

Colluding with colloids: Scientists make liquid crystal discovery

What do milk, paint, ink and liquid crystals have in common? Colloids. Findings of Kent State University scientists indicate that manipulating the size of colloids, micron-sized or nanometer-sized particles, can produce huge changes in the material properties of liquid crystals.

In a recently published article in the scholarly journal *Physical Review Letters*, the scientists illustrate that when the concentration and size of the colloids and liquid crystals are properly tuned, the systems formed promise a new technique for synthesizing liquid crystals with specific molecular properties. The ferroelectric nanoparticles have a significant impact on the material properties of the liquid crystal host; meanwhile they are stable in the liquid crystals and invisible to naked eye.

Manipulation of these systems also leads to reduction in the amount of power required to run liquid crystal displays, such as computer screens, and could result in creation of a range of different liquid crystal materials for a wide variety of applications.

On the Net: <http://link.aps.org/abstract/PRL/v97/e147801>

Source: Kent State University

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