BNNano, Inc. Completes Development of System that Removes and Destroys PFAS

BNNano's patented materials technology combined with UV light, captures and destroys over 99.99% of PFAS contaminants in a simple and low-cost, method.

BURLINGTON, NORTH CAROLINA, USA, May 23, 2023 /EINPresswire.com/ -- BNNano, Inc. announces a new process to remove and destroy PFAS from drinking water. The process utilizes BNNano's unique and patented materials technology combined with ultraviolet light and has been demonstrated to capture and destroy over 99.99% of PFAS contaminants in a simple and low-cost method that has no harmful byproducts nor additional volumes of waste that need to be disposed of.

BNNano is striving to make the world a better place through material science, and we believe there is no better application than using BNNano's materials technology to provide safe and clean water.

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>
> *Steve Wilcenski - CEO*

Per-and polyfluoroalkyl substances (PFAS), also known as "forever chemicals," are manmade chemicals used in industry and consumer products worldwide since the 1940s. They have been used to create nonstick cookware, water-repellent clothing, stain resistant fabrics and carpets, in some cosmetics and firefighting foams, and in products that resist grease, water, and oil.

PFAS do not break down, are nearly everywhere on the planet, and are found in our air, water, soil, and even our blood. PFAS have gone unregulated for almost three quarters of a century. They are only now being understood as a probable long-term

danger to human life and health.

Definitive studies show that exposure to PFAS leads to “adverse health outcomes” including decreased fertility, developmental delays in children, increased cancer risk, reduced immunology, inability to properly regulate hormones, increased levels of obesity, and more.

83% of American waterways sampled have PFAS. 133 million people are exposed to PFAS through their water supplies and over 57,000 PFAS contaminated sites exist in the United States alone (nearly 50,000 industrial facilities, 4,200 wastewater treatment plants, nearly 4,000 military sites, and over 500 airports).

Significant regulation is emerging. In March 2023, the Environmental Protection Agency (EPA) announced the proposed National Primary Drinking Water Regulation (NPDWR) for six types of PFAS, to create legally enforceable Maximum Contaminant Levels (MCLs) in drinking water. This will require public water systems to monitor and notify consumers of PFAS levels in their water, and, most importantly, require the reduction of PFAS levels in drinking water if more than the MCLs of 4 parts per trillion.

Current methods of PFAS removal from water are expensive, not effective enough, and require large volumes of hazardous waste incineration. What if we could remove PFAS compounds from water and destroy the PFAS using technologies that are efficient, without releasing the partially reacted and the byproducts of incineration to the air?

Jason Taylor, BNNano’s CTO states “BNNano’s Crystal Photo Catalytic Destruction (PCD) System uses our patented nano-crystalline materials technology to remove and destroy PFAS in a proven, economical, and efficient way. The Crystal PCD Process has been demonstrated to remove and destroy more than 99.99% of PFAS in place which means there is no need for filter media replacement and removal. This results in significantly smaller size systems with virtually no waste stream.”

“This is not a capability that is limited to our own laboratories and experiments. These results are confirmed by the US Navy and by laboratories at multiple US universities”, says BNNano’s CEO, Steve Wilcenski.

BNNano has a solution to the Forever Chemical Problem, not a band-aid that removes these harmful chemicals from water only to collect them in other materials that still need to be disposed of. The BNNano solution removes these chemicals from water, and then breaks them down into simple non-toxic and non-harmful components.

To learn more about the PFAS solution and how materials science will change the world, contact BNNano, Inc.

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