

TABLE OF CONTENTS

PREFACE	ix
LIST OF PARTICIPANTS	xiii
GROUP PICTURE	xxii
 CHAPTER 1. INTRODUCTION	
Introduction to Recycling J. Leidner	3
Regulations and Practices of Polymer Recycling in NATO Countries (A). European Countries D. Curto and Y. Başar	17
Regulations and Practices of Polymer Recycling in NATO Countries (B). Canada and United States of America F. H. C. Edgecombe	29
Economic Aspects of Plastics Recycling M. J. Bevis	41
Polymer Recycling for Energy Recovery An Application of Life Cycle Analysis Principles M. Xanthos and A. L. Bisio	57
 CHAPTER 2. FUNDAMENTAL ISSUES PERTINENT TO POLYMER RECYCLING	
Upgrading of Recyclates - the Solution for High Value Applications: Restabilization and Repair H. Herbst, K. Hoffmann, R. Pfaendner and H. Zweifel	73

Biodegradable Materials: State of Art and Future Perspectives C. Bastioli	103
Polymer Blends' Technology for Plastics Recycling L. A. Utracki	123
Compatibilization of Heterogeneous Polymer Mixtures from the Plastics Waste Streams H. J. Radusch, J. Ding and G. Akovali	153
Morphology Development During Processing of Recycled Polymers H. J. Radusch	191
CHAPTER 3. REPROCESSING OF SINGLE TYPE POLYMERS	
Derivation and Validation of Models to Predict the Properties of Mixtures of Virgin and Recycled Polymers C. A. Bernardo	215
Reprocessing of Poly (Vinyl chloride), Polycarbonate and Polyethyleneterephthalate F. P. La Mantia	249
Reprocessing of Polyolefins: Changes in Rheology and Reprocessing Case Studies A. T. P. Zahavich and J. Vlachopoulos	271
CHAPTER 4. REPROCESSING OF MIXTURE OF POLYMERS	
Separation Technologies J. Leidner and G. Boden	301
Reprocessing of Commingled Polymers and Recycling of Polymer Blends L. A. Utracki	333
Non-Conventional Processing Techniques for Polymer Recycling M. J. Bevis	355

Reprocessing and Properties of Homopolymer Blends of Virgin and Recycled Polymers

F. P. La Mantia

371

CHAPTER 5. RECOVERY OF CHEMICALS AND ENERGY

PVC Recycling with Chlorine Recovery

G. Menges

389

Thermolytic Processes

M. Xanthos and J. Leidner

407

Solvolysis

M. Xanthos and S. H. Patel

425

Fluidized Bed Incinerator with Energy Recovery System as a Means of Plastic Recycling

S. Suzuki and T. Minoura

437

CHAPTER 6. THE WAY FORWARD

Future Perspectives and Strategies of Polymer Recycling

H. J. Radusch

451

General Discussion - the Participants' view

469

INDEX

473