

# Greg Fenton Discusses Zentek's 2024 Progress and Exclusive Aptamer Technology Rights

written by InvestorNews | February 21, 2024

In a detailed interview with Tracy Weslosky, Greg Fenton, CEO and Director of [Zentek Ltd.](#) (NASDAQ: ZTEK | TSXV: ZEN), shared insights into the company's strategic progress and emerging opportunities, particularly emphasizing its work with aptamer technology. With an exclusive global license for innovative Aptamer-based platform technology developed by McMaster University, Zentek is pioneering advances in both diagnostic and therapeutic applications, underscoring its dedication to healthcare innovation. The company has made notable breakthroughs in COVID-19 therapeutics with its [C19HBA aptamer](#), showing significant promise in preclinical trials by outperforming leading monoclonal antibodies. This success has paved the way for Phase 1 clinical trials for COVID-19 and exploration into other areas such as oncology, immunology, and neurology.

Fenton highlighted the positive reception from major pharmaceutical companies, reflecting a broad industry interest in Zentek's aptamer technology. Additionally, Zentek's ZenGUARD™ technology platform, known for its 99-percent anti-microbial activity, has been instrumental in enhancing the bacterial and viral filtration efficiency of surgical masks and HVAC systems. A [recent study](#) on ZenGUARD™ Enhanced Air Filters revealed its potential to offer significant energy, emission, and cost savings for commercial buildings, showcasing a scalable solution for improving indoor air quality and addressing climate change.

Throughout the conversation, Fenton articulated Zentek's

ambitious plans for partnerships and expansion, leveraging the favorable market conditions to boost the company's visibility and impact. His vision for Zentek includes strategic partnerships, leveraging its proprietary technology, and a commitment to revolutionizing the approach to managing infectious diseases and enhancing environmental sustainability.

To access the complete interview, [click here](#)

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## About Zentek Ltd.

Zentek is an ISO 13485:2016 certified intellectual property technology company focused on the research, development and commercialization of novel products seeking to give the Company's commercial partners a competitive advantage by making their products better, safer, and greener.

Zentek's patented technology platform ZenGUARD™, is shown to have 99-per-cent anti-microbial activity and to significantly increase the bacterial and viral filtration efficiency of both surgical masks and HVAC (heating, ventilation, and air conditioning) systems. Zentek's ZenGUARD™ production facility is located in Guelph, Ontario.

Zentek, through its wholly-owned subsidiary Triera Biosciences Ltd., has a global exclusive license to the Aptamer-based platform technology developed by McMaster University, which is being jointly developed by Zentek and McMaster for both the diagnostic and therapeutic markets.

The Company is not making any express or implied claims that its aptamer technology has the ability to eliminate, cure or contain COVID-19 (or the SARS-CoV-2 coronavirus) at this time.

To learn more about Zentek Ltd., [click here](#)

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## **Greg Fenton on how Zentek's Advancement in Aptamer Technology is Revolutionizing Biotech**

written by InvestorNews | February 21, 2024

In an interview with host Tracy Weslosky from InvestorNews, [Zentek Ltd.](#)'s (NASDAQ: ZTEK | TSXV: ZEN) CEO Greg Fenton began their discussion on the substantial improvement in the aptamer platform's binding affinity and yield as announced in their [November 15th, 2023, release](#). Greg explains how the new platform

may reduce the rapid clearance from the body, the researchers have increased the aptamer platform production to a 95% yield, which substantially reduces costs and positions them as potential replacements for monoclonal antibodies, offering efficiency and cost benefits.

Fenton highlights the rapid production capability of aptamers, taking only 6-8 weeks compared to longer durations for vaccines. Aptamers, composed of DNA sequences, are deemed safe and can be synthesized quickly for specific targets. This speed and cost-effectiveness give aptamers a competitive edge in the market, especially against antibody therapies.

He also discusses Zentek's collaboration with McMaster University in medical research, noting that the aptamer platform is still in early stages but shows great potential. He emphasizes the importance of safety, dosing ranges, and further research to establish the platform's market value.

Additionally, Zentek's recent developments include ZenGUARD™ enhanced air filters, which offer significant cost savings in healthcare and energy efficiency. The filters reduce absenteeism and energy costs by requiring fewer air exchanges, representing economic benefits for building owners, businesses, and public healthcare systems.

