

CURRICULUM VITAE

Vasilis Pagonis
McDaniel College
Physics Department
Westminster, MD 21157, USA

Academic Rank: Full Professor
E-mail: vpagonis@mcdaniel.edu

Marital Status: Married, 2 children.

PROFESSIONAL PREPARATION

University of Athens, Athens, Greece	Major: Physics	B.S.	1976
University of Birmingham, Birmingham, England	Major: Physics	M.Sc.	1978
	Specialty: Applied Radiation Physics		
Northeastern University, Boston, Massachusetts	Major: Physics	M.S.	1979
Northeastern University, Boston, Massachusetts	Major: Physics	Ph.D.	1982
	Specialty: Experimental Solid State Physics		

Title of Master's Thesis: Thermoluminescence study of meteorites

Title of Doctoral Dissertation: Neutron studies of ferromagnetic materials

Name of Doctorate Supervisor: Prof. C. Perry.

ACADEMIC AND PROFESSIONAL EXPERIENCE:

McDaniel College	(9/07 to Present)	Kopp Endowed Chair Professor of Physics
McDaniel College	(8/96 to Present)	Professor Dept. of Physics
McDaniel College	(8/87 to 2001)	Department Chair Dept. of Physics
McDaniel College	(8/89 to 8/96)	Associate Professor Dept. of Physics
McDaniel College	(8/86 to 8/89)	Assistant Professor Dept. of Physics
Allegheny College	(8/82 to 8/86)	Assistant Professor Dept. of Physics
Northeastern University	(8/79 to 8/82)	Lecturer Dept. of Mathematics
Northeastern University	(8/79 to 8/82)	Research Assistant Dept. of Physics

Membership in Professional Societies:

Member of American Physical Society
Member of American Association of Physics Teachers

Awards:

McDaniel College *Kopp Endowed Chair in the sciences award*: 2007-present
McDaniel College *Faculty Book award*: 2006
McDaniel College *Faculty Research award for Scholarly publications*: 2006
McDaniel College *Faculty Research award for Scholarly publications*: 2002
McDaniel College *Faculty Research award for Scholarly publications*: 1998

Referee for the following journals:

Journal of Luminescence
Radiation Measurements
The Physics Teacher
Int. Journal of Radiation Effects and Isotopes
Journal of Physics D: Applied Physics
Physica B
Nuclear Instruments Methods and Beams
European Journal of Physics

PUBLISHED GRADUATE TEXTBOOKS

1. Dr. Pagonis is the co-author of a graduate-level book entitled *“Practical and Numerical Exercises in Thermoluminescence”*. The book is co-authored with Dr. George Kitis of the Aristotle University in Thessaloniki-Greece, and with Dr. Claudio Furetta of the University of Rome-Italy. This is a graduate level textbook that is meant to be used for training graduate students in the field of Thermoluminescence, and contains complete numerical and theoretical exercises and their solutions. The textbook was published in 2006 by Springer-Verlag-USA.
2. Dr. Pagonis is the co-author of the recently published book *“Thermally and Optically Stimulated Luminescence: A simulations approach”*. The book is co-authored with Dr. Reuven Chen, Professor Emeritus of Tel-Aviv University, Israel. The book was published in spring 2001 by Wiley.

LIST OF RESEARCH COLLABORATORS DURING THE PAST 5 YEARS

Dr. Reuven Chen, Tel-Aviv University, Tel-Aviv, Israel
Dr. John Lawless, Redwood Scientific Inc., Pacifica CA, USA
Dr. Ann Wintle, Professor Emeritus, Aberyswyth University, UK
Dr. Xulong Wang, Chinese Academy of Sciences, X'ian, China
Dr. George Kitis, Aristotle University, Thessaloniki, Greece
Dr. Andrew Murray, Nordic Laboratory for Luminescence Dating, Roskilde, Denmark
Dr. Mayank Jain, Nordic Laboratory for Luminescence Dating, Roskilde, Denmark
Dr. Stephen Greilich, Risø National Laboratory, Roskilde, Denmark
Ms. Christina Ankjaergaard, Risø National Laboratory, Roskilde, Denmark
Dr. Makaiko Chithambo, Rhodes University, South Africa
Dr. S. Mian, Physics Dept, McDaniel College, USA
Dr. Chris Soares, NIST, Gaithersburg, MD, USA
Dr. Claus Andersen, Risø National Laboratory, Roskilde, Denmark

