

Biosilico®

Bio Nanoporous Silica
from Rice Husk

Better products. Better prices. Better life.





Corporate History

Biosilico represents a brand of Bio Nanoporous Silica manufactured by BSB Nanotechnology JSC that is derived from rice husk (RH) and is the world first commercially produced Bio Nanoporous Silica. The vision of the Biosilico inventor and owner is to become a global producer and developer of premium industrial applications of RH-derived Nano Silica. The production of Bio Nanoporous Silica from a renewable energy source offers strong competitive advantages in comparison with conventional methods of producing silica from sand & quartz.

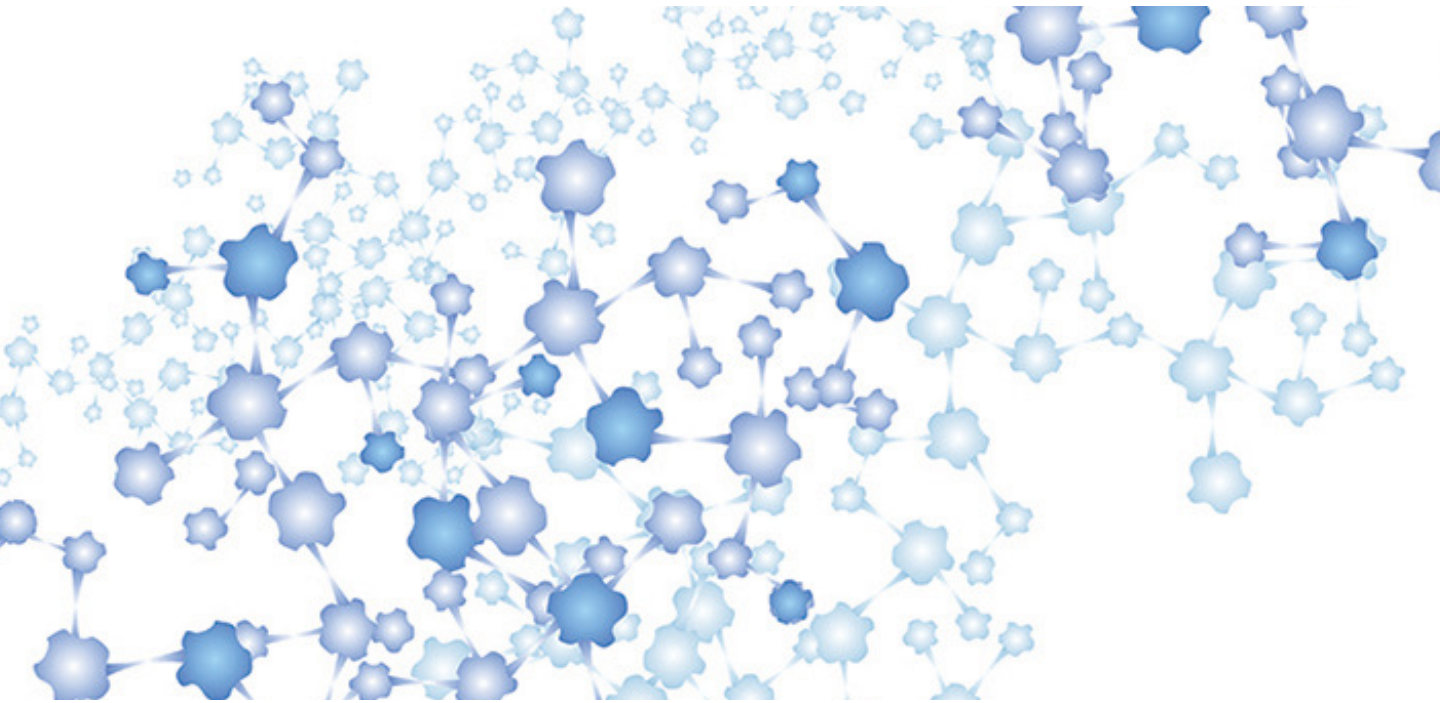
Key Milestones

- April 2017: Investment License in SHTP
- November 2018: Pilot Plant Completion
- December 2018: First Commercial Order
- February 2018: Nano Lab Completion
- March 2020: Plant Upgrade Completion
- Name change from BSB Development & Investment Co. Ltd to BSB Nanotechnology Joint Stock Company

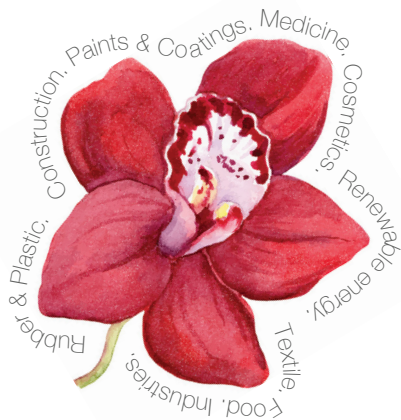
Senior Management Team

- Hung Nguyen Viet, PhD, Founder & CEO
- Christopher Do, Chief Commercial Officer & Director





