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CEO & FOUNDER OF FARADAY FACTORY JAPAN LLC.

PIONEERING THE FUTURE OF SUPERCONDUCTIVITY WITH AN INNOVATIVE

SPIRIT

Sergey Lee



Pioneering the Future of Superconductivity with an Innovative Spirit



n the realm of innovation and groundbreaking technologies, some visionary leaders stand out, transforming industries and shaping the future. Among them is Sergey Lee, a trailblazing CEO and a true pioneer in the world of superconductivity. With a passion for pushing the boundaries of scientific exploration and an unwavering commitment to progress, Sergey has left an indelible mark on the field.

Armed with a major in inorganic material science, Sergey's expertise in the field of chemistry has been instrumental in his pioneering work in the realm of superconductivity. While his mother was a medical doctor and his father a teacher of mathematics, they instilled in him a deep appreciation for scientific exploration, and his advisors at university were key figures who further fueled his passion for research.

In the late 1980s, just a few years after the discovery of high-temperature superconductors, Sergey entered the realm of superconductivity research during his PhD course. The potential of these materials to conduct electricity without resistance, even at higher temperatures, ignited his scientific curiosity. Sergey's groundbreaking research during his PhD laid the foundation for his future endeavours as he began to unravel the mysteries of these novel materials.

Venturing into Entrepreneurship

As Sergey progressed in his academic and scientific career, he witnessed the immense potential of high-temperature superconductors in various applications. However, he also recognized the significant challenges in scaling up their production for practical use. Determined to bridge this gap between scientific discovery and real-world applications, Sergey made a bold decision to transition from academia to entrepreneurship.

In 2011, Sergey founded SuperOx Japan, driven by a vision to revolutionize the production of high-temperature superconducting wires and make them readily available for a wide range of industries. His decision to step into the world of entrepreneurship was met with scepticism by some, as it involved venturing into uncharted territory. However, Sergey's

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At present, the main goal of Faraday Factory Japan is to scale up the production, and my role as CEO is aimed to fulfil this target.

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unwavering belief in the potential of superconducting materials and his determination to make a lasting impact motivated him to overcome these challenges.

Fostering a Culture of Innovation

Sergey Lee's leadership at SuperOx Japan (now Faraday Factory Japan) is distinguished by his unwavering commitment to fostering a culture of innovation within the organization. He believes that true innovation requires embracing change, challenging norms, and continuously striving for improvement. Throughout his journey, Sergey has been at the forefront of scientific research and technological advancements. His insatiable curiosity and passion for pushing the boundaries of superconductivity have naturally infused Faraday Factory Japan with an unwavering commitment to innovation. Under his guidance, the company has become a hotbed for creativity and cutting-edge research.

"At present, the main goal of Faraday Factory Japan is to scale up the production, and my role as CEO is aimed to fulfil this target," says Mr. Lee. As he continuously seeks ways to improve the production process and develop cutting-edge materials, his enthusiasm permeates the entire team.

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Beyond personal dedication, Sergey understands that innovation thrives in an environment that encourages collaboration and diverse perspectives. To overcome the challenge of hiring local talent in a risk-averse job market, he strategically turned to a global pool of individuals. "Currently, 70-80% of our company members are foreigners from 10 countries, and we continue hiring. For local people, we provide great flexibility in working schedules, especially for women with small kids and students, to attract them as part-timers," asserts Mr. Lee.

By attracting foreigners from various backgrounds, who shared a common desire to contribute to the world of superconductivity, Sergey created a diverse team that brought fresh ideas and approaches to the table. Furthermore, Sergey adopted flexible work schedules to attract part-time employees and retirees, thereby tapping into a wealth of expertise without restricting creativity. This inclusive approach to human resources fosters an atmosphere of open-mindedness and continuous learning, which in turn fuels innovation within the company.

Significant Accomplishments and Milestones

Mr. Lee says, "The company has thrived for 12 years, which is a remarkable achievement for a startup company working in the field of superconductivity." Under Sergey Lee's dynamic leadership, Faraday Factory Japan has achieved a series of significant milestones that have solidified its position as a global leader in the field of applied superconductivity.



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One of the most notable achievements of Faraday Factory Japan is its success in scaling up the production of high-temperature superconducting wires. Sergey's strategic decisions led to the company generating net profit since 2016, demonstrating not just scientific prowess but also financial acumen. This financial stability allowed the company to invest further in research and development, driving technological advancements.

In addition to financial success, Faraday Factory Japan has received external recognition for its exceptional growth and influence. The company was selected among the 500 High-Growth Companies in the APAC region in the past 2 years, a testament to its remarkable progress and contributions to the field of applied superconductivity.

Impactful Contributions to Global Technological Advancements

The recognition as one of the 500 High-Growth Companies in the APAC region further attests to Faraday Factory Japan's remarkable growth and influence. The company's products are now instrumental in groundbreaking projects worldwide, ranging from magnets for compact fusion to motors for electric

airplanes and high-voltage fault current limiters.

The impact of Faraday Factory Japan's contributions extends beyond individual projects. Superconducting materials have the potential to revolutionize numerous industries, from energy transmission and transportation to medical devices and scientific research. Sergey Lee's vision and leadership have played a crucial role in driving these advancements and positioning his company as a key player in the global technological landscape. Recently, Sergey Lee has been lauded with the IEEE Council of Superconductivity Award, a prestigious honour for his invaluable contributions to the industry.

Future Goals and Aspirations

"I believe that our company's goal is to maintain our leadership in the field of applied superconductivity. I do not doubt the very bright future of superconductivity," says Mr. Lee. Looking ahead, Sergey Lee envisions a future where Faraday Factory Japan maintains its leadership position in the field of applied superconductivity. His unwavering belief in the boundless potential of superconducting materials drives his ambition to steer the company's growth for decades to come.

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However, Sergey remains acutely aware of the need for constant progress in a rapidly evolving world. To stay ahead, he embraces the philosophy of "running twice as fast," always striving to remain at the cutting edge of innovation. This drive for continuous improvement not only ensures Faraday Factory Japan's success but also reinforces Sergey's journey as an entrepreneur and CEO.

Advice to Aspiring Entrepreneurs

For aspiring entrepreneurs seeking to make a meaningful impact in their chosen industries, Sergey Lee's advice is deeply reflective of his own experiences. "The main barrier you need to overcome to start your own business is usually deeply rooted within yourself," shares Mr. Lee.

Sergey's journey from academia to entrepreneurship stands as a testament to the power of unwavering belief in one's vision and the courage to take bold steps. His message to aspiring entrepreneurs is simple yet profound: "Do your duty and come what may," for it is this sense of purpose that can propel individuals to make transformative changes in their chosen fields and leave an enduring legacy.

As we celebrate Sergey Lee's accomplishments and his role in fostering innovation, we are reminded that true leaders not only achieve greatness in their endeavours but also inspire others to reach greater heights. Sergey's journey exemplifies how passion, innovation, and a culture of collaboration can pave the way for a brighter future, one breakthrough at a time. With his pioneering spirit, Sergey Lee continues to shape the future of superconductivity and inspire generations of innovators to come. The real key to his success has been the support and contributions of his teachers, former and present colleagues, investors, and collaborators, who have played a crucial role in his remarkable achievements.

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