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Titolo	Crystallization Modalities in Polymer Melt Processing [[electronic resource] /] / by Hermann Janeschitz-Kriegl
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ISBN	3-319-77317-8
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Descrizione fisica	1 online resource (238 pages)
Disciplina	547.7
Soggetti	Polymers Amorphous substances Complex fluids Materials science Physical chemistry Fluid mechanics Polymer Sciences Soft and Granular Matter, Complex Fluids and Microfluidics Characterization and Evaluation of Materials Physical Chemistry Engineering Fluid Dynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface to the First Edition -- Preface to the Second Edition -- Kinetics and structure formation in unloaded quiescent melts -- Flow induced processes causing oriented crystallization -- Closing remarks -- Subject Index -- Author Index.
Sommario/riassunto	In addition to structure formation in crystallizing polymers and semicrystalline polymers, this second edition completes the topic of transport phenomena. It also reviews solidification by crystallization during cooling and under flow or pressure, which all play an enormous role in polymer melt processing. Generally, there is an intensive interaction between three transport phenomena: heat transfer, momentum transfer (flow, rheology) and (flow induced) crystallization.

The strong interaction between the three transport phenomena is a major challenge when it comes to experimentation, and advances in this area are detailed in the book, guiding further development of sound modeling. This book enables readers to follow an advanced course in polymer processing. It is a valuable resource for polymer chemists, applied physicists, rheologists, plastics engineers, mold makers and material scientists.

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