

Independent Analysis Confirms HPQ's Pilot-Scale Fumed Silica Production

Baghouse-collected fumed silica yield is outperforming initial projections at this pilot stage.

Montreal, Canada, May 21st, 2025 — [HPQ Silicon Inc.](#) (“HPQ” or the “Company”) ([TSX-V: HPQ](#), [OTCQB: HPQFF](#), [FRA: O08](#)), a technology company developing next-generation processes for advanced material manufacturing, is pleased to inform shareholders that it has received an independent analysis confirming fumed silica production. The analysis confirms Fumed Silica was produced by **HPQ Silica Polvere Inc.**^[1] (“**HSPi**”)’s proprietary **Fumed Silica Reactor (FSR) Pilot Plant** during its four-batch Phase One test.

Further to the Company’s [May 15, 2025, release](#), HSPi’s technology supplier, [PyroGenesis Inc.](#) (TSX: [PYR](#), OTCQX: [PYRGE](#), FRA: [8PY1](#)) (“PyroGenesis”), has informed HPQ that the **independent analysis of the material produced and collected in the baghouse** supports the following conclusions:

- The white powder material recovered is, in fact, **Fumed Silica**,
- The **impurities** observed in the recovered material were **consistent with expectations** and are present in a form that makes them **readily removable**.
- The production yield was greater than anticipated at this stage, and this bodes well for the ultimate economics of the project.
- A **side-by-side comparison of Transmission Electron Microscopy (TEM) images** shows a **high degree of similarity** between the microstructures and morphological complexity of HSPi’s material produced at **lab scale, pilot scale**, and that of **commercial mid- to high-surface-area fumed silica grades**.

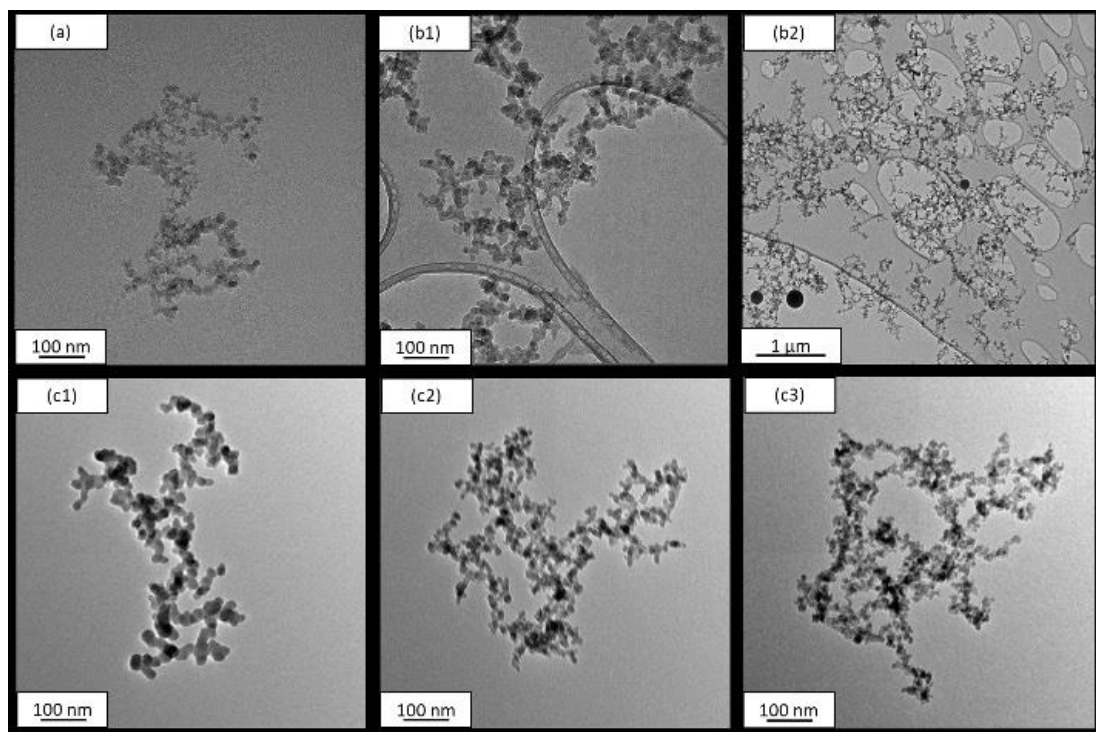


Figure 1. TEM images of Fumed Silica nanoparticles, (a) HSPi Lab-scale Sample of material collected inside the reactor, (b1 – b2) HSPi Pilot scale Samples collected from the Baghouse and (C1) Evonik commercial grades A90, (c2) Evonik commercial grade A150, and (c3) Evonik commercial grade A200 ^[2].

“These results significantly strengthen the commercial outlook for our Fumed Silica Reactor (FSR) technology,” said Bernard Tourillon, President & CEO of HPQ Silicon and HPQ Silica. “We’ve confirmed the successful recovery of fumed silica from the baghouse section of our pilot plant and also validated our proprietary FSR process reliably—even with a twentyfold increase in scale. Achieving this level of consistency and material quality so early in the pilot phase demonstrates the strength of our approach to de-risking commercialization. With these technical milestones achieved, we’re now ready to advance to the next stage—distributing samples to qualified third parties under NDA and LOI for independent evaluation and qualification.”

