

Transition to a Sustainable Bio-economy: Global Perspectives

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Since the oil embargo in 1973, scientists have been striving to develop new processes that use renewable sources and cleaner technologies to meet our energy and chemical needs. Initially it was driven towards reducing oil imports and the assumption of finite availability of fossil fuels. While there have been a number of successful developments in this area, the challenges that we face is further enhanced with the urgent need to limit carbon emissions, while improving the quality of life of citizens in emerging and less developed countries, in a sustainable manner.

In his talk, Dr. Rakshit will trace the geo-political and technical background to innovation, research and development in the use of bioenergy and biorefining processes based on his own experience in emerging and developed nations. He will focus on some of his work on the use of lignocellulosic biomass and renewable resources for the production of biofuels and platform chemicals. He will highlight some of the major technical bottlenecks that limit the use of available technologies in an economically viable way.

The challenges faced in the transition to a bio-economy vary from country to country. The need for innovative processes that can integrate into existing systems along with distributed efficient systems hold the key to a shift from fossil fuels based economy to the projected to a green economy. The need to work across national boundaries in an inter-disciplinary manner is imperative. The actions required for adapting any bioeconomy strategy including skills development, policy initiatives and enhancement of markets and most importantly the competitiveness of bioprocesses will be discussed.