

Lithium superconducts without pressure

May 10 2007

Finnish scientists have found lithium can superconduct at extremely low temperatures -- a finding of import to those wishing to model superconductivity.

Superconductivity -- the flow of electric current without resistance -- occurs in many metals at low temperatures. But elements in the alkali metal series of the periodic table of elements have been thought unlikely to superconduct because they are monovalent, meaning each atom can form only one chemical bond.

Although it has been known lithium, the lightest alkali metal, can superconduct under pressure, Julha Tuoriniemi and colleagues at the Helsinki University of Technology have now demonstrated it can also superconduct at ambient pressure and at a very low transition temperature of 0.4 millikelvin.

The research is detailed in the current issue of the journal *Nature*.

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Citation: Lithium superconducts without pressure (2007, May 10) retrieved 19 April 2024 from <https://phys.org/news/2007-05-lithium-superconducts-pressure.html>

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