PUBLISHED ARTICLES IN REFEREED JOURNALS

1. Vasilis Pagonis, Reuven Chen, John W. Maddrey, Benjamin Sapp. Simulations of time-resolved photoluminescence experiments in a-Al₂O₃:C . *Journal of Luminescence* 131 (2011) 1086–1094
2. Vasilis Pagonis, Atlee Baker, Meredith Larsen, Zachary Thompson. Precision and accuracy of two luminescence dating techniques for retrospective dosimetry: SAR-OSL and SAR-ITL. *Nuclear Instruments and Methods in Physics Research B* 269 (2011) 653–663
3. R Chen, V Pagonis and J L Lawless. Simulation of the Nonlinear Dose Dependence of Stabilized Point Defects. *IOP Conf. Series: Materials Science and Engineering* 15 (2010) 012071. doi:10.1088/1757-899X/15/1/012071
4. R.Chen, V. Pagonis, J. Lawless. On the initial-occupancy dependence of some luminescence phenomena under the one-trap-one-recombination-center (OTOR) model *Radiation Measurements* 45 (2010) 147–150
5. V. Pagonis and C. Kulp. Simulations of isothermal processes in the semilocalized transition (SLT) model of thermoluminescence (TL) *J. Phys. D: Appl. Phys.* 43 (2010) 175403 (8pp)
6. B. Subedi, G. Kitis and V. Pagonis. Simulation of the influence of thermal quenching on thermoluminescence glow-peaks. *Phys. Status Solidi A* 207, No. 5, 1216–1226 (2010)
7. Chen R, Pagonis V, Lawless JL. Nonlinear dose dependence of TL and LM-OSL within the one trap-one center model . *Radiation Measurements* 45 (2010) 277–280
8. V. Pagonis, C. Ankjærgaard, A.S. Murray, M. Jain, R. Chen, J. Lawless, S. Greulich. Modelling the thermal quenching mechanism in quartz based on time-resolved optically stimulated luminescence. *Journal of Luminescence* 130 (2010) 902–909
9. G. Kitis, N.G. Kiyak, G.S. Polymeris, V. Pagonis. Investigation of OSL signals from very deep traps in unfired and fired quartz samples. *Nuclear Instruments and Methods in Physics Research B* 268 (2010) 592–598
10. .L. Lawless, R. Chen , V. Pagonis, (2009). Sublinear dose dependence of thermoluminescence and optically stimulated luminescence prior to the approach to saturation level. *Radiation Measurements*, 44, (2009), 606-610.
11. Vasilis Pagonis , Ann G. Wintle, Reuven Chen, X.L. Wang, (2009) Simulations of thermally transferred OSL experiments and of the ReSAR dating protocol for . *Radiation Measurements* 44, (2009), 634-638
12. V Pagonis, J Lawless, R Chen and C Andersen, (2009). Radioluminescence in Al₂O₃ : C – analytical and numerical simulation results. *J. Phys. D: Appl. Phys.* 42 (2009) 175107
13. G. Kitis, C. Furetta and V.Pagonis. Mixed-order kinetics model for optically stimulated luminescence. *Modern Physics Letters B*, Vol. 23, No. 27 (2009) 3191–3207

