David C. Joy

The University of Tennessee-Knoxville
and Oak Ridge National Laboratory

Degrees:
D.Phil, Materials Science, Oxford University (UK), 1969
M.A. Natural Sciences, Cambridge University (UK), 1966
B.A. Natural Sciences, Cambridge University (UK), 1966

Professional Experience:

1969-1970	ICI Research Fellow, Oxford University (UK)
1970-1974	Royal Society Warren Fellow, Oxford University (UK)
1974-1987	Member of Technical Staff, AT&T Bell Labs., Murray Hill NJ
1987 -	Distinguished Professor, Univ. of Tennessee and Distinguished Scientist Oak Ridge National Laboratories

Principal Publications Over Last Five Years:

- **Joy D C, and Griffin B J**, (2011), '*Is Microanalysis Possible in the Helium Ion Microscope?',* Microscopy and Microanalysis, **17**, 643-649
- **Joy, D C** (2009), "*Scanning Electron Microscopy: Second Best no more*", Nature Materials **8**, (10), 776-777
- **Ramachandra R, Griffin B, Joy DC**, (2009), '*A model of secondary electron imaging in the Helium Ion scanning microscope'*, Ultramicroscopy **109**, 748-757
- **Cord B, Yang J, Duan H, Joy D C, Klingfus J, Berggren K K**, (2009), "*Limiting Factors in sub-10nm scanning electron beam lithography*", J Vac Sci Techol. **B 27(6),** 2616-2621
- **Klein KL, Melechko A V, McKnight T E, Retterer ST, Rack R D, Fowlkes J D, Joy DC Simpson ML**, (2008), '*Surface Characterization and functionalization of carbon nanofibers'*, J.Appl.Phys., **103 (6)**, 061301

Patents:

- #6730443 "Patterning Methods and Systems using Reflected Interference Patterns", Daniel C Herr and David C Joy, May 2004
- Six other UK and US patents 1967 – 1987 assigned to AT&T, and to Cambridge Scientific

Scientific & Professional Societies:
Microscopy Society of America
Microbeam Analysis Society
Royal Microscopical Society

Honors & Awards:

1971	Royal Society Warren Fellowship
1977	Elected Fellow of the Royal Microscopical Society of London
1979	Burton Medal, The Microscopy Society of America
1999	Distinguished Research Award, Semiconductor Research Consortium.
2000	NIST Award - One of top 100 papers published by NIST in 20th century

2001	National Winner Battelle Institute “NanoScience Challenge”
2009	Elected Fellow of the Microscopy Society of America
2010	Awarded the ‘Duncumb Medal’ of the Microbeam Analysis Society
2011	Editor Emeritus “SCANNING”

Institutional & Professional Service Over Past Five Years

- Reviewer for journals including Nature Materials, J.Applied Physics, Ultramicroscopy, Journal of Microscopy (Editorial Board), SCANNING (Editorial Board), and Micron
- Search Committee, System Vice-President for Research, University of Tennessee, 2006
- Search Committee, Director of Center for NanoPhase Materials Science, 2009-10
- Charter Member (4 year term) NIH Study Section “Microscopic Imaging”

Thesis Advisor Responsibilities (past 5 years):

Young Choi	(PhD)
Wei Li	(PhD)
Yinghong Lin	(PhD)
Jihoon Kim	(PhD)
Sachin Deo	(PhD)
Medhi Bolarizadeh	(PhD)
Satya Bari	(PhD)
Ranjan Ramachandra	(PhD)

Thesis Advisor Responsibilities (total, includes on-going):

Ph.D. 2