Pogaku Ravindra
Professor of Chemical and Bioprocess engineering,
Post Graduate Coordinator, School of Engineering and Information Technology.
University Malaysia Sabah, Kotakinabalu, Sabah, Malaysia
Editor in Chief-BMBR; UNESCO-Energy Consultantant

Abstract: "Green Engineering – Towards Environmental Renaissance"

Green Engineering is defined as the design of systems and unit processes that obviate or reduce the need for the use of hazardous substance while minimizing energy usage and the generation of unwanted by-products. **"**Green Engineering" respectively consists of three aspects: the environment-friendly, energy saving and emission reduction and concise and green. Over the past year, the mainstream media has dramatically increased its emphasis on all things "green." Concerns about global climate change, soaring energy prices, and increased government legislation are driving new priorities and expectations—from consumer products to corporate responsibility and sustainability plans. To meet these new demands, companies, big and small, around the world are scrambling to not only create products and technologies that address these concerns, but also to change the ways and processes by which they are developed. Engineers and scientists worldwide are leading the charge to address one of the largest challenges society faces, and they have the unique opportunity to make a bigger impact on the environment than any government policy. The scope of Green Engineering depends upon one's perspective and discipline, but it is broadly defined as minimizing environmental impacts across all life cycle phases in the design and engineering of products, processes, and systems. The benefits to society of implementing green engineering concepts specifically to materials science are significant and include health benefits, improved

environmental quality, and cost reductions. Explicitly considering the environment as an initial design constraint along with economic and performance metrics is critical; many significant environmental impacts that would be difficult to remediate can be minimized if considered early. Moreover, applying Green Engineering concepts early in the design stage provide benefits which compound throughout the life cycle and can in turn lead to renaissance of our environment.

Brief CV:

Prof.Dr.Pogaku Ravindra is an internationally renowned expert in bio energy and Biofuels field. He is a distinguished Professor of Chemical and Bioprocess Engineering, and the Postgraduate coordinator of School of Engineering and Information Technology at University Malaysia Sabah (UMS), Kota kinabalu, Sabah, Malaysia. He is also the UNESCO consultant on Sustainable energy projects.

He has rich versatile and varied experience of teaching, research, industry, administrative and executive spanning over 30 years.

Prof.Ravindra's research interests include bioenergy, wealth from waste (Single Cell protein etc), bioprocess engineering. At present his research group focus is on Bio-derived energy for sustainable development. His research work has culminated in over 150 research publications including chapters in books, critical reviews and presentations to his credit. He has published five books. He is the editor-in-chief, editorial board member, guest editor in referred journals and reviewer of many peer journals.

He has carried out as many as 25 national, international and industrial research projects. He was bestowed with the national and international prestigious and distinguished awards. He has won gold and silver medals for his research contributions to the Chemical and Bio processing industry.

Prof.Ravindra has delivered invited talks; keynote lectures at various National and International institutions and has a passion to interact with the people as he realizes this would be an opportunity to reach out to a wide spectrum of people.

His focus is on the issues of Green energy, Environment and Food for sustainable development for better society. Prof.Ravindra envisions and dreams of a world without hunger and lead healthy lives.