Water industry: water-energy-health nexus

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Water, energy, and human health have very close relationships. Energy requires a significant amount of water in the production, purification, and distribution processes, whereas the supply of energy to the purification and transport of water is essential. Most of the water contaminated with pathogens from human/animal feces causes diseases including diarrhea. Unfortunately, residents in areas that are not receiving a stable supply of energy and where access to safe and clean drinking water is restricted, especially young children under the age of five, are more likely to be exposed to various bacteria and live in less sanitary environments. In this regard, energy-efficient water treatment technologies are urgently needed for sustainable, healthy human living.

The International Water Industry Conference 2016, organized by Kyungpook National University (KNU) Advanced Institute of Water Industry, Daegu, Korea, 18–21 October, 2016, was held to share and discuss recent research activities with water industry in terms of water-energy-health. The water-energy-health nexus issue is one of the most important and urgent subjects to be resolved for both the current and next generations. Selected papers on innovative topics on the nexus, including photocatalytic water treatment, aerobic and anaerobic microbial reactions, electrocatalysis, sonolysis, and membrane osmosis, are published in this special issue. The editors of the special issue acknowledge the support from the National Research Foundation of Korea (2016R1A2B4007366 and 2018R1A6A1A03024962), the city of Daegu, and the Korea Tourism Office. In addition, we are grateful to Prof. Kwang-Ho Choo at the Department

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