Fenton also remarks on Zentek's efficient use of funds, highlighting that their current stage of development would typically cost hundreds of millions of dollars, but they achieved it with a fraction of that amount. This efficiency is attributed to their partnership with McMaster University.

Finally, the addition of John Snisarenko, a former pharma industry executive, to Zentek's board is seen as a strategic move to enhance the company's outreach and partnership engagement in the pharmaceutical industry. His extensive

pharmaceutical experience and connections are expected to be valuable for Zentek's future development and commercialization strategy.

The news release from November 15, 2023, corroborates these developments, noting the substantial improvement in the aptamer platform's binding affinity and yield. The release also highlights the potential for Zentek's aptamers in precision therapy, competing with monoclonal antibodies, and the significant cost and timeline advantages inherent to their platform technology. Zentek's CEO comments on the potential of the aptamer platform across various therapeutic areas and the company's shift towards commercialization and partnership strategies. To access the complete interview, [click here](#)

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## **Revolutionary Aptamer-Based Pathogen Technology from Zentek Unveils Rapid and Inexpensive Pathogen Detection**



# Capabilities

written by InvestorNews | February 21, 2024

A Canadian company and their laboratory partner have developed a low cost simple and much faster way to better detect pathogens causing infections in our bodies. In recent weeks the team found a way to dramatically improve the effectiveness of this technology, which is really a medical breakthrough you won't likely see on the news, at least not just yet. Their technology uses 'aptamer' based diagnostics from a simple saliva test.

## What is an aptamer?

Aptamers are short sequences of artificial DNA, RNA, XNA, or peptide that bind a specific target molecule or family of target molecules. In the case of today's company, they are using single-stranded DNA molecules capable of binding specifically with target proteins on the surface of pathogens such as SARS-CoV-2 to detect if a person has COVID-19 or potentially other pathogens.

## Zentek Ltd.

[Zentek Ltd.](#) (NASDAQ: ZTEK | TSXV: ZEN) ("Zentek") is a certified graphene technology company focused on the research, development and commercialization of graphene-based novel products, typically using nanotechnology.

Zentek's aptamer-enabled [Pathogen Detection Technology](#) is a low-cost, rapid, saliva testing, scalable technology initially to be used for COVID-19 testing, but can be adapted to detect other pathogens. Zentek has [exclusive worldwide rights to commercialize](#) their COVID-19 antigen testing aptamer-enabled technology. The technology is being developed by Zentek and

their technology partners at McMaster University Li Lab, led by Dr. Yingfu Li.

Zentek's collaboration with McMaster University extends beyond its exclusive license and now encompasses all aptamer and DNAzyme uses, including diagnostics, therapeutics, and neutralization agents, not limited solely to SARS-CoV-2 applications.

## **Aptamer technology breakthrough, up to 250 times increase**

Zentek recently announced a breakthrough in the team's aptamer-enabled technology, [stating](#):

*"Dr. Yingfu Li and his team at the Li Lab have developed a novel aptamer technology that increases the binding affinity of aptamers by up to 250 times. The increased binding affinity enhances the limits of detection for aptamer-based diagnostics. In addition, the enhanced binding affinity may lead to the successful adaptation of these same aptamers for new therapeutic and prophylactic treatments. Binding affinity is a key metric in both diagnostic and therapeutic applications."*

Understandably most people will not understand the implications of what is going on here, so I will spell it out. Effective Aptamer-based pathogen technology opens up a whole new potential to 'rapidly and cheaply' detect pathogens. In time this can be expanded to potentially detect other markers of disease in the body. Furthermore, it has the potential to more effectively treat diseases. But that's the next chapter, best discussed another time and assuming Zentek continues down that pathway.

