James Adey

Contact Details

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Personal Details

Gender: Male
Date of birth: 19th April 1980
Nationality: British

Education

10/2001–present	Ph.D. at the University of Exeter. Expected to complete October 2004. Thesis title: *Modelling of boron related point defects in silicon* Density functional calculations have been performed using large scale parallel supercomputers. The results have enabled the explanation of experimental observations on the atomic scale.
09/1998–09/2001	B.Sc. Theoretical Physics University of Exeter First class degree.
09/1996–06/1998	A-levels Valentines Sixth Form, Ilford, Essex Mathematics (A), Physics (A), Chemistry (B).
09/1991–06/1996	G.C.S.E.'s Valentines High School, Ilford, Essex 11 G.C.S.E.'s gained including Mathematics (A*), Science (A*) and English (B).

Skills

IT	I was involved in teaching Microsoft Office and MATLAB to undergraduates and have expanded my HTML skills by creating several webpages for conferences at Exeter. Programming in ANSI C was studied as part of my undergraduate degree and I have since learnt PERL. I have extensive experience using UNIX including in the environment of large scale parallel computers.
Team Work	Active discussions with both colleagues in Exeter and international collaborators have been an important part of my research where I have enjoyed working as part of a close research team.
Communication	Presenting results at national and international conferences has accelerated the development of my public speaking skills. I am able to debate with collaborators and colleagues clearly and confidently.
Problem Solving	Strong problem solving skills mean I can analyse problems accurately and formulate a logical approach to their resolution.
Organisation	I manage my time and work well, prioritising tasks to enable meeting of deadlines. This has been demonstrated in my research and in the organisation of an international conference hosted by my research group as well as in previous work.

Previous Employment

1999 and 2000	Summer work at the University of East London responsibilities included accurately inputting data as part of a team and producing transcripts of students' results after liaising with departments. I was responsible for the supervision of a small team of temps.
07/1999	Summer work at D.E.G.W.. Working independently I maintained office supplies and equipment and supplied technical support.

Other jobs include work experience within the nuclear medicine department of a busy hospital and a long-term weekend job at a wholesale warehouse where duties included banking, picking orders and data entry.

Other Interests

I am a keen motorist enjoying driving and motorcycling. As an active member of both the Institute of Advanced Motorists and RoSPA Advanced Drivers Association I am involved in developing the skills of new members in preparation for their advanced driving test. I regularly enjoy many outdoor pursuits including mountain biking, dinghy sailing and fell-walking.

References

References are available on request.

Publication List

Published Papers

Degradation of boron doped Cz-Si solar cells
J. Adey, R. Jones, D. W. Palmer, P. R. Briddon and S. Öberg
Physical Review Letters, Vol. 93, pp. 055504, July 2004

Interstitial boron defects in Si
J. Adey, J. P. Goss, R. Jones and P. R. Briddon
Physica B: Condensed Matter, Vol. 340-342, pp. 505, December 2003

Optical and electrical activity of boron interstitial defects in Si
J. Adey, R. Jones, P. R. Briddon and J. P. Goss
Journal of Physics: Condensed Matter, Vol. 15, pp. S2851, September 2003

Formation of B_iO_i, B_iC_s, and $B_iB_sH_i$ defects in e-irradiated or ion-implanted silicon containing boron
J. Adey, R. Jones and P. R. Briddon
Applied Physics Letters Vol. 83, No. 4, pp. 665, July 2003

Identification of boron clusters and boron-interstitial clusters in silicon
J. Adey, J. P. Goss, R. Jones and P. R. Briddon
Physical Review B Vol. 67, pp. 245325, June 2003

Oral presentations

Degradation of boron doped Cz-Si solar cells
J. Adey, R. Jones, D. Palmer, P. R. Briddon, S. Öberg
UK Nework Meeting on Defects in Si and SiGe, Sheffield, U.K., June 2004

Degradation of boron doped Cz-Si solar cells
J. Adey, R. Jones, D. Palmer, P. R. Briddon, S. Öberg
Point Defects Workshop, Dresden, Germany, April 2004

Theory of boron oxygen complexes
J. Adey, R. Jones, D. Palmer and P. R. Briddon
Lifetime Degradation in Photo-Voltaic Cells, Exeter, U.K., January 2004

Pseudopotential (and basis) data-base
J. Adey
AIMPRO 2003, Exeter, U.K., December 2003

Interstitial boron defects in Si
J. Adey, R. Jones and P. R. Briddon
22nd International Conference on Defects in Semiconductors, Århus, Denmark, July 2003

Radiation damage in p-type boron doped Si
J. Adey, R. Jones and P. R. Briddon
2^{nd} RD50 Workshop On Radiation Hard Semiconductor Devices For Very High Luminosity Colliders, Geneva, Switzerland, May 2003

Boron Defects in Silicon
J. Adey, R. Jones and P. R. Briddon
UK Defects in Si and SiGe Meeting, Bath, U.K., May 2002

Boron clusters in silicon
J. Adey, R. Jones and P. R. Briddon
Defects in Silicon Meeting, Exeter, U.K., January 2002

The tutorial experience - learning AIMPRO
J. Adey
AIMPRO '01, Exeter, U.K., December 2001

Poster presentations

Degradation of boron doped Cz-Si solar cells
J. Adey, R. Jones, D. W. Palmer, P. R. Briddon and S. Öberg
Gordon Reseach Conference, Defects in Semiconductors, New London, U.S.A., July 2004

Optical and Electrical Activity of boron interstitial defects in Si
J. Adey, R. Jones, P. R. Briddon and J. P. Goss
The Physics of Group IV Semiconductors, Exeter, U.K., April 2003

The properties of boron interstitial defects and boron impurity complexes in Si
J. Adey, R. Jones, J. P. Goss and P. R. Briddon
Gettering And Defect Engineering in Semiconductor Technology 2003, Zeuthen, Germany, September 2003

Thesis

Modelling of boron related point defects in silicon
J. Adey
October 2004 (estimated)