

# Curriculum Vitae

## DAVID ANTHONY KING

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<b>Date of Birth</b>	12 August 1939
<b>Place of Birth</b>	Durban, South Africa
<b>Citizenship</b>	British
<b>Marital Status</b>	Married to Jane Lichtenstein, Solicitor Three sons, one daughter
<b>Present Position</b>	Director of the Smith School of Enterprise and the Environment at Oxford University (since 2008) and Director of Research (Chemical Physics) at Cambridge University (since 2005)
<b>Degrees</b>	B.Sc. (Hons.), First Class, Chemistry, Witwatersrand University (1960) Ph.D. Physical Chemistry, Witwatersrand University (1964) Sc.D., University of East Anglia (1974) Sc.D., University of Cambridge (1999)
<b>Honorary Degrees</b>	University of Liverpool (2001) University of East Anglia (2001) University of Cardiff (2001) University of Leicester (2002) University of Genoa (2002) Royal Technical University of Stockholm (2002) Honorary Professor: Ocean University of Qingdao, China (2002) University of the Witwatersrand (2003) University of York (2003) University of St Andrews (2003) La Trobe University, Melbourne 2005 Queens University Belfast (2005) University of Newcastle (2006) Goldsmiths College (2006) University of Turin (2007)
<b>Honours</b>	Fellow of the Royal Society of Chemistry (1975) Fellow of the Institute of Physics (1980) Fellow of The Royal Society (1991) Honorary Fellow of the Indian Academy of Sciences (1998) Associate Fellow, Third World Academy of Sciences (2000) Honorary Foreign Fellow, American Academy of Arts and Sciences (2002) Honorary fellow, Chemical Research Society of India (2002) Foreign Member, The Royal Society of South Africa (2002) Knight Bachelor (2003) Honorary Life Fellow – Royal Society of Arts (2006) Honorary Fellow, Royal Academy of Engineering (2006) Honorary Fellow, Institute of Chemical Engineers (2008)
<b>Awards etc</b>	Royal Society of Chemistry, Medal and Award for Colloid and Surface Chemistry, 1978 (UK).

Selected by SERC for presentation as one of ten major advances in science in the U.K., 1985 (UK).  
 Royal Society of Chemistry, Tilden Lecturer, 1988/89 (UK).  
 British Vacuum Council, Medal and Award for research, 1991.  
 Procter and Gamble 1990 Lecturer (U.S.A.).  
 Texas A&M New Frontiers Lecturer, 1993 (U.S.A.).  
 Dupont Distinguished Lecturer, Indiana, 1993 (U.S.A.).  
 Dow Chemicals Canada Lecturer, 1994 (U.S.A.).  
 Visiting Miller Research Professorship, Berkeley, 1996 (U.S.A.).  
 Liversidge Medal and Lecturer, Royal Society of Chemistry, 1997-8 (UK).  
 South African Institute of Chemistry Catalysis Award, 1999-2000.  
 Schuit Prize and Lecture, Eindhoven, The Netherlands, 2000.  
 The Royal Society, Rumford Medal and Prize, 2002.  
 The 9<sup>th</sup> Zuckerman Lecture 2002  
 Greenpeace Business Lecture, 2004  
 World Wildlife Fund, British Environment and Media Awards, Awareness Award, 2004  
 American Association for Advancement of Science, Plenary Lecturer, 2004  
 The Magna Carta Lecture, Australian Parliament, Canberra, 2005  
 Ralph Miliband Lecture, London School of Economics, 2006  
 Denis Gabor Lecture, Imperial College London, 2006  
 Jawarhalal Nehru Birth Memorial Medal, Indian Academy of Sciences, 2007  
 Linnaean Medal and Lecture, Sweden 2007

## PREVIOUS APPOINTMENTS

Temporary Lecturing Assistant	University of Witwatersrand	1961-62
Shell Postgraduate Scholar	Imperial College London	1963-66
Lecturer in Chemical Physics	University of East Anglia	1966-74
Professor of Physical Chemistry	University of Liverpool	1974-88
Head of Department, IPI Chemistry	University of Liverpool	1983-88
1920 Professor of Physical Chemistry	University of Cambridge	1988-2005
Deputy Head, Chemistry	University of Cambridge	1990-93
Head of Department of Chemistry	University of Cambridge	1993-00
Master of Downing College	University of Cambridge	1995-2000
Editor	Chemical Physics Letters	1989-2000
Chief Scientific Adviser	HM Government Office for Science	2000-2007

