

Boomerang-shaped liquid crystals focus of new study

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A group of researchers from Kent State University's Department of Physics and Liquid Crystal Institute has been awarded an \$536,000 grant by the National Science Foundation to study a new class of liquid crystal molecules, known for their "boomerang" shape.

The researchers will search for new liquid crystalline states of matter, and also focus on a phenomenon called "flexoelectricity," which is likely to be enhanced by the boomerang shape of the liquid crystals.

Flexoelectricity could potentially be the basis of environmentally friendly micro-power generators.

"Imagine harvesting your legs' energy during walking to charge your cell phone," says team member and Associate Professor of Physics Dr. James Gleeson.

Kent State graduate students also will benefit from technical training in 21st Century skills through involvement in the project. Students will work with the researchers to perform experiments at both Kent State and at the NSF-funded National High Magnetic Field Laboratory in Tallahassee, Florida.

Source: Kent State University

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