Imperial College London

Dr Chris Tighe joined the Department of Chemical Engineering as a Lecturer in December 2014, following a varied career spanning 15 years in both academic and contract R&D, and the process industries. His High Pressure Industrial Systems (HiPIS) research group will address challenges related to chemistry, scale-up and engineering materials in industrial processes at high pressure (typically 200 to 2000 atmospheres, usually at elevated temperature) by conducting detailed fundamental experiments and employing computational methods where appropriate to yield deeper insights.

After graduating from the University of Manchester Institute of Science and Technology (UMIST) in 2000, Chris joined BP as a Chemical Engineer at their downstream Grangemouth crude oil refining and chemical complex in Scotland. Here, he had a broad spectrum of responsibilities including process troubleshooting, optimisation and debottlenecking, commissioning of a new synthetic ethanol plant, environmental compliance, and project management. Prior to the acquisition of the majority of the Grangemouth assets by Ineos, Chris left BP as a Chartered Chemical Engineer to pursue his academic interests at the University of Cambridge. Here he completed a PhD under the supervision of Professors John Dennis and Allan Hayhurst, with Johnson Matthey (Dr Martyn Twigg), on fundamental studies of reaction kinetics related to the treatment of Diesel exhaust gases to remove harmful soot particles and oxides of nitrogen. Then followed a period of postdoctoral research in the Department of Chemistry at UCL, during which he successfully scaled up a continuous process to manufacture nanoparticles of inorganic materials with a variety of applications in energy generation and storage, catalysis, and healthcare, using a novel patented high pressure, high temperature (300 bar, 500 ˚C) hydrothermal reactor.

Before joining Imperial College London, Dr Tighe was a Senior Project Leader at TWI, Cambridge (formerly The Welding Institute), where he was engaged in confidential, contract R&D directly with industry. Often this work involved the characterisation of engineering materials exposed to high pressure, high temperature (HPHT) corrosive environments, relevant to the design of HPHT deepwater oil wells in the upstream oil and gas industry.

Chris is a native of the north-east of England, receiving his formative education at Hebburn Comprehensive School and South Tyneside Marine Technical College. He was inspired to become a Chemical Engineer as a schoolboy, visiting the enormous complexes of industrial chemical plants nearby, and likewise wishes to inspire the new generation of students to continue the UK's proud manufacturing tradition.

**Curriculum Vitae**

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| 2014- | Lecturer, Dept. of Chemical Engineering, Imperial College London |
| 2012-2014 | Senior Project Leader, TWI |
| 2008-2012 | Post-Doctoral Research Associate, Dept. of Chemistry, UCL |
| 2004-2008 | PhD, Dept. of Chemical Engineering, University of Cambridge |
| 2000-2004 | Chemical Engineer, BP |
| 1998-1999 | Student Chemical Engineer, Texaco |
| 1996-2000 | MEng, University of Manchester Institute of Science and Technology (UMIST) |
| 1994-1996 | South Tyneside Marine Technical College, South Shields |
| 1989-1994 | Hebburn Comprehensive School, Tyne & Wear |