

Nucleation

This book represents a detailed and systematic account of the basic principles, developments and applications of the theory of nucleation. The formation of new phases begins with the process of nucleation and is, therefore, a widely spread phenomenon in both nature and technology. Condensation and evaporation, crystal growth, electrodeposition, melt crystallization, growth of thin films for microelectronics, volcano eruption and formation of particulate matter in space are only a few of the processes in which nucleation plays a prominent role. The book has four parts, which are devoted to the thermodynamics of nucleation, the kinetics of nucleation, the effect of various factors on nucleation and the application of the theory to other processes, which involve nucleation. The first two parts describe in detail the two basic approaches in nucleation theory - the thermodynamic and the kinetic ones. They contain derivations of the basic and most important formulae of the theory and discuss their limitations and possibilities for improvement. The third part deals with some of the factors that can affect nucleation and is a natural continuation of the first two chapters. The last part is devoted to the application of the theory to processes of practical importance such as melt crystallization and polymorphic transformation, crystal growth and growth of thin solid films, size distribution of droplets and crystallites in condensation and crystallization. The book is not just an account of the status quo in nucleation theory - throughout the book there are a number of new results as well as extensions and generalisations of existing ones.

255,50 €

238,79 € (zzgl. MwSt.)

*Lieferfrist: bis zu 10 Tage***Artikelnummer:** 9780750646826**Medium:** Buch**ISBN:** 978-0-7506-4682-6**Verlag:** Elsevier Science**Erscheinungstermin:** 11.05.2000**Sprache(n):** Englisch**Auflage:** Erscheinungsjahr 2000**Produktform:** Gebunden**Gewicht:** 934 g**Seiten:** 544**Format (B x H):** 164 x 242 mm