

# Recycling Materials from Waste Electrical and Electronic Equipment

## *Selected papers from the 13<sup>th</sup> International Conference on Waste Management and Technology in Beijing, China*

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The International Conference on Waste Management and Technology (ICWMT) is an important platform for specialists and officials to discuss scientific problems, exchange experiences, and look for innovative solutions related to solid waste management. The ICWMT 13 will be held in Beijing, China from 21–24 March 2018, with themed “Overall Control of Environmental Risks”. Electronic waste (E-waste) recycling is one of the main topics of ICWMT 13.

Waste Electrical and Electronic Equipment (WEEE) is regarded as one of the fastest growing waste streams in the world. Its annual amount has surpassed 50 million metric tons. If the estimated amount of e-waste generated every year would be put into containers on a train, it would go once around the world! The recycling potential of e-waste can reach approximately 100 billion US\$. The informal recycling has caused many serious environmental disasters, especially in some developing countries. However, there are significant quantities of valuable materials, such as plastics, metals, especially rare and precious metals, in the e-waste. Consequently, the recovery of these materials from e-waste in environmentally friendly approaches can make much sense to environmental protection and natural resources sustainability. The environmentally sound management of e-waste has been a building block for United Nations’ agreements, like the 2030 Agenda for Sustainable Development and Chemicals and Wastes Conventions.

This special issue includes a selection of submitted manuscripts to ICWMT 13 and the contributions followed by a call-for-papers for a special issue on “Recycling Materials from WEEE” sent to the potential participants of the ICWMT 13. The topics of the special issue mainly include 1) characteristics of valuable materials of WEEE, 2) technologies and practices for critical metals recovery, 3) green design and remanufacture, 4) life cycle assessment, and 5) the policy and standards of WEEE.

In this special issue, thirteen papers were selected for publication after a peer review process. Six articles can be categorized as using different methods recovering valuable materials from WEEE. Two papers describe the strategies of WEEE in China by using Life Cycle Assessment (LCA) method. Two review papers contributions recovery of precious metals from WEEE. In addition, one article emphasis on the silicon carbide waste as second materials. Finally, two articles focus on the WEEE’s simulation and social-economic analysis, separately.

In summary, this special issue gathers 13 excellent research contributions from all over the world and focuses on various areas on the WEEE. We are convinced that this collection can advance the field and inspire new research.

We would like to thank all the authors for their contributions to this special issue. In particular, we appreciate the kind support from the editorial office of FESE. We also wish to thank the reviewers. Their precious time and invaluable and detailed suggestions have been especially helpful in improving the quality of each paper and, therefore, this special issue.

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