



DR ALI ERDEMIR HONORED FOR FRICTION RESEARCH INNOVATION

Ali Erdemir (ET) has won the American Society of Mechanical Engineers' Innovative Research Award, recognizing his consistent and pioneering contributions to the science of tribology.

One of Erdemir's most recent developments was a "near-frictionless" carbon coating that has a coefficient of friction less than .001 when tested in a dry nitrogen atmosphere -- 20 times lower than the previous record holder. The new coating also has the highest wear resistance of any solid material. (See story below.)

For comparison, when tested under the same conditions, Teflon's coefficient of friction is around .04; steel has a coefficient of about 1.1. Oxygen and moisture increase the new material's friction coefficient.

Erdemir also received a 1999 Argonne Director's Award for this innovation, which he developed along with George Fenske (ET) and Osmon Eryilmaz, a visiting scientist from the Technical University of Istanbul, Turkey.

Erdemir is a materials scientist at Argonne. He conducts fundamental and applied research in tribology, surface science and engineering, lubrication and coatings. He discovered new solid lubricants and carbon coatings for metal-forming and engine applications.

He is associate editor of the journal Tribology Transactions, and chairs a technical committee for the Society of Tribologists and Lubrication Engineers (STLE). Erdemir is an associate member of ASME's Research Committee on Tribology. Among his many honors are two R&D 100 Awards from Research and Development magazine and a Discover magazine award and the STLE Edmond E. Bisson Award.

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