Next Steps

The remaining phases of the pilot plant program will focus on two primary objectives:

1. **Enhancing product-grade purity to determine market fit better**, by:
 - a. improving process control and parameter stability,
 - b. achieving higher product surface areas through optimized powder morphology and viscosity
2. **Reaching the targeted production capacity of 50 tonnes per year (TPY) by:**
 - a. increasing silica conversion efficiency and overall yield

In addition to these priorities, the overarching goal of the ongoing testing is to generate the critical data needed to support the development of scale-up plans and equipment modifications. This will be essential to making the system commercially viable following a further twentyfold scale increase beyond the current pilot plant capacity.

REFERENCE SOURCES

- [1] A wholly owned subsidiary of HPQ Silicon Inc., when technology supplier PyroGenesis announced its intention to exercise its option to acquire a 50% stake in HSPI in May 2024.
- [2] TEM images of **Evonik’s commercial fumed silica material** were obtained from the article: [*“Quantification of branching in fumed silica”*](#) by Andrew Mulderig, Gregory Beaucage*, Karsten Vogt, Hanqiu Jiang, and Vikram Kuppa, published in the *Journal of Aerosol Science*. *These reference images were used for comparative analysis alongside lab- and pilot-scale samples produced by HSPI.*

About HPQ Silicon

[HPQ Silicon Inc.](#) ([TSX-V: HPQ](#)) is a Quebec-based TSX Venture Exchange Industrial Issuer.

HPQ is developing new green processes, with the support of world-class technology partners [PyroGenesis Canada Inc.](#) and [NOVACIUM SAS](#), crucial to making the critical materials needed to reach net zero emissions.

HPQ activities are centred around the following five (5) pillars:

- 1) Becoming a green, low-cost (Capex and Opex) manufacturer of Fumed Silica using the **FUMED SILICA REACTOR**, a proprietary technology owned by HPQ Silica Polvere Inc., being developed for HSPI by PyroGenesis.
- 2) Becoming a producer of silicon-based anode materials for battery applications with the assistance of NOVACIUM SAS.



- 3) HPQ SILICON affiliate NOVACIUM SAS is developing a low-carbon, chemical-based on-demand and high-pressure autonomous hydrogen production system.
- 4) HPQ SILICON affiliate NOVACIUM SAS is developing a new process to transform black aluminum dross into a valuable resource.
- 5) Becoming a zero-CO₂ low-cost (Capex and Opex) producer of High Purity Silicon (2N+ to 4N) using our **PUREVAP™ “Quartz Reduction Reactors” (QRR)**, a proprietary technology owned by HPQ being developed for HPQ by PyroGenesis.

For more information, please visit [HPQ Silicon web site](#).

About PyroGenesis Inc.

PyroGenesis, a high-tech company, is a proud leader in the design, development, manufacture and commercialization of advanced plasma processes and sustainable solutions which reduce greenhouse gases (GHG) and are economically attractive alternatives to conventional “dirty” processes. PyroGenesis has created proprietary, patented and advanced plasma technologies that are being vetted and adopted by multiple multibillion dollar industry leaders in four massive markets: iron ore pelletization, aluminum, waste management, and additive manufacturing. With a team of experienced engineers, scientists and technicians working out of its Montreal office, and its 3,800 m² and 2,940 m² manufacturing facilities, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. The operations are ISO 9001:2015 and AS9100D certified, having been ISO certified since 1997. PyroGenesis’ shares are publicly traded on the TSX in Canada (TSX: PYR), the OTCQX in the US (OTCQX: PYRGF), and the Frankfurt Stock Exchange in Germany (FRA: 8PY). www.pyrogenesis.com

Cautionary Note Regarding Forward-Looking Information

This press release contains “forward-looking information” and “forward-looking statements” within the meaning of applicable securities legislation (collectively, “forward-looking statements”), including, but not limited to, statements relating to future financial or operating events or future performance of the Company, and reflecting management’s expectations and assumptions regarding the Company’s growth, results, performance, and business prospects and opportunities. Such forward-looking statements reflect management’s current beliefs and are based on information currently available to it. In some cases, forward-looking statements can be identified by words such as “aim”, “anticipate”, “aspire”, “attempt”, “believe”, “budget”, “could”, “estimate”, “expect”, “forecast”, “intend”, “may”, “mission”, “plan”, “potential”, “predict”, “progress”, “outlook”, “schedule”, “should”, “study”, “target”, “will”, “would” or the negative of these terms or other similar expressions concerning matters that are not historical facts.

In particular, forward-looking statements include, but are not limited to, the Company’s ability to develop its low-cost (Capex and Opex) manufacturing of Fumed Silica using its Fumed Silica Reactor (FSR) and enter in commercial production within the timeline, to provide high-performing and reliable advanced materials while promoting sustainability and supply chain traceability, and to position its fumed silica operation in the capital markets, the expected results of the initiatives described in this press release, and those statements which are discussed under the “About HPQ Silicon” paragraph and elsewhere in the press release which essentially describe the Company’s outlook and objectives.

