

U.S. Department of Energy
National Energy Technology Laboratory
Office of Public Affairs
P.O. Box 10940
Pittsburgh, PA 15236-0940



U.S. Department of Energy
National Energy Technology Laboratory
Office of Public Affairs
P.O. Box 880
Morgantown, WV 26507-0880

***NETL* REPORTS:**

News Media Contact:
Joe Culver, 304/285-4822 or 304/282-7381

For Immediate Release
September 23, 2008



Henry Pennline, a Research Group Leader in the Office of Research & Development at the U.S. Department of Energy's National Energy Technology Laboratory (NETL), is one of the inventors of palladium-based high temperature sorbents which have been named a winner of a 2008 R&D 100 Award to be presented to NETL this year. The sorbents capture mercury, arsenic, and selenium.

Pennline, a resident of Bethel Park, PA, received degrees in chemical engineering from Carnegie Mellon University in Pittsburgh, PA and Northwestern University in Evanston, IL.

The R&D 100 Awards are given yearly by R&D Magazine to the 100 most technologically significant new products in the marketplace over the past year. NETL technologies won two of the R&D 100 Awards in 2008.

Pennline's palladium-based formulations capture mercury, arsenic, and selenium in the integrated gasification-combined cycle (IGCC) process. These trace elements are captured at high temperatures, retaining the high thermal efficiency of IGCC plants compared to capture at low temperatures.

Recent issues of the journals *Industrial & Engineering Chemistry Research* and *Fuel* discuss these sorbents. NETL has issued a license to Johnson Matthey, a world leader in catalyst manufacture, for commercial development and application of the process for reducing the amount of mercury and other trace elements emitted by coal gasification and coal-fired power plants to meet increasingly strict clean-air regulations.

An independent judging panel and the editors of R&D Magazine vote on technologies in the running for the R&D 100 Awards, which will be presented at the R&D 100 Awards banquet in Chicago on October 16 this year.

NETL is one of the U.S. Department of Energy's national laboratories. NETL – "the ENERGY lab" – focuses on America's economic prosperity, which requires secure, reliable energy supplies at sustainable prices. Three overarching issues characterize the energy situation in the United States. They are energy affordability, supply security, and environmental quality. The Department of Energy's only government-owned, government-operated national lab, NETL is a research and technology center where these energy challenges converge and energy solutions emerge. NETL implements a broad spectrum of energy and environmental research and development programs through its own research staff and through funded research at other labs, universities, and industry that will return benefits for generations to come.

-NETL-