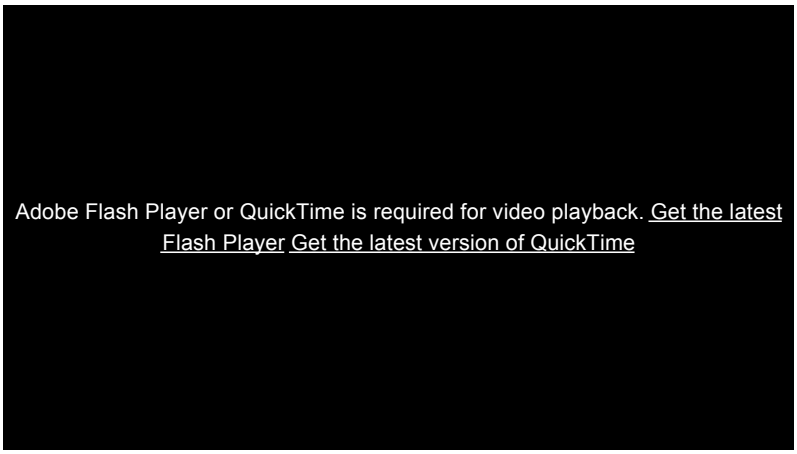
Professor Éva Valsami-Jones

Professor Éva Valsami-Jones of the School of Geography, Earth and Environmental Sciences describes, in 60 seconds, her research in understanding reactivity at the nanoscale.



My name is Éva Valsami-Jones and I'm a Professor of Environmental Nanoscience. The aim of my research is to try and understand processes that take place at the smallest imaginable scale where physicochemical properties, as we understand them, begin to blur with the quantum properties of very small particles.

What I want to establish is what makes those tiny particles, known as nanoparticles and which are tens of thousands of times smaller than the width of a human hair, so very reactive. To do that I use some of the most advanced analytical instruments available to science which are still, however, challenged by the smallness of the material which I am trying to characterise. I've also developed my own methods to tag those particles and detect them in, for example, the body of a snail or a fish.

Why is this important? For a start, the reactive nature of nanoparticles can have important applications, some of which still remain unknown. But also unpredictable behaviour may bring unpredictable health hazards and this is important to know and try to fix. So another strand of my research aims to develop methods to design safer nano-products.

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Professor Éva Valsami-Jones' profile (http://www.birmingham.ac.uk/schools/gees/people/profile.aspx?ReferenceId=31937&Name=professor-eugenia-%28%C3%A9va%29-valsami-jones)