Dr. Yingfu Li recently [stated](#):

*“The novel aptamer technology platform developed in my lab at McMaster University is demonstrating a robust increase in binding affinity to every aptamer we have tried so far. Combining this technology with aptamers that have high specificity **has created a very exciting potential for new therapeutics and diagnostics.** The enhanced binding affinity from these new aptamers has led to **consistent and successful in vitro testing** in my lab and the lab of Dr. Leyla Soleymani for diagnostic applications, and more recently, with in vivo testing in the lab of Dr. Matthew Miller for therapeutic applications. These early results are very exciting, and we look forward to future work that applies the technology to other potential therapeutic and diagnostic targets.”*

*Note: Bold emphasis by the author.*

## **The advantages of Zentek’s aptamer technology for detecting Covid-19 or potentially other pathogens**



### **The advantages of Zentek's aptamer technology are:**

- **Simplicity & Comfort** – uses saliva rather than a nasal swab reducing aversion to testing and risk of error in the sampling process
- **Accuracy** – electrochemical sensing technology rather than lateral flow allows for sensitivity equivalent to a 36 count RT PCR
- **Mobility** – simple hardware lends itself to easy transport and high throughput, point-of-care testing
- **Speed** – results in under 10 minutes
- **Low Cost** – aptamers can be developed more quickly and cost effectively compared to antibodies allowing us to be highly competitive compared to currently available rapid detection tests now and into the future
- **Scalability** – new aptamers can be developed to detect numerous other pathogens giving our technology the ability to enhance safety and empower businesses, governments and our healthcare providers well beyond COVID

Source: [Zentek website](#)

The potential for aptamer-based disease detection is truly

remarkable. There is also potential one day that aptamers can be used to much more precisely target disease treatment or prevention in the body.

Greg Fenton, CEO of Zentek [commented](#):

*“Initially, we were working to develop aptamers for diagnostic purposes.....Dr Li’s initial breakthrough was important for diagnostic purposes, and now early testing points to the potential to create new therapeutics and prophylactics. I can’t emphasize enough how unexpected these results were to our team and how significant this development is if it is confirmed through future testing.”*

For more details, investors can watch the recent Zentek CEO interview [here](#).

Zentek is now at the stage of commercializing their aptamer-enabled technology [stating](#) that they are “commercial prototyping readiness, and working with [Halteres Associates](#), a world-leading bioscience consultancy, to assist us in our commercialization process.”

**Zentek’s product pipeline**

# Graphene Pipeline: What We're Working On



We know graphene: a key building block for a healthier and more sustainable future

Source: [Zentek company presentation](#)

## Closing remarks

There is no more exciting company than Zentek. Apart from their aptamer technology Zentek has many other applications for their graphene nanotechnology including: [ZENGuard™](#) (a graphene coating applied to PPE to prevent Covid and other infections; also used for air filtration (HVAC) systems), [icephobics](#) (to prevent ice build up on planes etc), ZENArmor (corrosion resistance), [fuel additives](#) (helping reduce carbon emissions), [Graphene-wrapped silicon anodes](#), [conductive inks](#), [intumescent coatings](#), and [anti-inflammatory therapies](#).

Furthermore, Zentek makes their own graphene oxide at their Guelph facility and owns the Albany Graphite Deposit ([planned to be spun out](#)).

Zentek Ltd. trades on a market cap of [C\\$216 million](#). With commercialization of ZENGuard™ underway and Zentek's aptamer

technology potentially to follow soon, Zentek is at a great stage to rapidly grow from here. Stay tuned in 2023 to see how Zentek performs and if they can successfully start to monetize their technology.

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## **Zentek's Breakthrough Aptamer Platform Shows Promise in Fighting COVID-19**

written by InvestorNews | February 21, 2024

In a recent interview conducted by Tracy Weslosky of InvestorIntel, Greg Fenton, the CEO & Director of Zentek Ltd. (NASDAQ: ZTEK | TSXV: ZEN), unveiled some thrilling developments surrounding the company's revolutionary aptamer platform. With an exclusive global license from McMaster University, this groundbreaking platform has demonstrated remarkable success in pre-clinical animal model tests as a potential prophylactic or therapeutic for SARS-CoV-2, the virus responsible for the ongoing COVID-19 pandemic. Spearheaded by Dr. Yingfu Li's team at McMaster, this platform harnesses a series of synthetic molecules known as aptamers, exhibiting a high affinity for the SARS-CoV-2 spike protein.

