



Sir David Anthony King: A Viewpoint

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BIOGRAPHY



Sir David Anthony King, FRS HonFREng (born 12 August 1939) is an Emeritus Professor in Physical Chemistry at the University of Cambridge, Director of the Collegio Carlo Alberto, Chancellor of the University of Liverpool and a senior scientific adviser to UBS. He currently serves as the Foreign Secretary's Special Representative for Climate Change and Chairman of the Future Cities Catapult. In 1974 he became the Brunner Professor of Physical Chemistry at the University of Liverpool. In 1988 he was appointed 1920 Professor of Physical Chemistry at the University of Cambridge and subsequently became Master of Downing College (1995–2000) and Head of the University Chemistry Department (1993–2000). During this time, David King, together with Gabor Somorjai and Gerhard Ertl, shaped the discipline of surface science and helped to explain the underlying principles of heterogeneous catalysis. From

2008 to 2012 he was Director of the Smith School of Enterprise and the Environment, University of Oxford. King has published over 500 papers on his research in chemical physics and on science and policy, and has received numerous prizes, Fellowships and Honorary Degrees. King was knighted in 2003 and in 2009 made a Chevalier of the Légion d'Honneur. Until 2012, he continued as a Director of Research in the Department of Chemistry at Cambridge University, where he retains the title of Emeritus Professor. He was the Chief Scientific Adviser to H.M. Government under both Tony Blair and Gordon Brown and Head of the Government Office for Science from October 2000 to 31 December 2007. In that time, he raised the profile of the need for governments to act on climate change and was instrumental in creating the new £1 billion Energy Technologies Institute.

WELCOME ADDRESS TO NANO ENERGY 2016

I would like to welcome the delegates to this important conference (NANOENERGY 2016). My own association with the University of Liverpool goes back some time, I am going to have to admit, it goes back to 1974 when I became a chair of Physical Chemistry and subsequently I became the chancellor of the University of Liverpool. As a professor of Physical Chemistry, I led a team working on surface science and of course Nanotechnology is the emerging science from surface sciences. I am delighted to say that the Stephenson Institute for Renewable Energy is a tremendous outcome from that work in those early days. The Stephenson Institute is focusing its work on what I call and consider it to be the most important single topic for research across the world in this point in time. Of course I say that because my work in the Foreign Office today but previously as a chief scientific advisor to the British government has been heavily focused on the importance of climate change as a future threat to humanity. And managing that threat is a business of de-carbonizing the global economy. Finding new technologies can aid that de-carbonizing process through directive mission oriented research is

a key way forward. I believe that the team assembled at Liverpool can play a very large part in that process. Energy storage activities, the key part of delivering, new means of delivering renewable energy – and the overall process which needs to be integrated across all energy spheres. Creating energy from primary energy sources – solar, wind, geothermal – storing energy as needed because two of those sources are intermittent and then storing energy through smart grids and smart energy storage techniques. All of these process together will replace the old fossil fuel industries. I think it is very important that we recognise the magnitude, not only of the challenge but of the opportunity this represents. The clean energy field is going to produce a market by 2020, an annual market of 3 to 6 trillion dollars a year. And addressing that is therefore an opportunity not only for dealing with this enormous challenge but also re-linking science, technology and wealth creation into delivering the solutions. So I think your work is not only critical but it has become a big part of what I have been working on since I joined the government in the foreign office nearly 3 years ago – and that is a programme called "Mission Innovation" and just a few words about "Mission Innovation" – it was launched on the first

day of the COP meeting (Paris Climate Conference) in Paris in early December last year (2015). Mission Innovation involves 22 nations plus the European Union committed to doubling their research funding of clean energy research by 2020. Not only is Britain a member of that grouping but a thought leader for that process. It was launched with President Obama, Modi, Prime Minister of India, President Hollande of France and our own British prime minister, together supporting those other nations. We've just had the first ministerial mission innovation in San Francisco at the beginning of this month and I am pleased to say that the total sum committed by the member nations will be 30 billion dollars per annum by 2020. This gives you an indication on how seriously the world's leaders are now taking the challenge of climate change. We need to work on this as a mission oriented programme and we need to be collaborative across laboratories, the Stephenson Institute, with other countries and other laboratories around the world to produce solutions to this enormous challenge. I believe we can do it, I believe time is short and we need to focus our efforts. I would like to wish you all a tremendous conference. This is such an important topic (Energy) and what you deliver is going to be a critical part of that process. Thank you