

PHYSICS NEWS FLASH

Dr. Pengcheng Dai Published in Nature

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Dr. Pengcheng Dai is the third author on “[The structure of the high-energy spin excitations in a high-transition-temperature superconductor](#),” which appears in the June 3 issue of *Nature*.

Superconductors can carry electricity without any loss of energy. Usually superconductivity occurs at very low temperatures; however, in 1986 scientists discovered a new type of superconductor that can now carry electricity at five times the temperature of other superconductors. The authors of this Nature paper have found a clue as to why so-called high-T_c superconductivity occurs. They have observed new excitations that could provide the glue for the high-T_c. Using this knowledge, scientists hope to design new materials with even higher transition temperatures, making superconductors less expensive. (Thanks to Dr. Dai and Ron Walli of ORNL).