RSC Lecture

31st October 2013 at 3 p.m.

"Formulation of Nanomaterials: From Fundamental Principles to Product Opportunities"

Professor Gordon J. Tiddy

School of Chemical Engineering and Analytical Science, University of Manchester.

Professor Tiddy's careers in both industry and academia give him a unique perspective on how fundamental scientific principles understand current applications but are also a key starting point for the new state of the art formulations. Professor Tiddy spent 3 decades in Unilever providing the scientific understanding which was key for their successful detergents and personal care products. 17 years ago he moved to The University of Manchester and continued his research in surfactants, developing particular interests in liquid crystals, gels, soft solids/pastes and coacervates - doing soft matter research before the term was in common use.

Professor Tiddy has been able to develop a range of molecular and mesoscopic models which are able to explain the application behaviour of these complex fluids using techniques ranging from rheology to X-ray diffraction. For example a focus on chromonic liquid crystals is key to the properties numerous dyes and pharmaceutical systems. Professor Tiddy has been able to make sense of the phase behaviour where many phases coexist, all having an influence on the properties and subtly altered by slight composition changes.