From the Editor's Desk

As the year 2009 comes to an end we are happy to bring out the issue related to energy materials, specially dealing with fuel cells, batteries and supercapacitors. I would like to thank professor A. K. Shukla whose persistent efforts has culminated in getting this issue which has reviews authored by several experts in the filed both from India and abroad. I am happy to inform you that we have lined up the topics and guest editors for the four issues of the year 2010 and indeed have also identified the guest editor for the first issue in 2011. I must thank the efforts of the all the editorial members and staff who are responsible for generating such an interest in our journal and I am sure that this dedication would make our journal to be read with interest by readers around the world.

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Editorial

Energy is pervasive in nature and is one of the most pressing problems of the human kind. Energy has three components, namely, generation, storage and consumption. While energy is easy to consume, it is hard to both generate and store. Nature has provided us with chemical cache of energy as fossil fuels. But the usage of fossil fuels is causing concerns of atmospheric pollution and there is lurking fear that fossil fuels are depleting fast. The energy available from fossil fuels can be most efficiently converted into electrical energy by the use of fuel cells. Nature has also provided us with abundant renewable energy in the form of wind, solar and hydro. The ancient civilization has always revered the sun and water for the sustenance of life, and the vicissitudes of the last couple of decades have led us to believe that a sustainable energy future must include harnessing the abundant resource of radiant energy from the sun. Direct generation of electricity from solar radiation through solar cells is clean and attractive. However, due to the intermittent nature of solar radiation, efficient and economic management of electrical energy requires its storage. The storage and retrieval of electrical energy is most conveniently accomplished at present with storage batteries and ultracapacitors. In this issue experts in the area of their expertise have contributed state-of-the art reviews on certain fuel cells, storage batteries and ultracapacitors. I would like to thank the authors for their effort and the Editor of the Journal, Professor T. N. Guru Row, for giving me an opportunity to Guest Edit this issue.

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