

1. Record Nr.	UNINA9910860802203321
Autore	Blavette Didier
Titolo	Diffusion, segregation and solid-state phase transformations : Course reminders and solved problems // Didier Blavette, Thomas Philippe
Pubbl/distr/stampa	Les Ulis : , : EDP Sciences, , [2022] ©2022
ISBN	2-7598-2744-5
Edizione	[1st ed.]
Descrizione fisica	1 online resource (266 p.)
Collana	Current Natural Sciences
Disciplina	536/.7
Soggetti	Materials science Thermodynamics SCIENCE / Physics / General
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Frontmatter -- Preface -- Preface by Yves Bréchet -- Contents -- Chapter 1 Thermodynamics of Equilibria and Phase Diagrams -- Chapter 2 Diffusion and Transport in Solids -- Chapter 3 Kinetics of Formation of a New Phase -- References -- Index
Sommario/riassunto	This book contains a set of solved problems on the thermodynamics of phase transformations, diffusion and kinetics in alloys. These problems, preceded by a reminder of the course, are completed by answers detailing each stage of the calculations. The topics covered in the book (precipitation, ordering, segregation on crystalline defects, growth of a thin film, oxidation, creep, doping of semiconductors, etc.) are essential for the design of materials and the optimisation of heat treatments and properties, whether for structural materials (steels, Ni, Al, Cu, Ti-based alloys, etc.) or functional materials (semiconductors, alloys and magnetic multilayers, etc.). They often lead to an industrial problem (aeronautics, nuclear power plants, microelectronics, etc.). This book is intended for teachers and students of bachelor's and master's degrees, but also for engineering students, PhD students and researchers.

2. Record Nr.	UNINA9910299748803321
Autore	Stone Brian
Titolo	Chatter and Machine Tools / / by Brian Stone
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-05236-5
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (268 p.)
Disciplina	621.902
Soggetti	Manufactures Vibration Dynamics Machinery Manufacturing, Machines, Tools, Processes Vibration, Dynamical Systems, Control Machinery and Machine Elements
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1 -- Basic chatter theory 2 -- Extension of theory 3 -- Chatter resistant multiple-tooth cutters 4.-Structural improvements 5 -- Grinding 6 -- Conclusions.
Sommario/riassunto	Focussing on occurrences of unstable vibrations, or Chatter, in machine tools, this book gives important insights into how to eliminate chatter with associated improvements in product quality, surface finish and tool wear. Covering a wide range of machining processes, including turning, drilling, milling and grinding, the author uses his research expertise and practical knowledge of vibration problems to provide solutions supported by experimental evidence of their effectiveness. In addition, this book contains links to supplementary animation programs that help readers to visualise the ideas detailed in the text. Advancing knowledge in chatter avoidance and suggesting areas for new innovations, Chatter and Machine Tools serves as a handbook for those desiring to achieve significant reductions in noise, longer tool and grinding wheel life and improved product finish.

