

Special issue on the 4th International Conference on Recycling and Reuse 24–26 October 2018, Istanbul, Turkey

Preface

Hatice Eser Okten^a, Nilgun Balkaya^b, Serdar Aydin^b, H. Kurtuluş Ozcan^b,
Emine Elmaslar^b, Atakan Ongen^b, Huseyin Selcuk^b

^aIzmir Institute of Technology, Engineering Faculty, Environmental Engineering Dept., Gulbahce, Urla, Izmir, Turkey

^bIstanbul University - Cerrahpasa, Engineering Faculty, Environmental Engineering Dept. Avcilar, Istanbul, Turkey

In order to reach the ultimate goal of a prosperous human-centered society, new approaches in industrialization are being conceptualized, discussed or put into action in different parts of the world. However, industrial development and progress still depend heavily on limited natural resources such as water, minerals and fuels. A simple database search shows that interest of academia on concepts of recycling and reuse has doubled in the last 5 years, with a consistent increase since 2001. Research mainly includes but is not limited to reusing and recycling of lithium ion batteries in order to recover lithium, greywater for sustainable water management specifically at urban areas, rare earth elements, solid waste and industrial wastewater. Valorization of industrial wastewater for closing the on-site water cycle and recovery of resources including minerals and energy has been the focus of researchers and policy-makers alike, in the last decade. Apart from more conventional treatment approaches such as electrocoagulation, membrane filtration, and advanced oxidation, nanotechnology-based techniques have recently begun drawing attention.

This special issue is composed of a number of scientific works presented at the 4th International Conference on Recycling and Reuse, held on 24–26 October 2018 in Istanbul, Turkey. The biennial Conference was organized by Istanbul University, Environmental Engineering Department, Turkey. The Conference program was comprised of a wide spectrum of presentations, oral and poster, that included research on nanotechnology, development of new materials, energy harvesting, and treatment technologies. A total of 105 oral and 85 poster presentations were presented in the topics of advanced oxidation technologies, waste reduction, water and wastewater management, solid waste treatment and management, rare earth elements, hazardous waste management, resource use, renewable energy technologies, circular economy approach, public health issues, and management aspect of recycling and reuse. The Conference also hosted a workshop for ERA-NET co-funded ECOSAFEFARMING Project, which aimed at treating municipal wastewater in order to produce irrigation quality, safe and secure water resource. The guest editors expect that through focusing on recycling and reusing of our planet's limited resources, this issue shall contribute to sustainability by providing scientific and technological knowledge.

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