Homerun Resources Inc. One-Step Laser Process Produces Ultra-Pure 99.999% Silica from Raw Sand

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Vancouver, June 19, 2024 - Homerun Resources Inc. (TSXV: HMR) (OTCQB: HMRFF) ("Homerun" or the "Company") is pleased to announce that researchers at UC Davis in collaboration with Homerun have developed a femtosecond thermal laser processing method to purify raw silica sand to a level of 99.999% purity. The single step thermal method uses a femtosecond laser that involves subtle structural and optical phenomena controlled by multiple process parameters. Skillful variation of these conditions produces various topographical features (such as cones and ripples) and microstructural changes (including recombination, oxidation, and amorphization) which depend on specific laser parameters like number and intensity of pulses. The prospect of further adaptation and development of the treatment variables is a vast area of research and major proprietary product development theme.

Subhash H. Risbud, Distinguished Professor, Department of Materials Science and Engineering at the University of California, Davis, stated, "These very exciting results from the current research work with Homerun, have revealed for the first time how a single step laser process can convert raw impure sand samples in as little as two hours to a silica purity level of 99.999%. The thermal laser process used not only avoids the use of hazardous chemicals but also eliminates the need for energy-intensive machinery typically used in mechanical and chemical purification. This laser process is notable for its versatility as the production demands of new semiconductor chip substrates transition from conventional silicon to SiC and other wider bandgap materials. The foundation for these technologies-on-the-horizon are economically produced powders of ultra-pure silica convertible to Silicon, Silicon carbide, Si-nitride and Oxynitrides and Oxycarbides. The broad range of applications of these new materials will make a dramatic impact on the business world of products based on electronic and photonic chips, battery anodes, solar cells, glass and high temperature refractories for steel and metal alloys."

"This purification process used a raw silica sand sample from our Belmonte Project, in Bahia, Brazil. We did not use any chemical reagents and therefore we generate no polluting waste. If the energy source is renewable, then this is a completely green process. This all adds incredible value in silica materials applications where the product requires high levels of purity. These techniques, after the necessary improvements, can create an opportunity to produce special glass used in medical, pharmaceutical and other industries and furthermore, high purity silica-based materials used in electronics, photonics and other similar technology and energy applications," stated Dr. Mauro Cesar Terence, CTO of Homerun.

These testing results have not been independently verified and will be the subject of a Homerun Patent Application, which is in process.

About Homerun Resources (https://homerunresources.com/)

Homerun Resources is focused on the development of its business within the critical and energy materials sectors. With a steadfast commitment to operational excellence, sustainability, and building shareholder value, Homerun Resources is poised to make a lasting impact in these industries.

On behalf of the Board of Directors of
Homerun Resources Inc.

"Brian Leeners"

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