14. J L Lawless, R Chen and V Pagonis, (2009). On the theoretical basis for the duplicitous thermoluminescence peak. *J. Phys. D: Appl. Phys.* 42 (2009) 155409
15. Reuven Chen, Vasilis Pagonis, John L. Lawless, (2009). A new look at the linear-modulated optically stimulated luminescence (LM-OSL) as a tool for dating and dosimetry. *Radiation Measurements* 44 (2009) 344–350.
16. V. Pagonis, C. Ankjærgaard, A.S. Murray, R. Chen, (2009). Optically stimulated exoelectron emission processes in quartz: comparison of experiment and theory. *Journal of Luminescence* 129 (2009) 1003–1009.
17. V. Pagonis, S. Mian, R. Mellinger, K. Chapman, (2009) Thermoluminescence kinetic study of binary lead-silicate glasses. *Journal of Luminescence* 129 (2009) 570–577 .
18. V Pagonis, S M Mian, M L Chithambo, E Christensen and C Barnold, (2009). Experimental and modelling study of pulsed optically stimulated luminescence in quartz, marble and beta irradiated salt. *J. Phys. D: Appl. Phys.* 42 (2009) 055407
19. V. Pagonis, E. Balsamo, C. Banfold, K. Duhling and S. McCole (2008) Simulations of the predose technique for retrospective dosimetry and authenticity testing. *Rad. Meas.* 43, 1343-1353.
20. G. Kitis and V. Pagonis (2007). Peak shape methods for general order thermoluminescence glow-peaks: A reappraisal. *Nuclear Instruments and Methods in Physics Research B* 262, 313–322
21. Chen, R., and Pagonis, V. (2008) A unified presentation of thermoluminescence (TL), phosphorescence and linear-modulated OSL (LM-OSL). *J.Phys.D: Appl.Phys.* 41, 035102 (1-6).
22. Kitis, G., Chen, R., and Pagonis, V. (2008) Thermoluminescence glow peak shape methods based on mixed-order kinetics. *Phys. Stat. Sol. (a)* 205, 1181-1189.
23. Pagonis, V. and Chen, R., (2008). Simulation of OSL pulse-annealing at different heating rates: Conclusions concerning the evaluated trapping parameters and lifetimes. *Geochronometria*, 30, p.1-7.
24. Chen, R., Pagonis, V. and Lawless, J.L. (2008) “Duplicitous thermoluminescence peak associated with a thermal release of electrons and holes from trapping states”. *Rad. Meas.* 43, 162-166.
25. Pagonis, V., Chen, R. and Lawless, J.L. (2008) “A quantitative kinetic model for Al₂O₃:C: TL response to UV-illumination”. *Rad. Meas.* 43, 175-179.
26. Kitis, G. and Pagonis, V. (2008) “Computerized curve deconvolution analysis for LM-OSL”. *Rad. Meas.* 43, 737 – 741.
27. V. Pagonis, A.G. Wintle, R. Chen, X.L. Wang (2008) “A theoretical model for a new dating protocol for quartz based on thermally transferred OSL (TT-OSL)”. *Rad. Meas.* 43, 704-708.
28. V. Pagonis, S. Mian, Ryan Mellinger and Kate Chapman (2007) “Thermoluminescence kinetic study of binary lead silicate crystals”. Paper submitted to *Radiation Measurements*.