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# Greg Fenton of Zentek Discuss Anti-Icing Drone Technology & Spinning Out the Albany Graphite Project

written by InvestorNews | February 21, 2024

In this InvestorIntel interview, Tracy Weslosky talks with [Zentek Ltd.](#)'s (NASDAQ: ZTEK | TSXV: ZEN) CEO and Director Greg Fenton about the [successful testing](#) of its "best-in-class" [icephobic coating](#) for drones, first in wind tunnels and then real-world conditions.

While the drone with uncoated propeller blades rapidly lost the ability to maintain flight in an outdoor icing environment, Greg discusses how the drone coated with Zentek's icephobic coating prevented ice from adhering to the surface and was able to maintain flight until the end of the battery life. Greg explains how Zentek is positioned to potentially be the only company in Canada with a product to help drones fly in winter conditions to meet [Transport Canada's](#) anti-icing requirements for drones.

Greg also provides [an update](#) on Zentek's [Albany Graphite Project](#). With an increased demand for North American battery supply chains, Greg discusses how there has been a renewed market interest in their Albany graphite project. Recognizing this, Greg talks about Zentek's decision to resume work on the project and transfer the project to its wholly-owned subsidiary Albany Graphite Corp., to secure funding for its development and attract investors, including discussions with battery manufacturers and car companies.

To access the full InvestorIntel interview, [click here](#)



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## About Zentek Ltd.

Zentek is a graphene technology company focused on the research, development, and commercialization of graphene-based novel products to give its commercial partners a competitive advantage by making their products better, safer, and greener.

Zentek's patented ZenGUARD™ coating is shown to have 99-per-cent anti-microbial activity and to significantly increase the bacterial and viral filtration efficiency of both surgical masks and HVAC systems. Zentek's ZenGUARD™ production facility is located in Guelph, Ont. Zentek's second technology is the patent-pending ZenARMOR™ platform focused on corrosion protection applications.

To know more about Zentek Ltd., [click here](#)

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## **Greg Fenton of Zentek on Customer Demand for its Innovative Antimicrobial Coating for HVAC Systems**

written by InvestorNews | February 21, 2024

In this InvestorIntel interview, Tracy Weslosky talks

with [Zentek Ltd.](#)'s (NASDAQ: ZTEK | TSXV: ZEN) CEO and Director Greg Fenton about an update on the commercialization of Zentek's patented ZenGUARD™ antimicrobial technology.

With the ability to increase viral filtration efficiency of an HVAC (Heating, Ventilation, and Air Conditioning) filter by almost 5 times, Greg explains how a ZenGUARD™ coated HVAC filter is an incredibly safe way to improve indoor air quality and remove pathogens from the air without any additional energy requirements.

Although currently going through a regulatory approval process through Health Canada's Pest Management Regulatory Agency ("PMRA") in Canada, ZenGUARD™ has already received approval from another branch of Health Canada, indicating a high likelihood of approval from PMRA. Greg also discusses how ZenGUARD™ is seeing a growing demand from end users including filter manufacturers, provincial and municipal governments, and private sector customers.

To access the full InvestorIntel interview, [click here](#)

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## **Greg Fenton on the impact of Zentek's HVAC Phase 2 Testing results on Air Filtration**

written by InvestorNews | February 21, 2024

The ZenGUARD™ coating can be applied to existing HVAC filters without having to do any modification to the HVAC systems and can increase filtration efficiency of the Phi6 virus, a surrogate for COVID-19 during a single air exchange of a MERV 8 filter by almost 5 times. In this InvestorIntel interview, Zentek's Greg Fenton discusses the results of the final report for Phase 2 testing of ZenGUARD™ for use in Heating, Ventilation and Air Conditioning ("HVAC") filtration from the National Research Council of Canada ("NRC").

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# Greg Fenton on the ZenGUARD™ technology patent and how HVAC filter testing results mean better air for everyone

written by InvestorNews | February 21, 2024

In this InvestorIntel interview, Tracy Weslosky has [Zentek Ltd.](#)'s (NASDAQ: ZTEK | TSXV: ZEN) CEO and Director Greg Fenton discuss Zentek's recent [news release](#) on the ZenGUARD™ technology patent being granted. As an antimicrobial coating used on personal protective equipment (PPE) and heating, ventilation, and air conditioning (HVAC) applications, Greg explains how they took ZenGUARD™ from a concept in the lab to an Intellectual Property that can be commercialized.

