

FOR IMMEDIATE RELEASE

Media Contact:

Michelle DiMaio
Tetramer Technologies LLC
864-646-6282, ext. 232
michelle.dimaio@tetramer.com

Tetramer Announces Award of \$1 Million in DOE Funding to Develop Technology to Remove Toxic Heavy Metals from Water

Pendleton, SC. (June 16, 2022) — Tetramer Technologies, LLC announced the receipt of a two-year \$1.15MM Department of Energy Phase II award for the development and commercialization of a filtration material that can remove heavy metal toxins from industrial waste streams before they are released into the environment.

As the use of electronics and other technologies that rely on heavy metals has increased, more heavy metal contaminants make their way into our environment. Even in small amounts, contaminants such as lead, mercury, cadmium, arsenic, and chromium can be dangerous to both aquatic life and humans. Current water treatment methods are not selective for these specific dangerous metals, lack operational efficiency, and require frequent replacement when they become overloaded. To overcome these issues, the Tetramer team worked under DOE Phase I funding in 2021 to develop new tailorable materials that can selectively adsorb and decontaminate toxic heavy metal ions from water.

After consulting with industrial and municipal customers to learn about their use of current filtration methods in the field, Tetramer's Phase II efforts will continue work on the new filtering materials to optimize performance. The optimized materials will be tested in pilot-scale against current industrial standards. It is expected that the performance of these new filtration materials will increase the energy efficiency of the heavy metal ion capture process, increase the lifetimes of the filters, and allow for more cost-effective water remediation.

Tetramer Research Scientist, Heather Lange: "This work can revolutionize the wastewater treatment industry. These materials can be used in homes specifically for lead remediation to give families clean water or be used on a larger scale to clean up e-waste from the processing and recycling of electronics (batteries, processors, etc.). With the global market for environmental remediation technologies expected to reach ~\$160 B in the next few years, there is a clear need for this technology."

Tetramer Principal Investigator, Dr. Stephen Hudson: "We're really excited to have the opportunity to advance this technology. During Phase I, the R&D team applied a lot of innovative ideas and approaches to produce a final material with significant promise for meeting the needs of the Department of Energy. With the team bringing that same level of creativity, critical thinking, and energy into the Phase II program, we expect rapid development of our high selectivity adsorbent for commercial use."

Tetramer CEO, Dr. Jeffrey DiMaio: “Removing contaminants from drinking water is a major problem worldwide. Tetramer’s efforts to produce filter media that are selective to heavy metals will add one more tool for producing clean water and can aid in improving clean water access to millions of people. While our initial results in the lab were encouraging, there is still more work to do. The Phase II DOE funding will allow our scientists to do what they do best . . . get new technology out of the lab and into the marketplace where it can make a difference for the world around us.”



Located near Clemson, SC, Tetramer is an advanced materials company dedicated to the development of market-driven materials and transitioning those materials from the lab to the market or battlefield. With extensive R&D and manufacturing capabilities, Tetramer serves as both a research partner and a supplier of proprietary custom materials. We also provide analytical services to support manufacturers in solving their materials-related challenges.

Our team includes scientists and engineers with backgrounds in organic, physical, polymer, and analytical chemistry, ceramic engineering, materials science, and chemical engineering. With expertise in materials design, synthesis, analytical characterization, and scale-up, we provide customized support to our partners across every stage of innovation from molecule to manufacturing. tetramer.com



Department of Energy award page: <https://science.osti.gov/sbir/Awards> (This award is under 2022 Phase II, Release I Awards)

Novel Hybrid Porous Materials for the Selective Capture of Contaminants and/or Valuable Metal Ions from Water, \$1,150,000



TETRAMER TECHNOLOGIES, LLC
657 S. Mechanic St. | Pendleton, SC 29670 | (864) 646-6282 | Tetramer.com