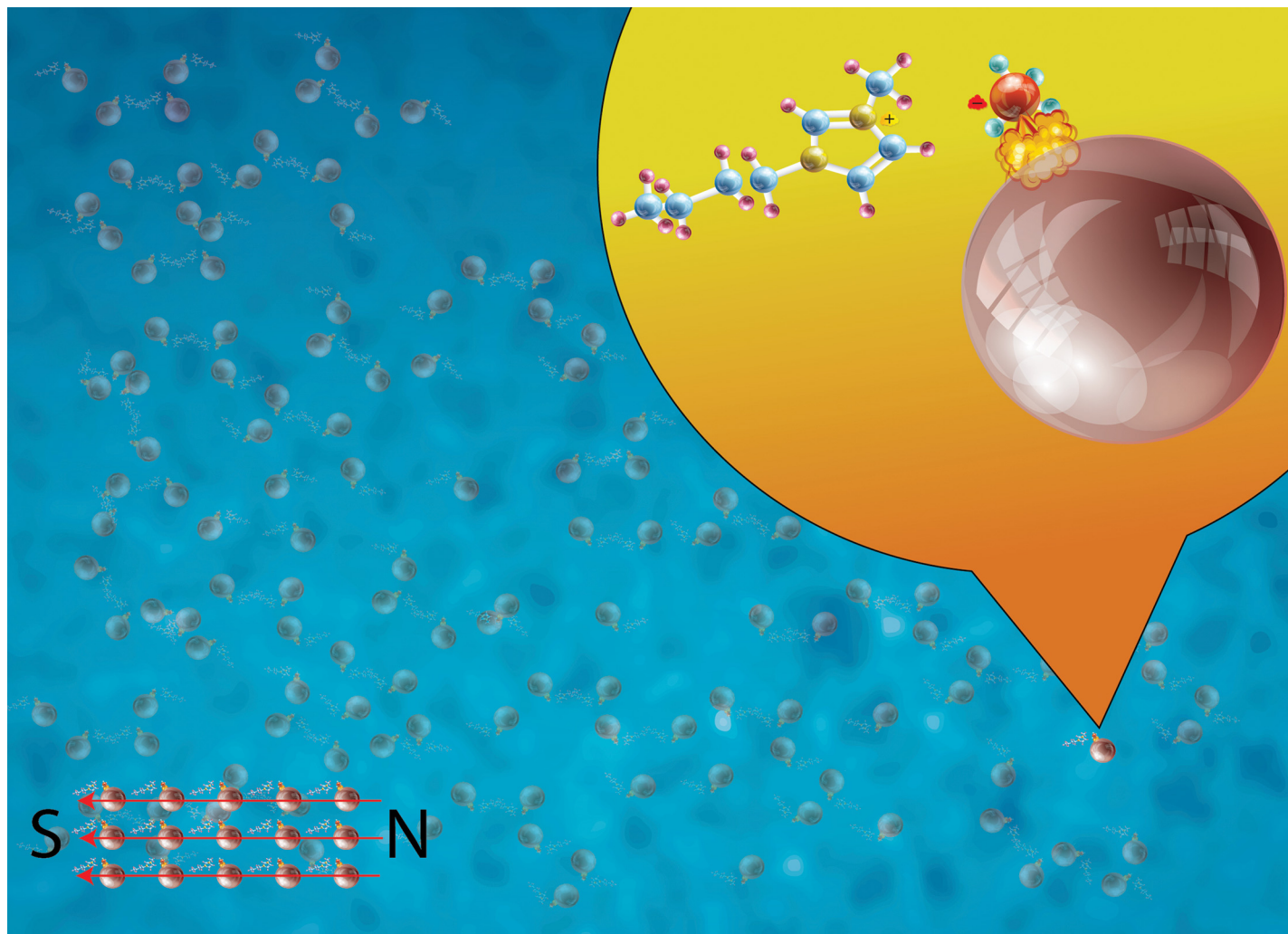




**Showcasing research from Professor Sajal K Ghosh's laboratory, Department of Physics, Shiv Nadar Institution of Eminence, Dadri, Uttar Pradesh, India.**

**A magnetorheological study of an uncoated nanoparticle-dispersed magnetic ionic liquid**

Magnetic ionic liquids are a new class of materials that embody intrinsic paramagnetic properties due to the presence of transition metals. Even in the absence of any steric repulsion among magnetic nanoparticles, the uncoated particles can distribute uniformly in such a liquid. The nanoparticle dispersed solution shows shear thinning which diminishes with externally applied magnetic field. The relaxation time of the solution drops due to the field indicating a transformation from viscous to elastic nature. These observations may help in easy synthesis and widening applications of magnetofluids.

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