Preface

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Renowned physicist Richard Feynman in 1959 seeded the concept of “*Plenty of room at the bottom*”. Further, K. Eric Drexler formally introduced the term “nanotechnology” in his 1986 book, “*Engines of Creation: The Coming Era of Nanotechnology*”, which proposed the idea of nanoscale self-assembly and other complex materials at atomic scale. Ever since, nanotechnology has become a centre of technological advancements and universe. The nanotechnology has triggered each set of components in our everyday life, right from toothpastes, socks and makeup items to something as complex as avionic engines and solar panels. In fact, governments worldwide are investing billions of dollars in this technology to make things efficient, lighter, portable and expandable. With every advanced technology, there are strings attached in the form of advantages and disadvantages. Nanotechnology has also seeped into the environmental technology sector, revolutionizing treatment technologies, monitoring and value addition, albeit at the cost of toxicity concerns. The idea of the prospect that nanotechnology is being viewed as the futuristic smart way to tackle the burgeoning environmental problems along with the possibility to proactively address the toxicity and risk issues brought up this journal.

Prof. Satinder Kaur Brar has been working for almost two decades on the environmental remediation aspects involving value addition approaches to sustainably manage wastes and wastewaters. Likewise, Dr. Rao Y. Surampalli has a long-standing experience of almost four decades on different novel environmental engineering technologies interlinked with nanotechnology. Thus, the journal *Nanotechnology for Environmental Engineering* came as a natural platform for the environmental community to come together and share research.

Nanotechnology for Environmental Engineering (NTEE) will bridge the gap between conventional environmental engineering and modern approach, such as biotechnology and/or nanotechnology. The emerging field of nanotechnology and nanoengineering is leading to unprecedented understanding and solutions to many fundamental environmental issues. Very recently, nanotechnology has contributed towards the environmental quality and sustainability by means of pollution prevention, treatment (air, water and soil) and most importantly generating vital information on the potential application of nanotechnology for substantial benefits to the environment. The continued nanoengineering approach for improved environmental strategies for environmental protection is inevitable. In parallel, environmental engineering research has helped in tracing the origin, transport, transformation, and impacts of contaminants in the environment and developing new technologies for reducing the associated risks to human health and environment. However, environmental nanotechnology (specially, applied bionanotechnology) is still far from summarizing many important aspects including alternative pathways for minimizing toxicities and molecular aspects, among others. In this pursuit, this publication seeks to publish papers that are particularly significant and original with emphasis on integrated nano-/environmental-/bioengineering approaches.

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NTEE takes special interest on uses of nanotechnology to the benefit of environment, green chemical and molecular biology processes and techno-economic aspects of nanotechnology. We foresee the journal to be useful to a

broad range of researchers working in the field of nanotechnological implementation for environmental engineering under the themes of design, discovery, and development of novel concept and applicability.