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**SMART TECHNOLOGIES FOR WASTE
PROCESSING FROM THE AUTOMOTIVE
INDUSTRY**

Editor

Dr.h.c. prof. Ing. Ľubomír Šooš, PhD.

Bratislava, 2022

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Introduction

Dear readers, waste management specialists and students,

This is another issue in the series of books prepared by the UNIVNET association - University and Industrial Research and Education Platform of the Recycling Society. The publication sums up the results of activities related to the assessment of state, waste generation forecasting and development of new technologies for material and energy recovery of the selected types of waste from the automotive industry in 2021.

The UNIVNET association was established upon an agreement between the Ministry of Education, Science, Research and Sport and the leader of the association – Slovak University of Technology in Bratislava (STU BA). In addition to STU BA, the association includes four other universities and the Automotive Industry Association of the Slovak Republic (ZAP SR).

The EU waste management policy focuses on the reduction of negative impacts of waste on the environment and human health and, at the same time, on the improvement of waste recovery efficiency in the form of secondary raw materials and energy. In order to switch over to circular economy it is necessary to implement changes in the entire value chain, from the product design up to new business and market models, including the new methods of waste conversion into resources, up to the change of consumer behaviour. This foresees a complete systemic change and innovation not only in the field of technologies, but also in organization, society, financing methods and formulation of policies.

The Slovak Republic is currently facing many environmental challenges. We have problems with air quality, low level of waste recycling and also with the protection of ecosystems. The basic vision defined in the Strategy of the Environmental Policy of the Slovak Republic through 2030 is to achieve better environmental quality and a sustainable circular economy.

The publication we present to you is divided into eight logically related chapters. Individual chapters are devoted to the analysis of waste quantities, processing capacities, forecasting of the waste change in relation to the launch of electromobility, waste preparation for reuse, design of technology for the recovery of laminated glass, recycling of metal-bearing waste from accumulators, waste from sound-proofing and thermal insulation, recycling of rubber, natural rubber and plastics, and finally the possibilities for energy recovery from waste.

I believe that this publication will provide you with the necessary information on the state and issues of waste management in the automotive industry and becomes an inspiration for those who deal with the minimization and recovery of waste generated in their production, operation, and processing of old vehicles.

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