide films" *Appl. Phys. Lett.*, 63(22), p.3049(1993).
20. Y. Shigesato and D. C. Paine, "A microstructural study of dc magnetron sputter deposited indium tin oxide" *Thin Solid Films*, 238(1), p.44(1993).
21. D.J. Howard, W.E. Bailey, and D.C. Paine, "Observations of open-ended stacking fault tetrahedra in $\text{Si}_{0.85}\text{Ge}_{0.15}$ grown on V-grooved (001) Si and planar (111) Si substrates", *Appl. Phys. Lett.*, 63(21), p.2893(1993).
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27. R. Bai, C.L. Briant, D.C. Paine, J.R. Beresford, "Investigation of the Annealing Texture Evolution in Hafnium", Metall Mater Trans A, vol.29A,(3), p. 757-64 (1998)
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29. C. Cariagianis-Broadbridge, J. Blaser, and D.C. Paine, "A Cross sectional AFM study of Nanocrystalline Ge precipitates in SiO₂ formed from metastable GeSiO₂", J.Appl. Physics, 82(4), p.1626-31(1997).
30. C.W. Ow Yang, D.C. Paine, "A time-resolved reflectivity study of the amorphous-to-crystalline transformation kinetics in dc-magnetron sputtered indium tin oxide" J. Applied Physics, vol.83(1), p. 145-54(1998).
31. Pung Keun Song; Shigesato, Y.; Yasui, I.; Ow-Yang, C.W.; Paine, D.C. "Study of Crystallinity in tin-doped Indium oxide films deposited by DC magnetron sputtering", J. Journal Applied Physics, Part 1, vol.37, no.4A, p. 1870-6, 1998
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37. C.L. Donley, D.R. Dunphy, D. Paine, C. Carter, K.W. Nebesny, P.A. Lee, D. Alloway, N.R. Armstrong "Characterization of Indium-Tin Oxide Interfaces Using X-ray Photoelectron Spectroscopy and Redox Processes of a Chemisorbed Probe Molecule: Effect of Surface Pretreatment Conditions, *Langmuir*, 18(2) 450-457(2002).
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44. B. Yaglioglu, H. Y. Yeom, R. Beresford, and D. C. Paine, *Applied Physics Letters* "High-mobility amorphous In₂O₃-10 wt %ZnO thin film transistors", **89**, 062103(2006).
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46. C. Ow-Yang, H.Y. Yeom, and D.C. Paine, "Fabrication of transparent conducting amorphous Zn-Sn-In-O thin films by direct current magnetron sputtering", *Thin Solid Films*, **516**, 3105-3111(2008).
47. D.C. Paine, B. Yaglioglu, Z. Beiley, and S. Lee, "Amorphous IZO-based transparent thin film transistors", *Thin Solid Films*, **516**(17,) 5894-5898 (2008)
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Book Chapters:

Encyclopedia of Applied Physics, "Materials Preparation", Published by VCH Published in collaboration with the American Institute of Physics, edited by G.L. Trigg. Vol. 9, p365-397 (1994).

Flexible Flat Panel Displays, "Transparent Conducting Oxide Materials and Technology", Published by John Wiley & sons limited, edited by G. Crawford , Chapter 5, pp.79-98 (2005).

Handbook of Transparent Conductors, "Characterization of TCO Materials", published by Springer, edited by Ginley, Hosono, and Paine, Chapter 4. pp.111-148(2010)

Book:

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