

## **Regius Professor Graham John Hutchings FRS CBE**

**ORCHID ID:** [orcid.org/0000-0001-8885-1560](http://orcid.org/0000-0001-8885-1560)

**Date of birth:** 3rd February 1951

**Nationality:** UK

**URL:** <http://www.cardiff.ac.uk/chemy/contactsandpeople/academicstaff/hutchings.html>

### **EDUCATION**

1972 BSc in Chemistry with First Class Honours, University College London

1975 PhD in Biological Chemistry, University College London. Supervisor: Prof C Vernon

2002 DSc (University of London)

### **EMPLOYMENT and CAREER**

**Summary** Graham Hutchings is distinguished for his work in the field of heterogeneous catalysis, in particular catalysis by gold and oxidation catalysis. Hutchings has not followed the standard academic career profile of establishing oneself in a field by doing PhD and postdoctoral research in the same fields thereby building a steady profile in a specific field from an early age. Following a PhD in biological chemistry on *in vivo* ATP synthesis, he was recruited by ICI for a biological chemistry project but they scrapped the research before he joined the company, and so he was forced to switch fields to heterogeneous catalysis to remain with ICI. He stayed with ICI for 9 years in mainly research, production and production support managerial posts – he was carbonylation plant manager at one stage in 1980-81 responsible for production valued at the time in excess of €120M. He became an academic in 1984 and has established himself as an internationally leading researcher in heterogeneous catalysis, particularly in catalyst discovery which is at the heart of this proposal. He has held 3 academic chairs (Witwatersrand, Liverpool, Cardiff) and for each he has reshaped his research and attacked new fields and has a proven track record in opening up new fields of heterogeneous catalysis using multidisciplinary approaches. Most recently he established the Cardiff Catalysis Institute in 2008 and this has now become one of the leading research centres for catalysis globally. His research is based on fundamental science of catalyst discovery which is then translated into application. His most significant discovery concerns catalysis by gold and a gold catalyst based on his discovery has recently been commercialised in China by Johnson Matthey, thereby eradicating the use of mercury as a catalyst. His career history is as follows:

1975– 1984	<b><i>ICI Petrochemicals Division</i></b>
1975– 1978	Technical Officer, Research Department Wilton, Teeside
1978– 1981	Plant Manager and Production Support manager, Oil Works, Teeside
1981– 1983	Senior Research Officer, AECl, Modderfontein, S Africa (Seconded)
1983– 1984	Chief Research Officer, AECl, Modderfontein, S Africa (Seconded)
1984– 1987	University of Witwatersrand, S Africa
1984– 1987	Lecturer (1984-6), Senior Lecturer (1986-7), Professor 1987
1987– 1997	<b><i>University of Liverpool</i></b>
1987 – 1994	Assistant Director of the Leverhulme Centre for Innovative Catalysis
1994 – 1997	Deputy Director and Professor
1997 – present	<b><i>Cardiff University</i></b>
1997– 2006	Head of School and Professor of Physical Chemistry
2006 – present	Distinguished Research Professor
2008 – present	Director: Cardiff Catalysis Institute
2010 – 2012	Pro Vice-Chancellor Research
2016 – present	Regius Professor of Chemistry

### **INSTITUTIONAL RESPONSIBILITY**

1997-2006	Head of School of Chemistry, Cardiff University
2008-date	Director Cardiff Catalysis Institute
2010-2012	Pro-Vice Chancellor Research, Cardiff University

### **FELLOWSHIPS, AWARDS and DISTINCTIONS**

- Langmuir Distinguished Lecturer Award, American Chemical Society, August 1996.
- Deutsche Wissenschaftliche Gesellschaft für Erdöl 2001 – Kolleg Lectureship, Germany, 2001.

