

# Fraunhofer Competence Landscape Recycling technologies



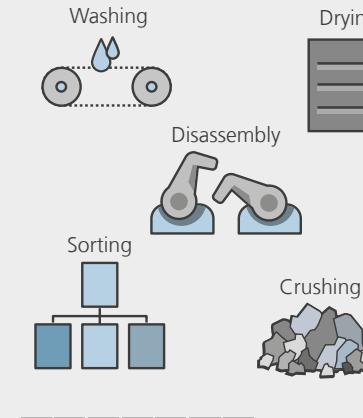
Plastic waste



Collection, logistics  
and waste analysis

[5 | 12 | 13 | 23 | 26 | 28]

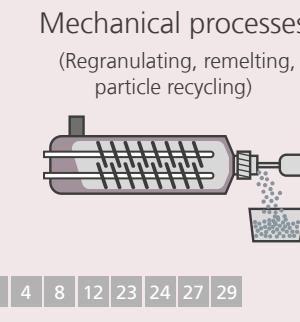
## Mechanical pretreatment



Washing, Drying, Disassembly, Sorting, Crushing

[5 | 12 | 13 | 16 | 24 | 26 | 29]

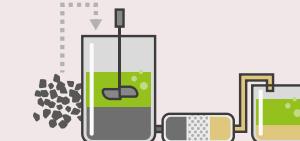
## Material recycling



Mechanical processes  
(Regranulating, remelting,  
particle recycling)

[2 | 4 | 8 | 12 | 23 | 24 | 27 | 29]

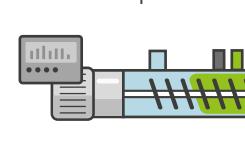
## Physical dissolution processes



Physical dissolution  
processes

[2 | 23]

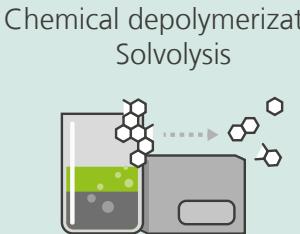
## Compounding



Compounding

[3 | 5 | 6 | 8 | 9 |  
15 | 19 | 22 | 25 | 27]

## Chemical Recycling



Chemical depolymerization  
Solvolytic

[3 | 5 | 27]

## Pyrolysis and catalytic Cracking



Pyrolysis and  
catalytic Cracking

[15 | 28]

## Gasification



Gasification

[15 | 28]

Regranulates

Solids

Virgin recyclate

Monomers

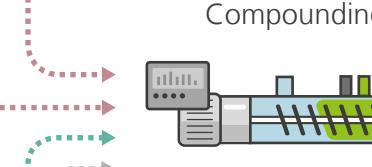
Solids

Oil

Gas

Gas

## Product development and production



Product development  
and production

[3 | 5 | 6 | 8 | 9 |  
12 | 15 | 18 | 19 | 21 |  
22 | 25 | 27 | 28 | 29]

Plastics

Polymerization

Steamcracking

Electrolysis / Synthesis

Petro-Chemicals

Fuels

Gas

6 | 7 | 11 | 14 | 15 |  
20 | 28



Plastic product

1	CBP	11	IKTS	21	IST
2	CSP	12	ILT	22	ITWM
3	IAP	13	IML	23	IVV
4	IBP	14	IMM	24	IWKS
5	ICT	15	IMWS	25	IWU
6	IFAM	16	IOSB	26	IZFP
7	IGB	17	IPK	27	LBF
8	IGCV	18	IPT	28	UMSICHT
9	IGD	19	ISC	29	WKI
10	IIS	20	ISE		