

# MO-SCI to manufacture SRNL's unique porous walled hollow glass microspheres

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A licensing agreement between the U.S. Department of Energy's Savannah River National Laboratory (SRNL) and specialty glass provider Mo-Sci Corporation will make SRNL's unique Porous Walled Hollow Glass Microspheres available for use in targeted drug delivery, hydrogen storage and other uses, including applications still being developed.

Hollow glass microspheres have been used for years in light-weight filler material, insulation, abrasives and other uses. What makes SRNL's patent-pending microspheres unique is the network of interconnected pores in the microsphere walls, which allow the tiny "microballoons" to be filled with, hold, and release gases and other materials. Each porous walled hollow glass microsphere is about 50 microns in diameter, about half the width of a human hair. Its walls, which are about 10,000 angstroms thick (an angstrom is one-tenth of one-billionth of a meter) feature pores that range from 100 to 300 angstroms, which allow gases to enter the tiny spheres and be stored or cycled on absorbents inside.

SRNL originally developed the unique microspheres as a solid-state storage method for hydrogen; they have been successfully demonstrated to store and release the gas.

Work since then has shown potential in other uses, including battery applications and medicine. An article by authors from the Medical College of Georgia and SRNL, which has been accepted for publication in the peer-reviewed journal [Nanomedicine: Nanotechnology, Biology](#)

*and Medicine*, discusses a possible application for the delivery of anti-cancer drugs. (Porous-wall hollow glass microspheres as novel potential nanocarriers for biomedical applications; Shuyi Li, Lynsa Nguyen, Hairong Xiong, Meiyao Wang, Tom C.-C. Hu, Jin-Xiong She, Steven M. Serkiz, George G. Wicks, William S. Dynan; article in press)

Under the license agreement, Mo-Sci will provide SRNL with a cost-effective supply of the microspheres to continue research and development of additional applications. It also provides for aggressive marketing by Mo-Sci to be the premier supplier for medical R&D applications.

Provided by Savannah River National Laboratory

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