## CONSULTANCIES etc.

Visiting Expert (sabbatical leave from UEA)	National Bureau of Standards, Washington, D.C	1969
Consultant	IBM Research Labs., San Jose	1977 (June)
Visiting Professor	Physics Department, University of Wisconsin-Milwaukee	1977 (July-August)
Consultant	IBM Research Labs, San Jose	1981 (July/Aug.)
Consultant	ICI Corporate Laboratory, Runcorn	1977-1985
Member	Experimental Programme Panel, Science Research Council, Synchrotron Radiation Source, Daresbury	1980-83
Member	Leverhulme Trust Research Awards Advisory Committee	1980-91
Chairman	Leverhulme Trust Research Awards Advisory Committee	1995-2001
Member	Physical Chemistry Board, Science Research Council	1978-81
Member	Electron Microscopy and Surface	1983

## Instrumentation Review Panel, SERC

Member	Synchrotron Science Review Panel, SERC	1986
Member	Interfaces and Catalysis Initiative Panel, SERC	1986-89

**HONORARY APPOINTMENTS**

Member	Comité de Direction, CNRS, Nancy	1975-81
Member	Editorial Board, J. Phys. C.: Solid State Physics	1977-80
Member	National Executive, Association of University Teachers	1970-78
Chairman	Salaries and Gradings Committee, AUT	1974-76
Member	National University Teachers Salaries Negotiating Committees A and B	1975-77
President	Association of University Teachers	1976-77
Chairman	Thin Films and Surfaces Group, Institute of Physics	1977-78
Member	British Vacuum Council	1978-89
Vice-Chairman	British Vacuum Council	1980-81
Chairman	British Vacuum Council	1981-85
Member	Surface Science Division (SSD) of the International Union of Vacuum Science, Technique and Application (IUVSTA)	1978-86
Chairman	International Programme Committee (SSD, IUVSTA)	1980-86
Member	IUVSTA Executive	1978-86
Secretary	Congress Planning Committee, IUVSTA	1986-88
Member	Faraday Division Council of the Chemical Society	1979-82
Member	Beirat (Direction Committee) of the Fritz-Haber Institut der Max-Planck-Gesellschaft, Berlin	1981-94
Member	Executive Committee Bluecoat Society for the Arts	1985-88
Chairman	Fundraising Committee Bluecoat Society for the Arts	1986-88
Chairman	Gallery Committee, Bluecoat Society for the Arts	1986-88
Chairman	Kettles Yard (Art Gallery and House)	1989-00
Chairman	ESF Scientific Programme, Dynamics of Gas-Surface Interactions	1990-95
Member	HEFCE research evaluation team, British Chemistry Departments	1993
Member	Peer Review Committee, Catalysis Research in The Netherlands	1994
Member	Peer Review Committee, Faculty of Science and Technology, Uppsala University, Sweden	1995
Member	Peer Review Committee, Physics Research, Denmark	1997
Chairman	Cambridge Crystallographic Data Centre	1998-00

**EXTERNAL EXAMINER / ASSESSOR**

External Examiner in Chemistry, University of Birmingham	1979-83
External Examiner in Chemistry, University of Exeter	1984-86
External Examiner in Chemistry, University of Jaffna, Sri Lanka	1985-88

External Examiner in Chemistry, University of Durham	1987-89
External Examiner in Chemical Physics, University of Edinburgh	1986-89
External Examiner in Physical Chemistry, University of London	1990-94
External Assessor, Chair of Experimental Physics, Chalmers University, Sweden	1979
External Assessor, Chair of Solid State Physics, University of Linköping, Sweden	1982
External Assessor, Applied Surface Science, Sweden	1990
External Assessor, Chair of Physical Chemistry, University of Oxford	1992
External Assessor, Chair of Physical Chemistry, UMIST	1993
External Assessor, Chair of Physical Chemistry, University of Nottingham	1993
External Assessor, Chair of Structural Chemistry, University of Birmingham	1995
External Assessor, Chair in Experimental Physics, University of Aarhus, Denmark	1995
External Assessor, Associate Professorship in Physical Chemistry, Jyväskylä, Finland	1996