Greg goes on to provide an update on the successful completion of [Phase 2 HVAC filter testing](#) of the ZenGUARD™ coating by the National Research Council of Canada. As an economical solution to significantly reduce airborne pathogens and improve indoor air quality, Greg discusses how ZenGUARD™ coating can be applied to HVAC filters without any modification to existing HVAC systems.

To access the full InvestorIntel interview, [click here](#)

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## About Zentek Ltd.

Zentek is an IP development and commercialization company focused on the research, development and commercialization of novel products using graphene and nanomaterials for use in the

healthcare industry and beyond.

Zentek's patented ZenGUARD™ coating is shown to have 99% antimicrobial activity, including against COVID-19, for use in PPE and potentially HVAC systems and other industries. Zentek's ZenGUARD™ production facility is located in Guelph, Ontario.

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# Zentek in the Global Spotlight for ZenGUARD™ Technology Patent

written by InvestorNews | February 21, 2024

[Zentek Ltd.](#) (NASDAQ: ZTEK | TSXV: ZEN), an IP development and commercialization company, has recently achieved a major milestone with their revolutionary product, ZenGUARD™ Technology. As of [December 2022](#), all 54 claims in the company's Canadian patent application were granted by the Canadian Intellectual Property Office (CIP0). This momentous achievement is an essential step in obtaining global patent protection for ZenGUARD™ Technology.

The result of two years of research and testing by 21 global partners, the ZenGUARD™ Technology is a cutting-edge nanotechnology based on their graphene-oxide silver compound designed to create an invisible barrier on the surface of the mask.

In order to evaluate the performance of ZenGUARD™ masks compared to standard surgical masks, American Society for Testing and Materials (ASTM) Level 3, 3-ply uncoated masks were used as a comparison group. The results showed that the ZenGUARD™ masks had 98.9% more bacterial removal efficiency and 97.8% more virus removal efficiency than standard surgical masks. Furthermore, these results were achieved with minimal added weight or bulkiness to the face masks, meaning they remain comfortable while providing superior protection against bacteria and viruses.

Zentek's accomplishment of getting a patent for their ZenGUARD™ technology for personal protective equipment and heating, ventilation, and air conditioning applications marks a significant milestone for the company and could set them up for success globally. This accomplishment took just two years from concept to fully protected asset.

CEO Greg Fenton's leading Zentek highlights their devotion to technology. The dedication to developing the concept and transforming it into a potential revenue-generating asset shows not only the commitment of Mr. Fenton but also Zentek as a whole. They have made great strides in an efficient amount of time and with promising results. This result highlights their capacity to take ideas from the lab bench to the market with patent protection.

With this success comes validation of their business model and a platform from which to extend their rights globally; plans are underway to eventually launch ZenGUARD™ Technology worldwide. Zentek also recently announced they are working with patent attorneys to extend patent protection of commercial rights on a global scale. This collaboration is an exciting example of how two organizations can use their collective knowledge to ensure businesses can maximize their intellectual property rights



across international borders.

Patent protection extends beyond copyright and trademark law, making it essential for modern companies to understand worldwide patent regulations in order to capitalize on their innovations. By relying on the expertise of IP counsel, Zentek will likely take full advantage of their rights across the globe.

This achievement not only validates Zentek's business model but also demonstrates that its product is both effective and marketable on a global scale. The ability to extend patent protection internationally opens many doors of opportunity for the company; they can now capitalize on their existing investments while also exploring new markets that were previously unavailable due to a lack of legal protection or recognition of intellectual property rights outside Canada's borders. With access to these new markets, there are a number of possibilities ahead for the company—especially when it comes to expanding its customer base and revenue stream potential.

In summary, Zentek Ltd.'s recent achievement of getting a patent for ZenGUARD™ marks an important milestone in the company's history—one that will potentially lead them down a path toward success both domestically and abroad. With access to new markets made available through patent protection globally, this opens up many opportunities for growth within the industry. As we look forward to 2023, we can continue to look for new developments ahead from Zentek Ltd., especially with regard to its revolutionary product ZenGUARD™ Technology.

