

Women Entrepreneur India

WOMEN LEADERS IN ENERGY
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WOMEN IN BUSINESS

CO-FOUNDER, KARMA TECH

Dr. Sasmita Nayak

Powering a Safer Future
through Cutting-Edge
Technology

₹150



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Soaring energy prices, lack of supply, and climate change make renewable energy sources an obvious way forward. Renewable energy is increasingly being recognized as a way to reduce carbon emissions. Women are making a significant difference in the field of renewable energy through their leadership, entrepreneurship, research, and advocacy. By bringing their skills and perspectives to this critical industry, they are helping to drive the transition to a cleaner, more sustainable energy and help accelerate the transition to a low-carbon future.

Dr. Sasmita Nayak is the co-founder of Karma Tech which is a renewable energy manufacturer start-up. She is actively involved in research to attain cost-effective, renewable energy solutions for solar products. She is currently working as an Associate Professor at the KIIT School of Biotechnology and as an Adjunct Faculty at the Department of Microbiology, Kalinga Institute of Medical Sciences, Bhubaneswar.

In an exclusive conversation with Women Entrepreneur magazine, Dr. Sasmita shares with us her professional journey and the various lessons she has gathered on the way. Here is an excerpt from the interview.



Dr. Sasmita Nayak is an Associate Professor at the KIIT School of Biotechnology at KIIT University and an Adjunct Faculty at the Kalinga Institute of Medical sciences. She completed her MBBS from SCB Medical College, Cuttack, Odisha, and was a visiting physician in various hospitals in the USA after receiving ECFMG certification. She was motivated to change her profession to medical research during this time and earned her Ph.D. degree from Rensselaer Polytechnic Institute, Troy, NY, USA.

What was the underlying idea behind starting the venture, Karma Tech?

Karma Tech was established in 2014 and is the brainchild of Prof. Saroj Nayak, a Co-Founder who wanted to work on the uninterrupted power supply. I joined the venture with the aim to reach out to the community and educate them about the many benefits that solar products have to offer including reduced energy costs and environmental impact. During the initial days, we hired and trained people, from slum areas, in various verticals.

Kalinga Renewable Energy Manufacturers (KARMA) is a start-up from the Indian Institute of Technology (IIT) Bhubaneswar and was originally incubated at Technology Business Incubator, KIIT University (KIIT-TBI). We felt the need to have solar products that are cost-effective, customizable, environment-friendly, and sustainable and these became the reason behind setting up the firm. With continued advancements and research in solar technology, we can expect to see even more innovative and cost-effective solar products in the future to attain sustainable development.

As the Co-Founder, what expertise do you bring to the table at Karma Tech? What are some of the value additions that Karma Tech offer to the clients?

As the Co-Founder and Director of Karma Tech, my primary role is providing technological solutions such as cost-effective nano-bio solutions to develop technology to address issues such as microbial contamination and corrosion for solar products. Apart from this, we are also working on technology for future innovations to bring a new and novel solution for renewable energy. I also train the team at Karma Tech about healthy workplace ethics.

Karma Tech has many areas of interest which are mostly research-based. We want to bring research-based state-of-the-art renewable energy to people for their benefit and for a green planet. Our team is multi-disciplinary, and we aim to provide cost-effective solar solutions in rural areas. We offer services in optimized energy usage, solarizing inverter, solar pumps, cold storage, and more. Karma Tech has introduced the first solar micro pump that is certified by the Ministry of New and Renewable Energy (MNRE). This is a cost-effective solution for small and marginalized farmers. Karma Tech has also provided uninterrupted power based on solar energy to many hospitals.

We aim to become the most sought-after player in the energy sector by collaborating with researchers from around the world. We are already collaborating with Onelab (MIT) and Rice University, USA.

What responsibilities do you shoulder as the Co-Founder of Karma Tech? What are your primary focus areas in terms of driving growth for the company?

My goal is to upgrade the existing solar product efficiency by performing fundamental research to attain higher output, low cost, and long-lasting products. One of the challenges solar products face is corrosion, especially in coastal areas. I am actively involved in research, to prevent the corrosion of solar products due to microbial contamination. I believe I have evolved as a person and the one thing that has driven me is the

desire to enrich myself. My aim is to learn, grow and work for the system.



KARMA TECH BELIEVES IN PROVIDING STATE OF THE ART SOLAR POWERED PRODUCTS THAT ARE DESIGNED TO FACILITATE SUSTAINABLE DEVELOPMENT

Throw some light on the most critical challenges you encounter as a leader in the energy space. How do you overcome the roadblocks that you face?

As a woman in 2023, I believe it's the best time to be in our country because we have overcome gender bias as a nation but maintaining a work-life balance is a challenge. Our main challenge is to adapt and implement new and novel technology and provide cost-effective solutions. This can be attained by recognizing the potential benefits of new technology and active research in the laboratory. Karma Tech team tries to identify the specific requirement for solar products in rural areas and customize products according to the needs. I am grateful to KIIT University for providing me with the opportunity and supporting our start-up through which we strive to serve the community and our country.

What are some of the important milestones you have achieved throughout your professional journey? What has been your success mantra as a business leader?

Striking a work-life balance is the first milestone since it can be a challenge, especially in today's fast-paced and demanding work environment. Second is earning a Ph.D. after MBBS which I consider rare. Third is being

able to reach out to society via a research-oriented start-up company.

The first success mantra was imparted to me by my mother and grandmother which is to define where one belongs. The world around us often tries to define our place based on gender, social status, and other factors. We need to take ownership of our own journey and create a life that feels more authentic and fulfilling and don't let the world decide it for us. Another is that I work for the system and don't expect the system to work for me. I always focus on finding ways to fit into and navigate the existing systems rather than expecting the systems to be tailored according to my specific needs or desires.



Drawing from your experience, what advice would you give to other aspiring women leaders & entrepreneurs?

In addition to defining where you belong as a woman and working for the system without any expectations, another piece of advice would be to never give up. Perseverance and determination are important factors in achieving one's goals when faced with challenges and setbacks. Work hard until you succeed and then continue to work hard without stopping. [WFI](#)



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Women Entrepreneur India Top 10 WOMEN LEADERS IN ENERGY 2023



Women
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PROUDLY AWARDS

Dr. Sasmita Nayak

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The annual recognition of
'Women Leaders in Energy- 2023'

celebrates the vast industry experience and subject matter expertise of the chosen women leaders while also celebrating their inspirational professional journey in the Indian business landscape.



Rachita Sharma
Special Editor