Promising new aqueous approach to carbon capture

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A new approach to carbon capture technology from DOE's Savannah River National Laboratory has the potential to open global markets for cost-effective industrial carbon dioxide (CO_2) capture and reuse.

The technology can capture CO_2 emissions from industry, and also use the gas to enhance oil collection in an environmentally safe manner. The new process overcomes the significant cost limitations of standard separation and concentration methods.

"This is a new aqueous approach to carbon capture that uses standard processes and components in a novel configuration," explained SRNL Principal Technical Advisor Gerald Blount. "The process is non-

hazardous, carbon-neutral, scalable and easier to implement than competing capture systems"

"The main component of the process is a mass transfer system that is suspended in a deep, water-filled sealed well. By using hydrostatic pressure and multiple efficient energy recovery processes, it is possible to capture and purify the CO_2 at a cost that opens the enhanced oil recovery market," said Blount. "This technology reduces the cost of post-combustion capture by more than 50 percent over most current and emerging technologies. It will help enhance oil recovery and simultaneously reduce global greenhouse gas emissions. It will also allow for the recovery of more oil from known reservoirs and promote energy security."

SRNL has signed an Exclusive Rights Agreement with Partnering in Innovation, Inc. of Orlando, Florida in support of the technology.

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