- Institute of Chemical Engineering Entech Medal 2004.
- Royal Society of Chemistry 2004 Award for Heterogeneous Catalysis.
- 2006 François Gault Lecturer of the European Federation of Catalysis Societies
- I Chem E Impact Award for Applied Catalysis 2005.
- Royal Society of Chemistry Green Chemistry Lecturer 2007.
- Institute of Chemical Engineering Environwise Award for Green Chemistry 2007.
- Winner Dow Methane Challenge 24<sup>th</sup> January 2008.
- Elected Fellow of the Royal Society 2009
- Royal Society of Chemistry Award for Surfaces and Interfaces 2009
- I Chem E Sustainability Award 2009
- Elected member Academia Europaea September 2010
- Elected Founding Fellow Learned Society of Wales
- International Precious Metals Institute Henry J. Albert Award 2011
- France Great Britain Chemistry Prize 2011
- Dechema Alvin Mittasch Award 2012
- International Association of Catalysis Societies Heinz Heinemann Award 2012
- Thompson Reuters Citation Laureate September 2012
- Distinguished Visiting Lecturer, Catalysis Society of South Africa, 2013.
- Royal Society Davy Medal 2013
- Dewar Lectureship, Queen Mary College, London.
- Thompson Reuters Most Cited Scientist Award 2014
- Xingda Lecturer University of Peking 2015
- Institute of Chemical Engineering Innovative Product Global Award 2015
- Cardiff University International Impact Award 2016
- Appointed Inaugural Regius Professor of Chemistry, Cardiff, in honour of the Queen's 90<sup>th</sup> Birthday
- C N R Rao Award Lecture Bangalore 2017
- Menelaus Medal of the Learned Society of Wales 2017
- Royal Society of Chemistry Industry-Academia Collaboration Award 2017 for the discovery of the gold catalyst for VCM.
- ENI Award for Advanced Environmental Solutions 2017 [https://www.eni.com/en\\_IT/innovation/eni-award/2017-hutchings-advanced-environmental-solutions.page](https://www.eni.com/en_IT/innovation/eni-award/2017-hutchings-advanced-environmental-solutions.page)
- Royal Society of Chemistry Faraday Lectureship Prize 2018
- Appointed CBE in the Queen's Birthday Honours 2018

### **COMMISSIONS of TRUST and EXTERNAL POSITIONS OF NOTE**

Editor J. Catal. 1999-date; Editor Scientific Reports (Nature) 2014-date; Editor Gold Bulletin 2015-date; Member of 15 Journal Editorial Boards; Treasurer and Committee Member International Association of Catalysis Societies 2000-2008; Member of the Fachbeirat of the Fritz-Haber-Institute, Berlin 1999-2015; and MPI Coal Conversion Mulheim 2012-14; Member of Sasol (South Africa) Heterogeneous Catalysis Advisory Board 2000-2009; Member of Netherlands Institute for Catalysis Research International Review Group 2000, 2006, 2010 (Chair), member of review team for Chemical Engineering in the Netherlands 2015; Invited Professor in Residence at the Université Pierre et Marie Curie, Paris, 2003-4; UK Research Assessment Exercise panel member for Chemistry (Panel 18) 2005-2008; Chair of Science Communities Representing Science Communities 2010-2013; Visiting Professor Tokyo Metropolitan University 2010-date; Adjunct Professor Louisiana State University 2011-date; UK Research Excellence Framework Panel member and Deputy Chair for Chemistry (Panel B8) 2011-14; President Faraday Division Royal Society Of Chemistry 2012-15; Inaugural Director UK Catalysis Hub 2013-15 and Director 2017-18. Council Member Academia Europaea 2016 and Head of the Chemistry Section.

### **PUBLICATIONS**

775 publications (652 refereed journal research papers; 45 Patents; 61 Review articles; 17 Edited works, over 40933 citations (Google Scholar 15.6.18), h-index 93, over 220 Research lecture presentations. Over 200 PhD students supervised and over 150 postdoctoral research associates supervised to date over my 34 year academic career. Many have gone into senior industrial or academic positions worldwide.