

Chief Guest's Address

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I am very pleased, honored and indeed privileged to have been invited as the Chief Guest tonight at this induction ceremony of the President of the Institute of Chemistry Ceylon. It is a great honor for me to address this esteemed gathering at this momentous occasion and be a part of this significant milestone.

First and foremost, I would like to extend my heartfelt congratulations to the newly inducted President Professor Namal Priyantha. Prof. Namal, your appointment to this esteemed position is a testament to your outstanding achievements, exceptional leadership qualities, and unwavering dedication to the field of chemistry. I have no doubt that under your guidance, the Institute will reach new heights of excellence and make significant contributions to the advancement of chemical sciences.

The field of chemistry plays a pivotal role in shaping our world. It is through the work of chemists that we understand the fundamental building blocks of matter, discover new compounds and materials, develop life-saving drugs, and tackle pressing global challenges such as climate change and sustainable energy. Chemists are at the forefront of innovation, driving technological advancements and improving the quality of life for people around the globe.

Therefore, the theme you have chosen this year Prof. Namal – Chemical Science for Technological Advancement: Empowering the future is a perfect theme in the current context.

I did a bit of research and gave a deep thought to understand how best we can realize the objectives of this

theme particularly in Sri Lankan context and contribute to the socio-economic development and wealth creation. Let us look at some of the possible areas:

- 1. Pharmaceutical Industry:** Chemical science is fundamental to the pharmaceutical industry and underpins the development of life-saving drugs and therapies. From the discovery and synthesis of new compounds to the design of drug delivery systems, chemical science drives advancements in pharmaceuticals. It enables the creation of more effective and targeted treatments, personalized medicine, and improved drug formulation and delivery methods, ultimately enhancing healthcare and improving patient outcomes. Sri Lanka can leverage its scientific expertise and natural resources to establish a robust pharmaceutical sector. Despite several initiatives towards its promotion, I believe that we are already too late. Today, we suffer a lot due to lack of medicines, substandard medicines, lack of foreign exchange, extremely high prices, corruption in procurement when other developing Asian countries have advanced very much in this area. By promoting research and development, Sri Lanka can produce generic drugs, contribute to healthcare accessibility, and reduce dependence on imports. A thriving pharmaceutical industry can generate employment opportunities, attract foreign investment, and contribute to the country's wealth.
- 2. Food and Agriculture:** Sri Lanka has a strong agricultural sector but battered with fertilizer and pest control issues chemical science can play a crucial role in adding value to agricultural products. For example, the development and application of agrochemicals to suit our own issues and fertilizers to enhance crop yields and quality. With imprudent decision making and poor management, we have closed down our fertilizer factories, not utilizing our valuable fertilizer deposits. There is a great need and potential in this area. Chemical science

can also contribute to the development of post-harvest technologies, such as food preservation and processing techniques, which can extend the shelf life of agricultural products and enable their export to international markets. Despite much research, even the developed technologies are not reaching the producer or end user. What can we do to connect the value chain from R&D to the individual consumer?

3. Manufacturing, value added and Export-Oriented Industries:

Chemical science is a key driver of industrial development. It enables the creation of new and improved materials, processes, and technologies, which form the foundation of various industries. For example, the development of advanced materials, such as polymers, composites, and specialty chemicals, can lead to the establishment of thriving manufacturing sectors, generating wealth through production and exports. Chemical science can also drive the development of export-oriented industries, such as pharmaceuticals, specialty chemicals, coatings, adhesives, and agrochemicals. By leveraging the expertise in chemical synthesis and formulation, Sri Lanka can produce high-value products for domestic consumption as well as for export to international markets. Chemical science also contributes to the development of value-added industries, such as cosmetics, personal care products, electronics, and automotive sectors. These industries create jobs, generate revenue, and enhance a country's competitiveness in the global market.

4. Renewable Energy Technologies:

Sri Lanka has abundant natural resources, including sunlight, wind, and biomass, which can be harnessed for renewable energy generation. Chemical science plays a crucial role in the development of technologies such as solar cells, fuel cells, and energy storage systems and devices such as batteries and super capacitors. By investing in research and development in this field, Sri Lanka can promote the adoption of clean energy technologies, reduce reliance on fossil fuels, and potentially become a net exporter of renewable energy, contributing to both energy security and economic growth. These advancements pave the way for a transition to clean and renewable energy

sources, reducing our reliance on fossil fuels and mitigating climate change.