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# Zentek's revolutionary graphene based icephobic coating targets billion dollar ice-resistant market

written by Tracy Weslosky | February 21, 2024

Ice build-up on wind turbines, airplanes, and cars in cold regions is a real problem. For example, Texas residents may remember the February 2021 ice storms and extreme cold weather that hit south-central USA. The storm resulted in over [4.5 million](#) homes and businesses being without power for several days. Frozen gas lines and ice buildup on wind turbines were key factors in the power failure as wind generation dropped by [almost 50%](#) over the entire state of Texas.

The airline industry spends significant time and money 'deicing' (removing ice and snow build-up) on their planes before take-off. Consumers in cold countries often have to do the same with their car windscreen. The drone market is another industry where deicing is important.

Now there is a better solution to de-icing. Today's company has developed an 'icephobic coating' technology that is effective at preventing ice build-up. '[Icephobic](#)' effectively translates to 'repelling ice'. It is also sometimes referred to as 'ice-resistant coating'.

## The global market for ice-resistant (icephobic) coatings

It has been reported that the global market for ice-resistant coatings is forecast to reach [more than \\$1 billion in 2023](#), growing at a CAGR of 23.3%.

## An excerpt from a 2021 report on the ice-resistant coatings and surfaces market



Source: [ResearchAndMarkets](#)

[Zentek Ltd.](#) (NASDAQ: ZTEK | TSXV: ZEN) [announced](#) in September strong test results supporting their [patent-pending](#), graphene-based, icephobic coating technology. The testing concluded that Zentek's icephobic technology is durable in adverse conditions for both wind turbine and drone industries, which are the initial focus markets for Zentek's icephobic coating.

Zentek [state](#) that their icephobic "coatings have demonstrated an adhesion strength repeatedly around 20 kPa (results under 100 kPa are considered to demonstrate low adhesion), a significant improvement over the current commercial products. Testing at the [National Research Council](#) (NRC) and [Anti-icing Materials International Laboratory](#) (AMIL) in Quebec is ongoing."

Some of the September [announcement](#) highlights included:

- "Flight tests in real-world icing conditions demonstrated good performance of Zentek's coating, with results indicating retardation of ice accretion (icephobicity) and low adhesion to accreted ice...
- Sand erosion testing demonstrated medium to good performance at a high speed of 540 km/h.
- Rain erosion testing at AMIL demonstrated good performance at 160 km/h and 320 km/h based on our interpretation, speeds at which the leading edge of wind turbines blade tips are exposed.
- NRC drone testing demonstrated consistent results of maintaining control of rotor thrust in icing conditions....
- Zentek has filed a full patent application with the Patent

Cooperation Treaty, the international patent office, on August 2<sup>nd</sup>, 2022, for Nanomaterial-Enhanced Elastomer for Passive Ice Accretion Prevention.”

### [Source](#)

## **Icephobic coatings have many applications and significant demand**

An exciting part of the above news is the potential for Zentek’s technology to be used in a huge variety of uses globally, particularly the energy and aviation/aerospace industries.

Zentek [states](#):

*“Commercial applications of our patent-pending coating could be used in drone technologies allowing for efficient all-weather operation. Other additional applications include powerlines, large wind turbines, ship structures (railings, etc.), and oil rigs, especially in Arctic operations, along with tall buildings where ice buildup could pose a public hazard.”*

## **Icephobic coatings could revolutionize aviation and wind power generation industries**



Source: [Zentek website/icephobics](#)

In addition to their icephobic coatings Zentek is also advancing multiple other initiatives including the commercialization of their “[Canada patent allowed](#)” [ZenGUARD™](#) (a ‘graphene-silver coating’ shown to have [99% antimicrobial activity](#) used on masks or PPE, also used in HVAC systems to improve air quality), aptamer enabled [Pathogen Detection Technology](#), [anti-inflammatory therapies](#), [fuel additives](#) (to reduce carbon emissions), [conductive filaments](#) for 3D printing, [fire retardant coatings](#), and [graphene wrapped silicon anodes](#) for batteries.

Zentek Ltd. trades on a market cap of [C\\$235 million](#) on the TSXV or [US\\$175 million](#) on the Nasdaq.