Additionally, the forward-looking statements include, but are not limited to, the Company’s future results, the intended pilot plant testing and timeline of the Fumed Silica Reactor commercial scale up, the economic performance and product development efforts, as well as the Company’s expected achievement of milestones,



including the ability to conclude an offtake agreement and obtain sufficient financing for the future development on favorable terms for the Company.

Further, these forward-looking statements include the Company's ability to achieve its Fumed Silica strategy and its intended results, market trends, the consumer demand for materials, the Company's competitive advantages, macroeconomic conditions, the impact of applicable laws and regulations, and any information as to future plans and outlook for the Company are or involve forward-looking statements.

Forward-looking statements are based on estimates and assumptions that, while considered reasonable by the Company at the time of such statements, are inherently subject to significant business, economic, and competitive uncertainties and contingencies. These estimates and assumptions are not guarantees of future performance and may prove incorrect. These statements rely on various factors, including current technological trends, safe and effective operations, timely delivery and installation of future production equipment at estimated prices, assumed Fumed Silica sale prices, future exchange and interest rates, political and regulatory stability, commodity prices and production costs, the receipt of necessary approvals, licenses, and permits on favorable terms, sustained labor stability, financial and capital market conditions, availability of critical supplies and equipment, tax assumptions, CAPEX and OPEX estimates, economic and operational projections, local infrastructure, and overall business prospects. Forward-looking statements are also subject to risks, uncertainties, and other factors that may cause actual results to differ materially, including the outcome of development, engineering, and planning activities, market conditions, competition, pricing pressures, risks inherent to mining exploration and development, the commercial viability of the Company's technology, project timelines, business continuity challenges, geopolitical instability, and other industry risks. Additionally, there can be no assurance that the conditions precedent of offtake agreements, product qualification requirements, and commercial operations will be met, nor that the Company will fulfill the expectations of financing partners and certifying bodies.

Forward-looking statements are subject to known or unknown risks and uncertainties that may cause actual results to differ materially from those anticipated or implied in the forward-looking statements. Risk factors that could cause actual results or events to differ materially from current expectations include, among others, delays in the scheduled delivery times of the equipment, the ability of the Company to successfully implement its strategic initiatives and whether such strategic initiatives will yield the expected benefits, the availability of financing or financing on favorable terms for the Company, the dependence on commodity prices, the impact of inflation on costs, the risks of obtaining the necessary permits, the operating performance of the Company's assets and businesses, competitive factors in the graphite mining and production industry, changes in laws and regulations affecting the Company's businesses, political and social acceptability risk, environmental regulation risk, currency and exchange rate risk, technological developments, as well as earnings, capital expenditure, cash flow and capital structure risks and general business risks. A further description of risks and uncertainties can be found in HPQ's Annual Information Form dated March 21, 2025, including in the section thereof captioned "Risk Factors", which is available on SEDAR+ at www.sedarplus.ca Unpredictable or unknown factors not discussed in this Cautionary Note could also have material adverse effects on forward-looking statements.

Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that may cause results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Forward-looking statements are provided for the purpose of providing information about management's expectations and plans relating to the future. The Company disclaims any intention or obligation to update or revise any forward-looking statements or to explain any material difference between subsequent actual events and such forward-looking statements, except to the extent required by applicable law.

Market and industry data presented throughout this press release was obtained from third-party sources and industry reports, publications, websites and other publicly available information, as well as industry and other data prepared by the Company or on the behalf of the Company based on the Company's knowledge of the markets in



which the Company operates, including information provided by suppliers, partners, customers and other industry participants.

The Company believes that the market and economic data presented throughout this press release is accurate as of the date of publication and, with respect to data prepared by the Company or on behalf of the Company, that estimates and assumptions are currently appropriate and reasonable, but there can be no assurance as to the accuracy or completeness thereof. The accuracy and completeness of the market and economic data presented throughout this press release are not guaranteed and the Company does not make any representation as to the accuracy of such data.

Actual outcomes may vary materially from those forecast in such reports or publications, and the prospect for material variation can be expected to increase as the length of the forecast period increases. Although the Company believes it to be reliable as of the date of publication, the Company has not independently verified any of the data from third-party sources referred to in this press release, analyzed or verified the underlying studies or surveys relied upon or referred to by such sources, or ascertained the underlying market, economic and other assumptions relied upon by such sources. Market and economic data are subject to variations and cannot be verified due to limits on the availability and reliability of data inputs, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey.

Further information regarding the Company is available in the SEDAR+ database (www.sedarplus.ca), and on the Company's website at: www.hpqsilicon.com

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

This News Release is available on the company's [CEO Verified Discussion Forum](#), a moderated social media platform that enables civilized discussion and Q&A between Management and Shareholders.

Source: HPQ Silicon Inc.

For further information contact:

Bernard J. Tourillon, Chairman, President, and CEO
Tel +1 (514) 846-3271
Email: Info@hpqsilicon.com