

1. Record Nr.	UNINA9910254909003321
Autore	Schönmayr David
Titolo	Automotive Recycling, Plastics, and Sustainability : The Recycling Renaissance // by David Schönmayr
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-57400-0
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXIV, 184 p. 82 illus.)
Disciplina	658.4083
Soggetti	Industrial management—Environmental aspects Social responsibility of business Waste management Sustainable development Corporate Environmental Management Sustainability Management Corporate Social Responsibility Waste Management/Waste Technology Sustainable Development
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface -- Acknowledgements -- 1. A transdisciplinary journey into sustainability science -- 1.1. Transdisciplinarity – why is it so important? -- 1.2. Geographic society and environment research -- 1.3. Systems sciences -- 1.4. Sustainable development -- 1.5. Ecology -- 1.6. Economy -- 1.7. Society, ethics, psychology, politics, and technology -- 1.8. In a nutshell: controversial sustainability as a challenge -- 2. Sustainability and automotive plastics - a controversial industry reality -- 2.1. Plastics -- 2.1.1. Definition and development of plastics -- 2.1.2. The life cycle of plastics -- 2.1.3. Environmental and social impact of plastics -- 2.1.4. Waste treatment technologies for (automotive) plastics -- 2.1.5. Environmentally sound solution: circular life cycle of plastics -- 2.1.6. Plastics are a blessing and a curse - a summary -- 2.2. Automotive plastics -- 2.2.1. Automotive and automotive plastic trends -- 2.2.2. Environmental impact of automotive

plastics and cars in general -- 2.2.3. The car life cycle, ELV management, and recycling -- 2.3. In a nutshell: Holistic controversy of automotive plastics -- 3. What do the experts say? The survey results. -3.1. Validation of survey data through expert workshop -- 3.2. Demographic data and details about the survey participants -- 3.3. Automotive plastics recycling and recycled plastics -- 3.4. Special information from the survey groups -- 3.4.1. The survey - automotive group -- 3.4.2. The survey - recycling group -- 3.4.3. The survey - plastics group -- 3.5. In a nutshell: The survey results -- 4. A SCOT analysis, future perspectives and scenarios -- 5. Concepts for solutions to advance automotive recycling -- 5.1. A solution ranking by experts -- 5.2. Solutions for politics, companies, and independent institutions -- 5.3. Elements of a roadmap to ecologically sustainable automotive plastics -- 6. Today's illusion: true sustainability -- 7. Today's chance: the recycling renaissance -- 8. Why automotive recycling is an opportunity -- an executive summary -- Bibliography.-Appendices -- Glossary -- Methods of the empirical research -- The original survey, and expert interview.

Sommario/riassunto

This book provides transdisciplinary analyses of the automotive plastics production and recycling system, including prognoses, scenarios and solutions for corporate sustainability management. A book on plastics, not written by a plastics guy. But a sustainability guy. Plastics schizophrenia and the automotive abyss: The industry is facing a severe challenge. It is the inevitable and promising change towards a sustainable economy. However, the automotive industry is primarily concerned with the CO₂ emissions from cars when driving, while the rise of lightweight plastics, electric drive and heavy batteries make the production and end-of-life phase ever more important. Therefore, the currently increasing use of non-sustainable virgin plastics in cars has to be tackled. The plastics and the automotive industry now have a chance, and this chance is the Recycling Renaissance. This book offers:

- Holistic and transdisciplinary overview on sustainability and automotive plastics from all angles including economy, ecology, technology, and politics with a focus on Europe
- Concise analyses, prognoses, tools and a roadmap with solutions for companies, developed together with international experts from industry and academia
- Strong scientific basis and independent research including a Europe-wide survey, expert interviews, and workshops
- More than 80 illustrations and 15 tables including a SCOT analysis
- Executive summaries after each chapter for fast reading

"The uniqueness of this book lies within the different point of view on this topic from a critical, outstanding scientist." - Univ.-Prof. Dipl.-Ing. Dr. mont. Pomberger, Montanuni Leoben.
