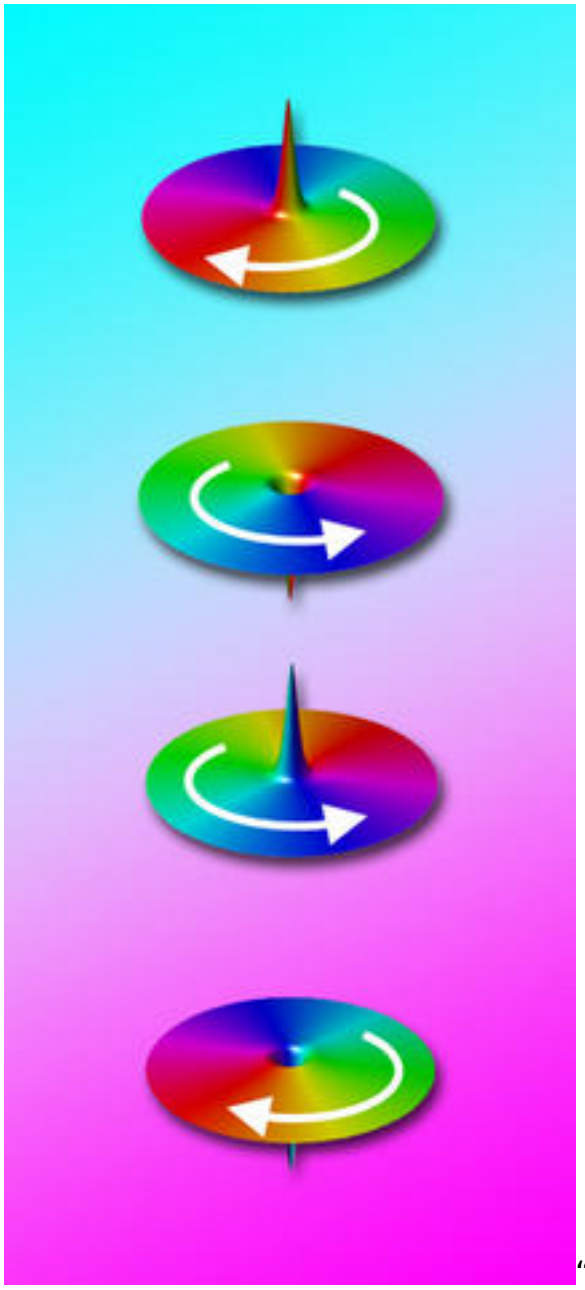
Whirlpools on the Nanoscale Could Multiply Magnetic Memory

Paul Preuss, Berkeley Lab

At the Advanced Light Source, Berkeley Lab scientists join an international team to control spin orientation in magnetic nanodisks.



“We spent 15 percent of home energy on gadgets in 2009, and we’re buying more gadgets all the time,” says Peter Fischer of the U.S. Department of Energy’s Lawrence Berkeley National Laboratory (Berkeley Lab) [1]. Fischer lets you know right away that while it’s scientific curiosity that inspires his research at the Lab’s Advanced Light Source (ALS), he intends it to help solve pressing problems.

“What we’re working on now could make these gadgets perform hundreds of times better and also be a hundred times more energy efficient,” says Fischer, a staff scientist in the Materials Sciences Division. As a principal investigator at the Center for X-Ray Optics, he leads ALS beamline 6.1.2, where he specializes in studies of magnetism.

Fischer recently provided critical support to a team led by Vojtěch Uhlíř of the Brno University of Technology in the Czech Republic and the Center for Magnetic Recording Research at the University of California, San Diego. Researchers from both institutions and from Berkeley Lab used the unique capabilities of beamline 6.1.2 to advance a new concept in magnetic memory.

Click here to read the full article [2].

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