

4-13-2000

Sam Liu Earns University of Dayton Research Institute's Wohlleben-Hochwalt Award for Work with Magnet Material

Follow this and additional works at: https://ecommons.udayton.edu/news_rls

Recommended Citation

"Sam Liu Earns University of Dayton Research Institute's Wohlleben-Hochwalt Award for Work with Magnet Material" (2000). *News Releases*. 9097.

https://ecommons.udayton.edu/news_rls/9097

This News Article is brought to you for free and open access by the Marketing and Communications at eCommons. It has been accepted for inclusion in News Releases by an authorized administrator of eCommons. For more information, please contact frice1@udayton.edu, mschlangen1@udayton.edu.

UNIVERSITY of



DAYTON

1850-2000

April 13, 2000
Contact: Jim Pickering
pickering@udayton.edu

NEWS RELEASE

SAM LIU EARNS UNIVERSITY OF DAYTON RESEARCH INSTITUTE'S WOHLLEBEN-HOCHWALT AWARD FOR WORK WITH MAGNET MATERIAL

DAYTON, Ohio — Sam Liu has been named winner of the University of Dayton Research Institute's top annual award for his recent work on high-temperature permanent magnet materials.

Liu will receive the 1999-2000 Wohlleben-Hochwalt Award for outstanding professional research during an awards banquet from 11:30 a.m. to 2 p.m. on Thursday, April 20, in Kennedy Union's west ballroom.

Liu, a researcher in UDRI's metals and ceramics division, is being honored for his innovative work toward developing new high-temperature magnetic materials for potential Air Force applications. He was nominated by Ed Kuhl, fellow senior researcher at UDRI.

Liu's research "has resulted in a major breakthrough ..." wrote Kuhl in the nomination. "The maximum operating temperature of permanent magnets has been increased dramatically from 300 C for conventional materials to 550 C for the new composition. This development is significantly important for the advanced power systems proposed by the U.S. Air Force for new technologies envisioned for the 21st century."

Kuhl added, "Dr. Liu's accomplishments have re-established the international reputation of UDRI's Magnetics Laboratory as a source of innovative and scientific excellence in rare earth permanent magnet materials."

These new magnets will be used in new advanced power and flight control systems for the Air Force and could greatly improve aircraft reliability and maintainability. Applications include not only military and civilian aircraft, but also cars, tanks and ships, Kuhl wrote.

Magnetic materials are widely used in countless devices, ranging from computers to motors, from satellites to rockets, from tiny sensors to huge MRI medical diagnostic devices. Generally speaking, better magnetic materials mean smaller, lighter and better electromagnetic devices.

- over -

OFFICE OF PUBLIC RELATIONS
300 College Park Dayton, Ohio 45469-1679
(937) 229-3241 (937) 229-3063 Fax
www.udayton.edu

Liu, fascinated by magnets at an early age, received a sponsorship from the Chinese government in 1980 to be a visiting scholar at the University of Dayton. In 1986, he was hired by UDRI as a research materials engineer to continue where other UD researchers had left off — searching for improvements in the second-generation samarium-cobalt magnetic compound.

At UD he studied with Herb Mildrum, Karl Strnat and Alden Ray, who, together, discovered compounds that produced more energy than any other permanent magnet — rare earth magnets. Because of their research, permanent magnets have been created that are now used in everyday objects from telephones to stereo speakers.

Also at the banquet, Andrea Snell, a technical secretary in the structural integrity division, will receive the 1999 award for outstanding support person and Ann G. Dombroskie, chief polymer synthesis technician in the nonmetallic materials division at Wright-Patterson Air Force Base, will receive the 1999 award for outstanding technician.

Since 1981, 22 UDRI researchers have won the Wohlleben-Hochwalt award, which commemorates Brother William Wohlleben, S.M., founder of UD's chemistry and chemical engineering departments, and UD alumnus Ted Hochwalt, a successful researcher for General Motors and the Monsanto Chemical Co. Wohlleben, a mentor of Hochwalt's, set Hochwalt up with a lab at UD in 1925 that sparked the invention of a new type of fire extinguisher and the beginning of the Thomas and Hochwalt Laboratories, which became the research labs of Monsanto Chemical Company.

Moved by Wohlleben and his support for research, Hochwalt created an endowment in 1981 to fund the Wohlleben-Hochwalt Award to recognize excellence in sponsored research at the University of Dayton.

The University of Dayton Research Institute, the region's leading research and development organization, employs more than 350 employees and conducts more than \$45 million in sponsored research annually.

- 30 -

For media interviews, contact **Sam Liu** at (937) 229-3272 or via e-mail at sliu@engr.udayton.edu and **Ed Kuhl** at (937) 656-9546 or via e-mail at kuhl@udri.udayton.edu.