## UNIVERSITY ADMINISTRATION

### University of East Anglia (1966-74)

Member of Senate  
 Member of Council  
 Chairman, Car Park Users Committee  
 Member, Committee of Two on Frame of Government of the University  
 Member, Committee on Frame of Government  
 Member, Emergency Procedures Committee of Senate and Council  
 Member, University Teachers Consultative Committee of Senate and Council

### University of Liverpool (1974-88)

Member of Senate  
 Member, Physical Recreation Committee of Senate  
 Chairman, Resources Committee, Faculty of Science  
 Chairman, Equipment Resource Distribution Working Party, Faculty of Science  
 Chairman, Ph.D. Committee of Senate  
 Chair Selection Committee: Experimental Physics (2x); Inorganic Chemistry; Director, Leverhulme Centre for Innovative Catalysis; Computer Science  
 Member, Planning and Resources Committee of Senate and Council

### University of Cambridge (1988-present)

Chairman, Physical Chemistry Sector, Department of Chemistry (1988-2000)  
 Chairman, Kettle's Yard Committee (1989-2000)  
 Chairman, Working Party on the Future of the Industrial Unit (1990)  
 Chairman, Industrial Liaison and Technology Transfer Office Committee (1991-1996)  
 Head, Department of Chemistry (1993-2000)  
 Master, Downing College (1995 to 2000)  
 Member, Planning Committee of the University and Colleges (1997 to 2000)

## CONFERENCES ORGANISED

One of the founders of the Interdisciplinary Surface Science Conferences series, held biennially in the U.K. since 1973; and of the European Conference on Surface Science series, held annually in Europe since 1977.

Chairman of the Organising Committees of the Faraday Division part of the Royal Society of Chemistry Annual Congresses in Norwich (1973); in Liverpool (1978); and in Manchester (1984).

Member of the International Programme Committee for the Fourth International Congress on Solid Surfaces, Cannes, 1980; Chairman of the International Programme Committee, Surface Science, for the Sixth International Congress on Solid Surfaces, Baltimore, 1986.

One of the founders of the International Conference on Structure of Surfaces series, first held in Berkeley, California, 1985; second held in Amsterdam, 1987; etc.

Chairman of the Third International Conference in Vibrations at Surfaces, Windermere, 1985 (first: Namur, Belgium; second: Asilomar, California; fourth: Munich; etc.).

Co-chairman, Anglo-Japanese Conference on Catalysis, Liverpool 1987.

Chairman, SERC Summer School in Surface Science, Cambridge 1989.

Organiser and Secretary, The Rideal Conference, Cambridge 1990.

Chairman, Topical Summer School in Surface Science, Cambridge 1990.

Chairman, Faraday Discussion, Dynamics at the Gas-Solid Interface, Cambridge 1993.

Chairman, 7th International Congress on Theoretical Aspects of Heterogeneous Catalysis, Cambridge, 1998.

### **ESTABLISHMENT OF NEW RESEARCH CENTRES**

In 1987 a successful grant application from D.A.K. to The Leverhulme Trust led to the formation of a new research centre, The Leverhulme Centre for Innovative Catalysis, at the University of Liverpool. Commitments to funding the Centre for an initial five year period were also obtained from industrial companies, including ICI, British Gas, Johnson Matthey and BP. Professor R.W. Joyner, formerly at BP, was appointed as the first Director of the Centre, and Drs Bowker (formerly at ICI) and Hutchings (formerly Professor at the University of Witwatersrand) were appointed as Assistant Directors.

In 1998 negotiations initiated and conducted by DAK with Unilever led to the establishment of the *Unilever Centre for Molecular Science Informatics*, within the Department of Chemistry at a total cost to Unilever of £13 M over the first five years, with two subsequent quinquennial grants of £5 M at 1998 prices to cover a total period of 15 years.

