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EDITORIAL

Integrated management of the environment for sustainable development

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In recent years, environmental protection has emerged as a requirement that goes beyond the state borders to reach a global dimension. This awareness has resulted in numerous treaties, directives, and conventions and even changed the way we do business. Protection of the environment, one of the pillars of sustainable development, is an absolute priority for the international community. In this context, the focus on relevant experiences, up-to-date scientific research and findings carried out all over the world to protect and preserve the environment and can enhance our awareness about environmental protection. Strategies and pollution management tools are of great importance for stakeholders and decision makers. Water treatment and management relates to all the processes used to purify water including traditional processes such as decantation, filtration, and adsorption, and of the specific processes where one carries out some chemical reactions to facilitate the treatment of this waste (precipitation/filtration). Rapid industrialization and urbanization have resulted in the deterioration of water, air, and land quality (Sdiri and Bouaziz 2014). Various industrial activities including textile dyeing, fertilizer production, and mining activities generate high volume of contaminated wastewaters (Klay et al. 2010; Lim and Aris 2014; Watlington 2005). The tremendous increase in the use of contaminants over the past few decades has eventually resulted in an increased flux of toxic substances in the environment. Various methods were proposed for wastewater treatments; they including ion exchange resins (Fu and Wang 2011; Iqbal et al. 2009), solvent extraction (Sadegh Safarzadeh et al. 2007), electrochemical treatment (Sulaymon et al. 2011), and biosorption (Ahmad et al. 2010; Das 2012). Among those techniques, adsorption was the most preferred technique due to its simplicity and relatively low cost (Ali and Gupta 2007; Bhattacharyya and Gupta 2008; Itskos et al. 2010; Jaman et al. 2009). Efforts are being done to find out the most economic water treatment technology.

Sustainable development has become a slogan for both developed and developing countries; it is now becoming a prerequisite for the appropriations granted to the countries. If the credit will contribute to the sustainable development, it will be easily granted because the progress of a nation is conditioned by the sustainable development indices. This inevitable condition measure the development of a community or a country.

Currently, most of the new techniques for wastewater treatments take into account such a factor. Special attention was given to the sustainable development as a main topic of the current integrated environment management meeting. The success of a new advanced technique applied for the treatment of water; ground and air can be highly efficient if it consider sustainable development indices. Thus, in all the processes of water treatment, the aspect of the sustainable development is of significant positive impact on the environment (Muga and Mihelcic 2008).

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Recycling and managing wastewaters is fundamentally important for supporting the economy of water resources and therefore contributes to the efficient management of such scarce resources.

All of the publications retained in this journal issue treated mechanisms of purification and recycling this hydrous waste in order to establish a viable technique that would be of great importance for developing water treatment processes. They were selected from the presentations in the International Conference in Integrated Management of Environment (ICIME) congress that has been conceived as a special platform to exchange knowledge among researchers from the Euro-Mediterranean region. The main idea was to share the environmental impacts and the negative effects of human activities on the environment; recent achievements of researchers acting within the region for remediation, protection, and smart management of our natural resources. If our chaotic human activities are negatively impacting the main environmental components, then it is the duty of scientists to find out the right solutions to prevent, educate, and create real hope for the forthcoming generations.

The ICIME conference was held in Hammamet, Tunisia, from 25 to 28 September 2014. More than 300 participants attended this event to share new findings and discuss the potential applications of such new processes that can be turned out to viable technique for sustainable development. A good and transparent work of selection has been undertaken to choose papers to inclusion in this special issue. The intense and fruitful exchange between the present researchers clearly showed their common concern to address the problem of waste and remediation together. Few problems may be specific to a given region, but similarity in the diagnosis as well as the remediation approaches demonstrated that the scientific community is in charge of bringing solutions for sustainable environmental protection.

Beyond the presented results, our meeting was a great occasion of launching new collaborative actions and new networks to better face the challenges and handle the risks for our resources and human being.

So, we are really grateful for researchers who attended this edition of ICIME; congratulations for the authors with published papers. We are thankful for all authors who actively contribute to the success of the meeting, hoping that there will be other occasions to meet and exchange ideas and new scientific results. Doctor Philippe Garrigues, Editor in chief of Environmental Sciences and Pollution Research, and the editorial team are acknowledged for their endless help during the review process of this special issue.

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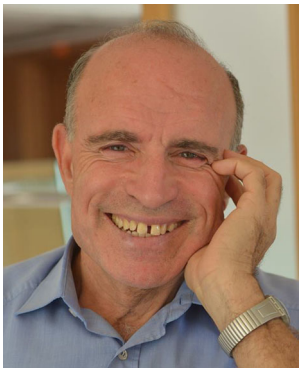

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