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## Prominent physicist Zachary Fisk joins UCI faculty

*Superconductor scientist to bolster correlated-electron physics research*

**Irvine, Calif., March 15, 2006**

Zachary Fisk, a condensed matter physicist and National Academy of Sciences member whose work has played a key role in the growth and development of new superconductors, joins the UC Irvine faculty today as a Distinguished Professor of Physics.

Fisk will lead an effort in the Department of Physics and Astronomy to grow high-quality crystals that help scientists learn more about superconductors – materials that allow electricity to pass through them with virtually no resistance. Fisk will build a laboratory for the discovery of and research into the electronic and magnetic properties of new superconducting compounds.

“Professor Fisk is at the forefront of the development of correlated-electron physics. He is a true intellectual leader,” said Ronald J. Stern, dean of the School of Physical Sciences. “We are very fortunate to have attracted Professor Fisk to UCI, and we look forward to subsequent growth in his research areas.”

Fisk’s research examines the electronic properties of magnetic and superconducting materials, which have a wide range of technological applications, from medical devices to new transportation technology. Typically, superconductivity occurs in a variety of metals at very low temperatures, which can limit their applications. Fisk has studied high-temperature superconductors, which are regarded as more accessible for new technologies. In this work, Fisk



Zachary Fisk

## Related Links

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has excelled at creating high-quality crystals of these superconducting materials – crystals of such exceptional quality, they are absent of the impurities and disorders that can alter or obscure the fundamental behavior of the compounds.

Fisk also is a leader in the study of heavy Fermion compounds, which are rare earth and actinide compounds where the electrons propagate slowly, as though the electrons have enormous masses. He discovered major examples of heavy Fermion superconductors as well as Kondo insulators, which are semiconductors with extremely small energy gaps between electrically non-conducting and conducting states. Semiconductors form the physical basis for digital technology and are used in most modern electronics systems, such as computers and audio and video devices.

Fisk comes to UCI from UC Davis, where he was a Distinguished Professor of Physics. Fisk received his doctorate from UC San Diego. He has held positions at the University of Chicago, UC San Diego, the Los Alamos National Laboratory and Florida State University. Fisk has received many awards and honors in recognition of his work in condensed matter physics, including the American Physical Society International Prize for New Materials in 1990 and the E.O. Lawrence Award in 1991. He was elected a fellow of the American Academy of Arts and Sciences in 1994, and in 1996 he was elected to the National Academy of Sciences for his work linking crystal chemistry with condensed matter physics, which improved scientific insight into the transport and magnetic properties of a variety of magnetic and superconducting materials. Fisk has written or contributed to more than 800 papers, including many in journals such as Nature and Physical Review Letters.

**About the University of California, Irvine:** The University of California, Irvine is a top-ranked university dedicated to research, scholarship and community service. Founded in 1965, UCI is among the fastest-growing University of California campuses, with more than 24,000 undergraduate and graduate students and about 1,400 faculty members. The second-largest employer in dynamic Orange County, UCI contributes an annual economic impact of \$3.3 billion. For more UCI news, visit [www.today.uci.edu](http://www.today.uci.edu).

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