### **INVITED LECTURES**

Between 1967 and 2003 DAK gave over 150 invited lectures at international conferences, symposia, workshops and summer schools on his research. The most recent invitations include: Plenary Lecture, International Congress on Catalysis, Budapest, July 1992; International Conference on Dynamical Processes at Surfaces, Tokyo, April 1992; International Surface Science Conference, Taipei, Taiwan, April 1992; European Summer School on Surface Science, Bad Honnef, March 1992; European Conference on Gas-Surface Dynamics, Graz, August 1992; NATO Advanced Study Workshop on Heterogeneous Catalysis, Vaucluse, November 1992; Dead Sea Symposium on Dissociation Dynamics, Israel, January 1993; European Physical Society Congress, Regensburg, March 1993; European Conference on Surface Crystallography, Aarhus, May 1993; International Colloquium on Spectroscopy, York, July 1993; European Conference on Surface Science, Coventry, August 1993; AVS Conference, Florida, November 1993; Interdisciplinary Surface Science Conference, Liverpool, March 1994; Dynamics of Surface Restructuring Conference, Erlangen, April 1994; Surface Science Conference, Tokyo, November 1994; International Surface Science Conference, Slovenia, April 1995; 3rd European Summer School in Surface Science, Marseille, June 1995; Symposium on Atomically Controlled Surface Processes, Tsukuba, Japan, September 1995; Symposium on Dynamical Quantum Processes at Surfaces, Osaka, Japan, September 1995; European Conference on Applications of Surfaces and Interface Analysis, Montreux, October 1995; ESF Conference on Dynamics of Surface Reactions, Genoa, December 1995; ESF Workshop on Oscillatory Processes at Surfaces, Cambridge, January 1996; American Chemical Society Annual Congress, New Orleans, March 1996; International Conference on Theoretical Aspects of Heterogeneous Catalysis, Tarragona (Spain), June 1996; International Conference on the Structure of Solid Surfaces, Aix-en-Provence, July 1996; International Symposium on Catalytic Science to Create Next Generation Chemistry, Sapporo, July 1996; NATO Summer School on Surface Diffusion, Rhodes, August 1996; Yamada Conference on Solid State Physics (Plenary), Osaka, September 1996; Oji Conference on Surface Science, Tokyo, October 1996; Lecture tour, India, November 1996 (IIT New Delhi, Nehru Centre and NPL, Bangalore, IIT Madras, Bahba Atomic Research Centre, Bombay); Gordon Conference on Surface Reactivity, Ventura, USA, February 1997; National Condensed Matter Physics Conference (plenary), Caxambu, Brazil, June 1997; Gordon Conference on Dynamics at Surfaces, Procter Academy, August 1997; European Surface Science Summer School, Copenhagen, August 1997; Eurocat 97, Belgium, September 1997; Liversidge Lecture: Cambridge,

