

## Résumé - Mark Tyrer - 2007



<b>Full Name:</b>	Mark Tyrer
<b>Date of Birth:</b>	13 <sup>th</sup> May 1960
<b>Place of Birth:</b>	Chorley, Lancashire
<b>Nationality:</b>	British
<b>Marital Status:</b>	Married, one son
<b>Profession:</b>	Geochemist
<b>Present Posts:</b>	Consulting Geochemist (Private Practice) Research Manager (MIRO) Senior Research Fellow (UCL) Research Fellow (Imperial College, London) Associate (Land & Minerals Consulting Ltd.)

Mark Tyrer is an independent geochemist, specialising in low temperature interactions between groundwater, rock, cement and wastes, especially as they relate to environmental protection and resource efficiency. With interests in mineral processing technologies (refining and synthesis in molten salts, ultrasonics and electrokinetic dewatering of solids) and in computational thermodynamics, he has worked on a wide range of geochemical systems. He works closely with the UK universities and as a private consultant in the following areas:

- **Thermodynamic simulation of near field processes**
- **Cement chemistry, especially as it applies to waste management**
- **Low-embodied energy construction materials**
- **Novel sorbents derived from waste materials**
- **Mineral processing technologies**
- **Resource-efficient materials and materials re-use**

Mark Tyrer joined the Materials Department at Imperial College in 1997 as a Research Fellow but has recently moved to the Department of Civil and Environmental Engineering. He was appointed as a Senior Research Fellow in Chemical Engineering at University College, London in 2006, where he also collaborates with colleagues in the departments of Chemistry and Civil Engineering

Prior to working at Imperial, he was Senior Geochemist for the Consulting Practice of W.S. Atkins where he worked mainly on projects assessing options for nuclear waste management, both in the UK and overseas. His interests in computational thermodynamics have extended to a wide range of man-made materials and natural systems and include predictions of heavy metal phase stability, performance assessment of mineral barriers, water quality and risk analysis.

Following a degree in geology and materials science and a master's degree in radiochemistry, his doctoral studies were on the hydration of Portland-blast furnace slag cements for nuclear waste encapsulation. He has worked at a range of national laboratories (AEA Harwell, Winfrith, Sellafield, Drigg and BGS Keyworth) under contract for BP, Royal Dutch Shell, UK Waste Ltd., Biffa Plc. Tarmac Southern Ltd., The Environment Agency (and formerly HMIP) and for the Swedish nuclear regulators, SKI. In addition, he has worked for small consulting practices (and is retained as a Research Manager for MIRO) and undertakes consultancy through Imperial College Consultants Ltd. and Land and Minerals Consulting Ltd.

He is an active committee member of the Society of Chemical Industry, for whom he has organised three successful conferences and serves on the editorial board of "Mineral Processing & Extractive Metallurgy". He is a Senior Research Fellow in the UCL CO<sub>2</sub> Centre and Visiting Fellow in the Department of Earth Sciences at the University of Greenwich. He is a co-author of the recent CASST report to the Environment Agency on applications of carbonation technology in waste management.