Short Communication

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Electrochemical Processes: Emerging Applications for Enhanced Sustainability

S. Vasudevan

CSIR - Central Electrochemical Research Institute, India

Abstract

Water the generous gift of nature is sure to become scarce unless the ever growing population is enlightened enough in handling the increasing stress and to avoid the crisis due to the expanding demand for this precious commodity. Management of water and its resources by conservation and its judicious use help to preserve the available water. Even then, whether it is from surface or underground sources, it has become impossible to obtain good quality water for human consumption. Thus, the dwindling quantity and lessening the quality of water require effective steps to be taken urgently for the sustenance of the living being of today and tomorrow. Water scarcity also affects ecosystem as numerous species might not be able to cope up with a decrease in the availability of freshwater. The development of sustainable, robust and energy efficient water purification technology is greatest challenges of this century. Currently available water treatment processes are based on biological, physical, physicochemical, chemical, thermal and electrochemical methods. Each treatment process has its distinct advantages/disadvantages over the other ones

In this talk some of the important and recent developments in the electrochemical alternatives for drinking water purification are reviewed. The talk also covers electrochemical technologies developed at CSIR-CECRI for decontamination of drinking water.

Biography

Dr. S. Vasudevan did his Masters in 1988 and Ph.D in 1995 on electrochemistry from Alagappa University, Karaikudi (Tamil Nadu, India). He has been working in diverse areas of electrochemistry for the past 25 years. His research primarily focussed on the areas of electrochemical water treatment, hydrogen generation by water electrolysis, synthesis of electro-inorganic chemicals, electrochemical waste management, electro-catalysis, magnesium batteries. He has published more than 100 research papers in reputed peer reviewed journals and written six book chapters

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