Bio Nanoporous Silica



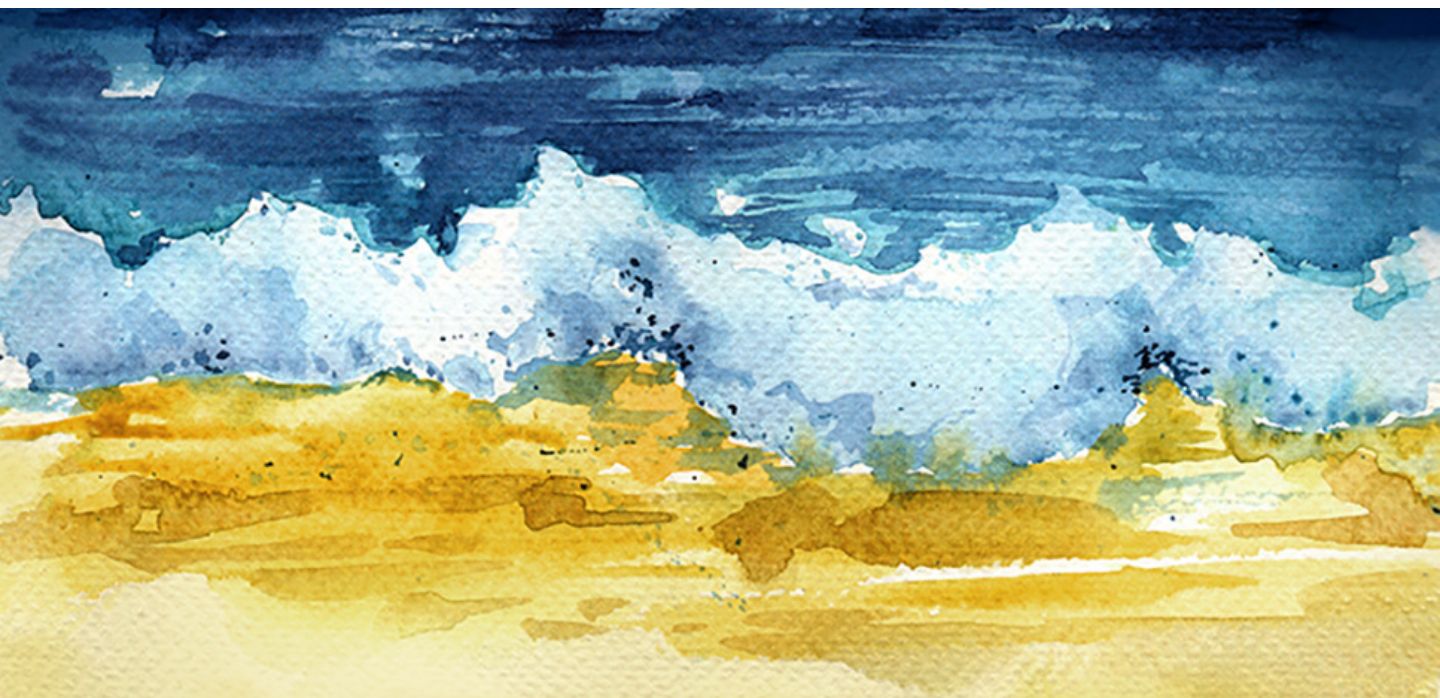
Nanosilica or Silicon Dioxide nanoparticles (SiO_2) is a marriage between nanotechnology and one of the most widely used and manufactured materials, silica.

Silica in its nano size has a range of advantages: large specific surface area and energy, strong surface absorption, high chemical purity and good dispersion. Due to its unique properties, nanosilica has established roles in the fields of physics, chemistry and biology.

Thus nanosilica is applicable to a large and diverse range of industries, from construction to rubber and plastic additives, paints and coatings, medicine and cosmetics, and more. Nanosilica is a ubiquitous constituent in materials which are a part of our daily life.

BSB Nanotech is the world first producer of Bio-based Nanoporous Silica from rice husk on an industrial scale with the Biosilico Brand.





The Sand Crisis & Solution

50 billion
Tons/Year

Growing demands for nanosilica, in the face of diminishing virgin resources and the increase of excess waste, call for more sustainable production practices.

Sand is the third most used resource after air and water, and is a prime constituent in silica production.

50 billion tons of sand is mined per annum leading to devastating ecological and sociological consequences.

The Solution for the above mentioned challenges was found by BSB Nanotech's scientists with the use of rice husk ash instead of sand or quartz.





From Ash to Cash



Rice is the second most consumed food, globally. Rice husk, which is the by-product of rice production, can be used as fuel in energy production. However, the result is rice husk ash, which is a waste.

The use of rice husk in the production of Bio-based nanoporous silica is a revolutionary technique in which waste is utilized to create a nanomaterial of high purity and value.

Rice husk ash is rich in amorphous silica, making it a highly customizable and sustainable source of silica. This conversion from ASH to CASH is an initiative in building a circular economy.

*Annual Renewable Rice Husk Source in Vietnam





The Bio-Silica Production Pioneer



Asian countries are predominantly rice producers with Vietnam being one of the top five in the world. The extraction of silica from this renewable resource has been endeavored by many scientists and researchers.

Leading this scientific race, BSB Nanotech is the first company to successfully produce rice husk based nanoporous silica on a commercial scale in the world.

Strategically located along the waterways of the Mekong Delta in Vietnam, BSB Nanotech has brought together the abundant access to rice husk, state-of-the-art technologies and skilled professionals to develop a cost effective nanoporous silica in its purest form.

After four years of extensive research, Biosilico was formulated to perfection, harnessing the highest amorphous silica content from rice husk and customised for various applications.





Applications of Biosilico



Biosilico, as a bio-based nanoporous and amorphous silica or easily known as rice husk silica, is derived from rice husk ash and processed to an ultrafine and pure quality silicon dioxide. **Biosilico is also synthesised to offer hydrophobicity, superhydrophobicity, aerogel and a range of valuable nanocomposites.**

While we have cemented our footprint in the nanotechnology world with the commercialization of Biosilico in the **Paint and Coatings** industry, our highly innovative team continues to roll out new applications for this versatile and customisable bio nanosilica in various industries such as:

- **Rubber & Plastics**
- **Personal Care**
- **Cosmetics**
- **Agriculture and Aquaculture**



ARE YOU
DRIVING
CHANGE

OR ARE YOU
BEING **DRIVEN**
BY IT

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