CARL VON OSSIETZKY **UNIVERSITÄT**OLDENBURG

REMANUFACTURING AND REUSE IN A CHANGING AUTOMOTIVE WORLD - A

THREE CONTINENT APPROACH

Overview

Scarce and valuable resources, including potentially hazardous materials, are increasingly present in end-of-life vehicles. Electrical and electronic components in motors, sensors, electronics, batteries, and other parts present new materials and material combinations. And compositions will continue to change as new products become safer, more efficient, more communicative and intelligent.

A new three-continent collaboration between researchers in Asia, Europe and North America is introduced. The effort includes assessment of information on the changing composition of vehicles, development of decision-making tools to assist in reuse and recycling, and development of eco-efficient engineering processes for remanufacturing.



New Directions



The Cascade Use research group seeks to investigate the efficacy and potential for a circular economy that maximises resource efficiency. There is an existing partnership between the group and China and Canada which provides valuable international insight, case studies and exposure. The partnership considers all parts of the automobile, from the critical materials and electronics used to the abundant materials.

The recycling markets in Germany, Canada and China are vast and consist of many industrial and academic links. The Cascade Use research group is actively seeking to make new industry connections to collaborate on open and closed loop problems.

If you need asssistance with environmental assessment of recycling and reuse strategies, analysis of gathered data or seek to make a strategic partnership, please contact us!





Steven B. Young, Ph.D, PEng

Associate Professor, Interim Director, Environment & Business School of Environment, Enterprise and Development University of Waterloo Email: <u>sb.young@uwaterloo.ca</u>

Chen Ming, Ph.D. Professor Executive Vice Chairman and Secretary-General of AARTI School of Mechanical Engineering Shanghai Jiao Tong University Email: mingchen@sjtu.edu.cn

VON OSSIETZKY universität OLDENBURG

Bundesministerium für Bildung und Forschung

Dr.-Ing. Alexandra Pehlken, alexandra.pehlken@uni-oldenburg.de, <u>www.uni-oldenburg.de/cascadeuse/</u>