



# NCL Innovations

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NCL Innovations Seminar Series

**3<sup>rd</sup> Talk**

## "The Future of the Chemical Industry"

by

**Dr. Faruq Marikar, Ph.D.**  
President, Nanobiz, LLC

on

**Friday, 19 December 2008**

at 1000 hrs in the  
Lecture Hall, 2<sup>nd</sup> floor, Main building  
National Chemical Laboratory  
Pashan Road, Pune – 411008

### Abstract

The material world is built on chemistry. Chemical industry began employing the chemical sciences to serve human caprice and comfort some 250 years ago. Rapid advancement in the underlying science in the 19<sup>th</sup> Century awaited the development of oil/natural gas fields in the 20<sup>th</sup>, to begin to flood the world with inexpensive goods. Uncertainty in the continued abundance of fossil fuels is now raising doubts about the cornucopia of goods; and the health effects of the proliferation of vast quantities of chemical by-products and effluent is leading to questions of the future of the chemicals enterprise.

This talk will outline the current predicament and our options to address it. Destabilization creates opportunity and there is considerable room for innovation. The globalization of knowledge generation and the rapid pace of information diffusion are leading to a democratization of innovation and an easing of innovation monopolization. Knowledge generation and commercialization are progressively merging, and there is a crucial need for alliances and partnerships to bring products to the market. Are we ready?

**Dr. Faruq Marikar, Ph.D.**



Faruq Marikar is President of Nanobiz, LLC [www.nanobizllc.com](http://www.nanobizllc.com), a consulting firm offering business, investment, patent and legal guidance on energy, materials, cleantech and nanotechnology commercialization. Nanobiz helps large companies grow, and small companies grow up. Corporate clients are in North America and Japan. A recent Canadian government project provided management consulting to ten nanotechnology start ups and connected them with major US corporations.

Earlier, with Hoechst, Celanese, Gould, and SGL Carbon, Marikar planned and developed new businesses through global cross-sector alliances. Product areas include batteries, capacitors, fuel cells, films, paints, coatings, plating, corrosion, carbon fiber, graphite, specialty chemicals, plastics, electronic chemicals, ceramics, and composites.

Following his degrees in chemistry and a Ph.D. in engineering from the Indian Institute of Science, Bangalore, Marikar taught corrosion, and worked at Imperial College, London and RPI in Troy, NY. He has 23 patents, 10 of them in the USA, in batteries, fuel cells, coatings and nanomaterials. He served on an industrial advisory committee to the US NSF; he was the first chairman of the US Industrial Research Institute's External Technology Directors' Network. Marikar is currently on the Board of the ACS – Chemical Marketing & Economics Group. He was the founding chairman of the Materials & Components working group of the US Fuel Cell Council. He has written on competitiveness and organized a conference on University-Industry collaboration.

Marikar has lived and worked on three continents.

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