5. Water and Environmental Management:

This includes developing technologies for water purification, wastewater treatment, and environmental remediation. Chemistry plays a crucial role in understanding and mitigating environmental challenges. Through the study of chemical reactions and processes, chemists contribute to the development of sustainable practices and technologies. This includes developing methods for pollution control, designing environmentally friendly materials, and creating innovative approaches for wastewater treatment, recycling, and waste management. By addressing challenges related to water scarcity and pollution, chemical science can enhance the sustainability of water resources and protect the environment, leading to improved living standards and increased wealth.

6. Innovation and Entrepreneurship:

Chemical science fosters innovation and entrepreneurship. For example, materials Innovation enabling the development of advanced materials with enhanced properties. From lightweight and durable materials for aerospace applications to flexible and conductive materials for electronics, chemistry contributes to the creation of new materials that revolutionize industries and improve everyday life. By promoting research and development, providing support for startups, and encouraging collaboration between academia and industry, Sri Lanka can nurture a culture of innovation in chemical science. This can lead to the creation of new technologies, products, and services, stimulating economic growth and wealth creation.

7. Nanotechnology and Advanced Manufacturing:

Chemical science enables breakthroughs in nanotechnology, which involves manipulating matter at the atomic and molecular level. Nanomaterials and nanodevices have applications across various sectors, including electronics, medicine, energy, and environmental remediation. Additionally, chemistry contributes to advanced manufacturing processes,

such as 3D printing and precision engineering, enabling the production of complex structures with high precision and efficiency.

To fully realize these potential benefits of chemical science for socio-economic development and in wealth creation, Sri Lanka should prioritize investments in research and development, strengthen the collaboration between academia, industry, and government institutions, and provide support for education and training in chemical sciences. By doing so, Sri Lanka can harness the transformative power of chemical science to drive economic development, create employment, and improve the overall prosperity of the nation.

I firmly believe that the Institute of Chemistry Ceylon has a tremendous responsibility not only to uphold the highest standards of scientific rigor and integrity but also a resolute need to foster a culture of collaboration, creativity, and curiosity within the Institute. It is essential to cultivate an environment that encourages interdisciplinary research, promotes diversity and inclusivity, and nurtures the next generation of chemists.

Moreover, as we navigate the complexities of the 21st century, it is imperative that the Institute of Chemistry Ceylon actively engages with society and policymakers. Chemistry has the potential to address some of the most pressing challenges we face today. As President, Prof. Namal, has a unique opportunity to advocate the

importance of chemistry and its contributions to society, and to foster partnerships with industry, academia, and government institutions to drive meaningful change.

I have no doubt that you would lead the Institute with vision, passion, and integrity. Embrace innovation and encourage your colleagues to push the boundaries of knowledge. Foster an environment that supports the exploration of new ideas, promotes collaboration, and inspires the pursuit of excellence by harnessing the talents of members, the researchers, educators, and students who are the driving force behind its success.

In summary, chemical science is a driving force behind technological advancement, empowering the future in numerous ways. Through materials innovation, renewable energy solutions, pharmaceutical breakthroughs, environmental sustainability efforts, nanotechnology, advanced manufacturing, and advancements in food and agriculture, chemistry contributes to a better and more sustainable world. By pushing the boundaries of knowledge and innovation, chemists continue to shape the future and address the challenges and opportunities that lie ahead.

In conclusion, I would like to once again congratulate the newly inducted President Prof. Namal Priyantha and extend my best wishes for a successful tenure. May your leadership inspire and empower the members of the Institute to strive for greatness and make significant contributions to realize your vision.

Professor Ananda Jayawardane is the Chairman of the Commercial Bank of Ceylon PLC, a Senior Professor in Civil Engineering at the University of Moratuwa and a Commission Member of the University Grants Commission. He is also a past Vice-Chancellor of the University of Moratuwa and a past Director General of the National Science Foundation. He obtained BSc Engineering degree in Civil Engineering with first class honours from the University of Moratuwa in December 1983, a Master of Science Degree in Construction from the Loughborough University of Technology in the UK in 1986 and PhD in Construction Management in January 1990 from the same university.