29. V. Pagonis, A.G. Wintle and R. Chen (2007) “Simulations of the effect of pulse annealing on optically stimulated luminescence of quartz”. *Rad. Meas.* 42, 1587-1599.
30. V Pagonis, R Chen and AG Wintle (2007) “Modelling thermal transfer in optically stimulated luminescence of quartz”. *J. Phys. D: Appl. Phys.* 40 998–1006
31. N.C. Tsirliganis, G.S. Polymeris, G. Kitis, V. Pagonis (2007). “Dependence of the anomalous fading of the TL and blue-OSL of fluorapatite on the occupancy of the tunnelling recombination sites”. *Journal of Luminescence* 126 (2007) 303–308
32. G. Kitis, G. Polymeris, V. Pagonis, and N. Tsirliganis (2006) “Thermoluminescence response and apparent anomalous fading factor of Durango fluorapatite as a function of the heating rate”. *phys. stat. sol. (a)* 203, No. 15, 3816-3823
33. G. Polymeris, G. Kitis, V. Pagonis (2006). “The effects of annealing and irradiation on the sensitivity and superlinearity properties of the 110⁰C thermoluminescence peak of quartz”. *Radiation Measurements* 41, 554 – 564
34. G. Kitis, R. Chen, V. Pagonis, E. Carinou, P. Ascounis and V. Kamenopoulou (2006). “Thermoluminescence under exponential heating function II: Deconvolution of experimental glow-curves”. *J. Phys. D: Appl. Phys.* 39, 1508-1514 (2006).
35. Kitis, G., Chen, R., Pagonis, V., Carinou, E., and Kamenopoulou, V. (2006) “Thermoluminescence under exponential heating function I: Theory”. *J. Phys. D: Appl. Phys.* 39, 1500-1507.
36. Pagonis, V., Chen, R., Lawless, J.L., (2007). A quantitative kinetic model for Al₂O₃:C- I: TL response to ionizing radiation”. *Rad. Meas.* 42, 198-204.
37. Chen, R., Pagonis, V. and Lawless, J.L., (2006). The non-monotonic dose dependence of OSL in Al₂O₃:C – analytical and numerical simulation results. *Journal of Applied Physics* 99, 033511, 2006.
38. G. Kitis, V. Pagonis, R. Chen and G. Polymeris, (2006). “Comparison of experimental and modelled quartz thermal-activation curves obtained using multiple-and single-aliquot procedures”. *Radiation Measurements* 41 (2006) 910 – 916 .
39. Pagonis, V., Chen, R., Lawless, J.L., (2006). “Non-monotonic dose dependence of OSL intensity due to competition during irradiation and read-out”. *Radiation Measurements* 41 (2006) 903– 909.
40. V. Pagonis, R. Chen and G. Kitis, (2006). “Theoretical modeling of experimental diagnostic procedures employed during predose dosimetry of quartz”. *Radiation Protection Dosimetry*, Vol. 119, No. 1–4, pp. 111–114
41. G. Kitis, V. Pagonis, R. Chen and G. Polymeris, (2006). ”A comprehensive study of the predose effect for three quartz crystals of different origin” *Radiation Protection Dosimetry*, Vol. 119, No. 1–4, pp. 438–441
42. Christopher Soares, Chris Drupieski, Brian Wingert, Garey Pritchett, Vasilis Pagonis, Michelle O'Brien, Alan Sliski, Pawel Bilski and Pawel Olko, (2005). *Absorbed Dose Measure-*

ments of a Handheld 50-kV X-ray Source in Water with Thermoluminescence Dosimeters. Paper accepted for publication in *Radiat. Prot. Dosim.*

