CHEMISTRY EVERYWHERE: ADDRESSING THE CHALLENGES OF MODERN INDIA

DR. S. SIVARAM

The Confederation of Indian Industry (CII) organized the second edition of its 'Chemistry Everywhere' conference on the theme 'Addressing the challenges of Modern India' in Mumbai on November 26, 2015.

The focus this time was on the role of chemicals and the chemical industry in sectors such as food & water, corrosion management, fire safety and sustainable development.

Central science: Speaking at the event, **Dr. S. Sivaram, CSIR Bhatnagar Fellow, National Chemical Laboratory (NCL), Pune,** described chemistry as a "central science critical to the understanding of the world around and within us."

Unfortunately for the industry, however, chemistry does not resonate well in the minds of the public. This despite the fact that chemicals are critical to the making of many products essential for modern living. For example, nearly 80 chemicals and materials go into the manufacture of a cell phone, and the much-touted electric mobility needs batteries the manufacture of which crucially hinge on chemicals. "Chemistry defines the molecular basis of almost everything. That is the message we have to deliver. But we need to understand public emotions and proactively communicate chemistry."

Lack of investments: Dr. Sivaram also expressed his disappointment at the lack of investments in the chemical industry in India. He urged the industry and the government to work together and create a logistics strategy for the industry. "Industry needs to create the momentum for change, instead of waiting for things to happen."

He was not very hopeful of large foreign direct investment (FDI) flowing into the chemical industry here, as globally the industry is suffering from over-capacity and the market is not growing. "We need to defend our industry from cheap imports and if this does not happen we will cede markets," he warned.

'Build scale, skills and reach': He called upon the industry to build scale, skills and reach, pointing out that the country produces just 1,000 PhDs annually in chemical engineering. "Industry must move to selling solutions, not just chemicals. It needs to create a brand."

Lamenting the "innovation drought" in the global chemical industry, which is gradually transforming into a life sciences one, at least in the developed world, he noted that India is in a different phase of economic development and will have to build its own chemical industry and innovation path. He urged the Indian industry to increase its emphasis on innovation, including by investing overseas. "Why can't India acquire R&D centres in Europe, which are on the verge of closure, and bring the benefits back to India." As an example, he pointed to the Innovation Centre set up by Apollo Tyres in the Netherlands, which now employs 200 people.

He also urged the industry to focus on reverse engineering and incremental innovation, noting that neither is to be scoffed at. "Disruptive innovation will not happen every day," he added.

He stressed the need to chart a sustainable growth path, but added that this would "expensive in the short term" but "will pay in the long term."