Belfast, Cardiff, Dundee and Reading, October-December 1997; 22nd Annual Meeting, Advances in Surfaces and Interface Physics, Modena (Italy), December 1997; VIth Euroconference on Surface Crystallography, La Grand Motte, (France), May 1998; 50th Anniversary of State of Israel Chemical Congress, Jerusalem, May 1998; 19th International Seminar on Surface Physics, Wroclaw (Poland), June 1998; African Chemical Congress, Durban, July 1998; 15th International Symposium on Gas Kinetics, Bilbao (Spain), September 1998; Almeria Euroconference, (Spain), September 1998; 50th Anniversary of INIFTA, Argentina, November 1998; International Symposium on Surface and Interface: Properties of Different Symmetry Crossing, Tokyo, November 1998; National Symposium in Chemistry, 50th year of India's Independence, India, January 1999; CERC-3 Workshop "Molecules at Complex Surfaces", Amsterdam, March 1999; Spring meeting of the ACS, Anaheim (California), March 1999; Workshop on "Catalysis from First Principles", Copenhagen, May 1999; Erlangen-Cambridge Workshop on "New Developments in Low Energy Electron Diffraction", Erlangen (Germany), June 1999; TMR Summer School on Surface Science: Understanding Catalysis, Dronten, The Netherlands, August 1999; ERC Conference "Challenges in Predictive Descriptions of Reaction Dynamics and Growth Properties at Surfaces", Lengries (Germany), September 1999; European Workshop, "Elementary Steps in Fast Oxidation Reactions", Lelystad, Flevoland, The Netherlands, October 1999; Royal Soc. Chem. Lectures, Exeter and York, Nov. 1999; VW Foundation Research Conference in Materials Science, Bremen, Dec. 1999; Opening Plenary Lecture, Israel Chemical Society Annual Meeting, Beer Sheva, Israel, Feb. 2000; Wolfson College Lecture, Physics at the Boundaries, Feb. 2000; Schuit Lecture, "Reactive Solid Surfaces", Eindhoven, The Netherlands, March 2000; Spring Meeting of the ACS, Berkeley, California, March 2000; 17<sup>th</sup> Canadian Conference on Surface Science, Ontario (Canada), May 2000; XIVth International Symposium on the Reactivity of Solids, Budapest, (Hungary) August 2000; ISSI PDSC-2000, Nagoya (Japan), October 2000; International Conference on Elementary Processes in Molecule-Metal Surface Interactions, San Juan (Puerto Rico), November 2000; International Symposium on the Science of Surfaces and Nanostructures, Singapore, November 2000; 27<sup>th</sup> IUVESTA Workshop on Dynamical Phenomena Related with Electrons at Surfaces, Hokkaido, Japan, January 2001; Cargese Winter School, "State-of-the-Art Simulations in Electronic Structure and Energetics Applied to Surface Physics", Corsica, February 2001; Spring meeting of the ACS, Seattle, March 2001. Plenary Lecture, Winter Gordon Conference, California, 2007.

As Chief Scientific Adviser to the Government, DAK gave a very large number of lectures related to science in government. These include venues throughout the UK, USA, Japan, the EU (especially Brussels), China, Russia, South Africa, India, Brazil, Canada, Korea and Singapore. In 2002 he delivered the Ninth Zuckerman Lecture, on "The Science of Climate Change: Adapt, Mitigate or Ignore?", at the Royal Society. In 2004 he delivered the Third Greenpeace Business Lecture, in London, and the Magna Carta Lecture to the Australian Parliament, 2005. In 2006 he gave presentations to both the Cabinets of Finland and Rwanda.

## **PUBLICATIONS**

Over 450 papers in scientific journals, including twenty in the past year.

### **Books edited**

"Interdisciplinary Surface Science", ed. D.P. Woodruff and D.A. King, North Holland, Amsterdam, 1975.

"The Chemical Physics of Solid Surfaces and Heterogeneous Catalysis", ed. D.A. King and D.P. Woodruff, Elsevier, Amsterdam; Volumes 1 to 8, 1982 to 1997.

"Vibrations at Surfaces IV", ed. D.A. King, N.V. Richardson, S. Holloway, Elsevier, Amsterdam, 1985.

## **GOVERNMENT POSITIONS, 2000 - 2007**

Chief Scientific Advisor to Prime Minister and Cabinet  
Head, Office of Science and Innovation

Chairman, Global Science and Innovation Forum (GSIF)

Chairman, Chief Scientific Adviser's Committee (CSAC).

Chairman, Chief Scientific Adviser's International Committee (CSAIC) – responsible for doubling the number of scientific cultural attaches at British embassies around the world.

Chairman, Honours sub-committee, S, E & T.  
Chairman, Foot and Mouth Disease Science Panel, 2001 - 2002  
Chairman, GM Science Review Panel, 2003  
Chairman, Government Science Advisory Panel, for Emergency Response  
Co-Chair, Council for Science and Technology.  
Member, Permanent Secretaries Committee.  
Director of the Government's Foresight Programme  
Founding Chair, Energy Research Partnership.  
Co-Founder: Energy Technologies Institute (£1bn public-private partnership)

**2008- PRESENT**

Director of the Smith School of Enterprise and the Environment, University of Oxford.