43. V. Pagonis. (2005) "Evaluation of activation energies in the semi-localized transition model of thermoluminescence". *J. Phys. D: Appl. Phys.* 38 (2005) 2179–2186
44. J. Marx, S. Mian, and V. Pagonis, 2004. "An Activities-Centered General Science Course Concerning Light and Optics." APS Forum on Education, Ed. Wolfgang Christian, Spring 2004.
45. J L Lawless, R Chen, D Lo and V Pagonis "A model for non-monotonic dose dependence of thermoluminescence". *J. Phys.: Condens. Matter* 17 (2005) 737–753
46. Vasilis Pagonis and Hezekiah Carty, "Simulation of the experimental pre-dose technique for retrospective dosimetry in quartz". *Radiation Protection Dosimetry* (2004), Vol. 109, No. 3, pp. 225-234
47. Vasilis Pagonis, George Kitis, Reuven Chen. Applicability of the Zimmerman predose model in the thermoluminescence of predosed and annealed synthetic quartz samples. *Radiation Measurements*, 37, (2003), 267-274.
48. G. Kitis, V. Pagonis, and C. Drupieski. Cooling rate effects on the thermoluminescence glow curves of Arkansas quartz. *Phys. stat. sol. (a)* 198, No. 2, 312– 321 (2003)
49. Reuven Chen and Vasilis Pagonis. Modelling thermal activation characteristics of the sensitization of thermoluminescence in quartz. *J. Phys. D: Appl. Phys.* 36 (2003) 1–6
50. G. Kitis, V. Pagonis, H. Carty, and E. Tatsis, "Detailed kinetic study of the thermoluminescence glow-curve of synthetic quartz", *Radiation Protection Dosimetry* (2002), Vol. 100, Nos. 1-4, pp. 225-228.
51. V. Pagonis, E. Tatsis, G. Kitis, and C. Drupieski, "Search for common characteristics in the glow-curves of quartz of various origins", *Radiation Protection Dosimetry* (2002), Vol. 100, Nos. 1-4, pp. 373-376
52. V. Pagonis and G. Kitis, "On the possibility of using commercial software for thermoluminescence glow-curve deconvolution analysis", *Radiation Protection Dosimetry*, 101, 93-98 (2002).
53. V. Pagonis and G. Kitis, "Fit of second order thermoluminescence glow peaks using the Logistic distribution function", *Radiation Protection Dosimetry*, 95, (3) pp 225-229 (2001).
54. V. Pagonis, S. M. Mian, and G. Kitis, "Fit of first order thermoluminescence glow peaks using the Weibull distribution function", *Radiation Protection Dosimetry*, 93, (1) pp 11-17 (2001).
55. V. Pagonis and C. Shannon, "An improved experimental procedure of separating a composite thermoluminescence glow curve into its components", *Radiation Measurements*, 01, 1-8 (2000).

56. V. Pagonis, R. Drake, M. Morgan, T. Peters, C. Riddle, and K. Rollins, "Modeling forces on the human body", *Physics Teacher*, 37, 469-474 (1999).
57. C.T. Michael, N. Zacharias, K. Polikreti and V. Pagonis "Minimizing the Spurious TL of Recently Fired Ceramics Using the Foil Technique". *Radiation Protection Dosimetry* vol. 84, p. 499-502, (1999).
58. V. Pagonis, "The effect of annealing atmosphere on the thermoluminescence of synthetic calcite", *Radiation Measurements*, 29, 45-52 (1998).
59. Vasilis Pagonis, Sean Chauduri, Brian Hornbecker, and Nathan Smith, "Video Measurements: Effects of Air resistance", *The Physics Teacher* 35, 364-369 (1997).
60. V. Pagonis, Y. Maniatis, C. Michael and Y. Bassiakos, "Spurious and regenerated thermoluminescence in calcite powder samples", *Radiation Measurements*, 27:1, 37-42 (1997).
61. Vasilis Pagonis, Eric Allman, and Albert Wooten Jr., "Thermoluminescence from a distribution of trapping levels in UV irradiated calcite", *International Journal of Radiation Measurements*, 26, 265-280 (1996).
62. V. Pagonis and C. Michael, "Annealing effects on the thermoluminescence of synthetic calcite", *Radiation Measurements*, 23:1, 131-142 (1994).
63. Franklin, A.D., Hornyak, W.F., Pagonis, V., and Kristianpoller, N. "Thermoluminescence study of annealing a geological calcite", *Nucl. Tracks*, 17: 4, 517-523 (1990).
64. JB Sokoloff., W. H Li, V Pagonis and CH Perry, "Forbidden magnon scattering in the weak ferromagnet MnSi" *Solid State Communications*, 52 (1984) p.693.
65. G. Shirane, R. Cowley*, and C. Majkrzak , J. B. Sokoloff, V. Pagonis, and C. H. Perry "Spiral magnetic correlation in cubic MnSi" *Phys. Rev. B* 28, 6251-6255 (1983)
66. RD Lowde, RM Moon, V Pagonis, CH Perry, JB Sokoloff. "A polarized neutron scattering demonstration of deviations from Stoner-theory behavior in nickel" *Journal of Physics F: Metal Physics*, 13, (1983) 249-279.