

DCU WATER INSTITUTE PRINCIPAL INVESTIGATORS

PI NAME:	Dr Brian Kelleher
SCHOOL:	School of Chemical Sciences
PI INFORMATION:	<p>Biography Dr Brian Kelleher received a PhD in environmental chemistry from the University of Limerick in 2001 under the supervision of Dr Tom O'Dwyer. He then managed a large scale research project that demonstrated the feasibility of using fluidised bed combustion for the transformation of agricultural waste to energy. In 2002 he joined Prof William Kingery in Mississippi State University as a post-doc researcher to study soil-enzyme dynamics and the growth mechanisms of marine gas hydrates. In 2004 he took up a post-doc position with Prof. Andre Simpson of the University of Toronto where he worked on the application of advanced Nuclear Magnetic Resonance (NMR) and hybrid techniques to study the complex mixtures in soil, water and sediment natural organic matter (NOM). In 2005 he took up the position of lecturer in the School of Chemical Science in DCU.</p> <p>Expertise Brian's' research objective is to address environmental questions at a molecular level. To do this he employs analytical techniques such as advanced NMR and compound specific stable isotope mass spectrometry and works closely with microbiologists, geologists and mathematicians. His research interests include the characterisation of natural organic matter (NOM) in water (dissolved organic matter), soil and sediments; the contribution of NOM to the carbon cycle; the sequestration of CO₂ by soil, water and marine microorganisms; marine methane seepage, gas hydrates and their related chemical, microbiological and physical features; hydrocarbon degradation and detection; palaeoclimate information derived from soil/sediment biomarker analysis.</p>

Please contact Jane Wall at jane.wall@dcu.ie or 01-7008514 for further information.