



KAAPI WITH KURIOSITY

Is clay a solid or a liquid?

Ranjini Bandyopadhyay



Ranjini Bandyopadhyay obtained her Ph.D. degree in Physics in 2001 from Indian Institute of Science, Bangalore. After conducting postdoctoral research at the University of California Los Angeles and Johns Hopkins University, Baltimore MD, between 2001–2005, she joined Raman Research Institute (RRI), Bangalore, as a Scientist in 2005. Presently she is a Professor at RRI and Coordinator of its Soft Condensed Matter group. Her group investigates the structure, dynamics, phase behaviour, stability and flow of soft materials such as colloidal clays and microgels. Her interests also include science outreach and the application of her research to therapeutics and materials processing in the industrial sector.

Pierre de Gennes received the Nobel prize in Physics in 1991 for 'discovering that methods developed for studying order phenomena in simple systems can be generalized to more complex forms of matter, in particular to liquid crystals and polymers'. Liquid crystals, polymers, foams, emulsions and suspensions are common examples of a class of matter called 'soft materials' — materials characterised by structural complexity and mechanical flexibility. In this Kaapi with Kuriosity talk, we will together try to decipher the intriguing flow and deformation properties of some very common soft materials that we encounter everyday — materials categorised as colloidal suspensions (clay, smoke, fog, ink and milk), emulsions (mayonnaise, lotions and creams), liquid foams, pastes (tomato ketchup and toothpaste), granular media (a bag of rice or sand) and polymers.

4 pm, Saturday, June 17th 2023
Jawaharlal Nehru Planetarium, Bengaluru

Registration Link: bit.ly/kwk_jun2023

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