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Titolo	Ecological genetics [[electronic resource] /] / David J. Merrell
Pubbl/distr/stampa	Minneapolis, : University of Minnesota Press, c1981
ISBN	0-8166-5520-0 1-4356-0618-3
Descrizione fisica	1 online resource (513 p.)
Disciplina	576.58
Soggetti	Ecological genetics Ecology Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliography and index.
Nota di contenuto	Preface; Acknowledgments; Contents; Chapter 1 The Nature of Ecological Genetics; Chapter 2 Adaptation; Chapter 3 Biological Variation; Chapter 4 Mutation; Chapter 5 Natural Selection; Chapter 6 Balanced Polymorphism; Chapter 7 Polymorphism and Population Dynamics; Chapter 8 Genetic Loads; Chapter 9 Chromosomal Polymorphism; Chapter 10 Random Genetic Drift; Chapter 11 Migration and Gene Flow; Chapter 12 The Origin of Races; Chapter 13 Neutralist vs. Selectionist; Chapter 14 The Species Concept; Chapter 15 The Origin of Species; Chapter 16 Competition; References; Index
Sommario/riassunto	Ecological Genetics was first published in 1981. Population genetics and population ecology originally developed independently, but are now merging into a discipline known as ecological genetics. Thus far, the union has been an uneasy one, and this book is an effort to further the union. The ecological geneticist is an experimental naturalist, concerned not just with the distribution and abundance of populations but with their genetic compositions as well. The methodology involves field and laboratory research and permits study of the ways that natural populations adapt to their physical and b

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Titolo	Handbook of metal injection molding [[electronic resource] /] / edited by Donald F. Heaney
Pubbl/distr/stampa	Cambridge, U.K. ; ; Philadelphia, Pa., : Woodhead Pub., 2012
ISBN	0-85709-623-0
Descrizione fisica	1 online resource (609 p.)
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Altri autori (Persone)	HeaneyDonald F
Disciplina	671.37
Soggetti	Injection molding of metals
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Handbook of metalinjection molding; Copyright; Contents; Contributor contact details; Preface; 1 Metal powder injection molding (MIM): key trends and markets; 1.1 Introduction and background; 1.2 History of success; 1.3 Industry structure; 1.4 Statistical highlights; 1.5 Industry shifts; 1.6 Sales situation; 1.7 Market statistics; 1.8 Metal powder injection molding market by region; 1.9 Metal powder injection molding market by application; 1.10 Market opportunities; 1.11 Production sophistication; 1.12 Conclusion; 1.13 Sources of further information; Part I Processing 2 Designing for metal injection molding (MIM)2.1 Introduction; 2.2 Available materials and properties; 2.3 Dimensional capability; 2.4 Surface finish; 2.5 Tooling artifacts; 2.6 Design considerations; 2.7 Sources of further information; 3 Powders for metal injection molding (MIM); 3.1 Introduction; 3.2 Ideal MIM powder characteristics; 3.3 Characterizing MIM powders; 3.4 Different MIM powder fabrication techniques; 3.5 Different alloying methods; 3.6 References; 4 Powder binder formulation and compound manufacture in metal injection molding (MIM); 4.1 Introduction: the role of binders 4.2 Binder chemistry and constituents4.3 Binder properties and effects on feedstock; 4.4 Mixing technologies; 4.5 Case studies: lab scale and commercial formulations; 4.6 References; 5 Tooling for metal injection molding (MIM); 5.1 Introduction; 5.2 General design and function of injection molding machines; 5.3 Elements of the tool set; 5.4 Tool design options; 5.5 Special features and instrumentation; 5.6

Supporting software and economic aspects; 5.7 Sources of further information; 6 Molding of components in metal injection molding (MIM); 6.1 Introduction; 6.2 Injection molding equipment
6.3 Auxiliary equipment6.4 Injection molding process; 6.5 Common defects in MIM; 6.6 References; 7 Debinding and sintering of metal injection molding (MIM) components:; 7.1 Introduction; 7.2 Primary debinding; 7.3 Secondary debinding; 7.4 Sintering; 7.5 MIM materials; 7.6 Settering; 7.7 MIM furnaces; 7.8 Furnace profiles; 7.9 Summary; 7.10 Acknowledgements; 7.11 References; Part II Quality issues; 8 Characterization of feedstock in metal injection molding (MIM); 8.1 Introduction; 8.2 Rheology; 8.3 Thermal analysis; 8.4 Thermal conductivity; 8.5 Pressure-volume-temperature (PVT)
8.6 Conclusions8.7 Acknowledgments; 8.8 References; 9 Modeling and simulation of metal injection molding (MIM); 9.1 Modeling and simulation of the mixing process; 9.2 Modeling and simulation of the injection molding process; 9.3 Modeling and simulation of the thermal debinding process; 9.4 Modeling and simulation of the sintering process; 9.5 Conclusion; 9.6 References; 10 Common defects in metal injection molding (MIM); 10.1 Introduction; 10.2 Feedstock; 10.3 Molding; 10.4 Debinding; 10.5 Sintering; 10.6 Conclusion; 10.7 References; 11 Qualification of metal injection molding (MIM)
11.1 Introduction

Sommario/riassunto

Metal injection molding combines the most useful characteristics of powder metallurgy and plastic injection molding to facilitate the production of small, complex-shaped metal components with outstanding mechanical properties. The Handbook of metal injection molding provides an authoritative guide to this important technology and its applications.Part one discusses the fundamentals of the metal injection molding process with chapters on topics such as component design, important powder characteristics, compound manufacture, tooling design, molding optimization, debinding, and sintering