

1.	Record Nr.	UNISA990000753260203316
	Autore	McCLUSKEY, John Herbert
	Titolo	Law, justice and democracy / Lord McCluskey
	Pubbl/distr/stampa	London : Sweet and Maxwell, 1987
	ISBN	0-421-37890-5
	Descrizione fisica	VIII, 116 p ; 22 cm
	Disciplina	345.41105
	Soggetti	Magistrati - Inghilterra
	Collocazione	XXVI.1.D 3 (ISP IV 411)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
2.	Record Nr.	UNINA9911018932503321
	Autore	Gupta M (Manoj)
	Titolo	Microwaves and metals / / Manoj Gupta and Wong Wai Leong, Eugene
	Pubbl/distr/stampa	Singapore ; ; Hoboken, NJ, : John Wiley & Sons, c2007
	ISBN	9786612371363 9781282371361 1282371363 9780470822746 0470822740 9780470822739 0470822732
	Descrizione fisica	1 online resource (242 p.)
	Altri autori (Persone)	WongWai Leong
	Disciplina	669.028
	Soggetti	Microwave devices - Industrial applications Metals - Effect of radiation on
	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 and index.
Nota di contenuto	Microwaves and Metals; Preface; Acknowledgments; Introduction to Microwaves; 1.1 Microwaves and Electromagnetic Radiation; 1.2 Development of Microwaves; 1.3 Applications of Microwaves; 1.3.1 Microwave Heating/Processing of Materials; 1.3.2 Communications; 1.3.3 Radio Detection and Ranging (Radar); 1.3.4 Electronic Warfare; 1.3.5 Medical Applications; 1.3.6 Scientific Applications; 1.3.7 Industrial and Commercial Applications; 1.3.8 Potential Applications; 1.4 Frequency Allocation; 1.5 Microwave Generators; 1.6 Summary; References; Microwaves - Theory; 2.1 Introduction; 2.2 Fundamentals 2.2.1 Maxwell's Equations 2.2.2 Permittivity; 2.2.3 Permeability; 2.2.4 Power Dissipated; 2.2.5 Penetration Depth; 2.2.6 Rate of Increase in Temperature; 2.3 Microwave-Material Interactions; 2.3.1 Electronic Polarization; 2.3.2 Orientation or Dipolar Polarization; 2.3.3 Ionic or Atomic Polarization; 2.3.4 Interfacial (Maxwell-Wagner) Polarization; 2.3.5 Frequency Dependence of Polarization Mechanisms; 2.3.6 Conduction Losses; 2.3.7 Hysteresis Losses; 2.4 Summary; References; Microwave Heating; 3.1 Development of Microwave Heating; 3.2 Characteristics of Microwave Heating 3.2.1 Penetrating Radiation 3.2.2 Rapid Heating; 3.2.3 Controllable Field Distributions; 3.2.4 Selective Heating of Materials; 3.2.5 Self-limiting Characteristic; 3.2.6 Microwave Effects; 3.3 Types of Microwave Heating; 3.4 Future Developments; 3.5 Summary; References; Microwave Heating of Metal-Based Materials; 4.1 Microwaves and Metals; 4.2 Observations and Theories-Mechanisms Proposed for Microwave Heating of Metals; 4.2.1 Size and Morphology of Starting Materials; 4.2.2 Effect of Separate Electric and Magnetic Fields; 4.2.3 Sintering Behavior and Mechanisms 4.2.4 Proposed Microwave Sintering Model by Luo et al. 4.2.5 Proposed Microwave Sintering Model by Rybakov et al.; 4.2.6 Model for Microwave Heating of Metal Compacts; 4.3 Microwave Sintering of Metals; 4.3.1 Cermets; 4.3.2 Ferrous Alloys; 4.3.3 Copper Alloys; 4.3.4 Aluminum and Composites; 4.3.5 Magnesium and Composites; 4.3.5.1 Microwave Sintering of Magnesium Composites; 4.3.5.2 Effect of Microwave Heating Rate on Properties of Pure Magnesium; 4.3.6 Tungsten Alloys; 4.3.6.1 Effect of Particle Size Distribution and Phases on Densification 4.3.6.2 Effect of Sintering Atmosphere on Densification 4.3.6.3 Effect of Aspect Ratio of Samples on Densification; 4.3.6.4 Comparison of Sintering Methods on Densification; 4.3.6.5 Microwave Sintering of Nanocrystalline Tungsten Powders; 4.3.7 Tin-Based Alloys (Electronic Solders); 4.3.8 Hybrid Composites; 4.3.9 Layered Composites; 4.4 Other Applications for Microwave Processing of Metals; 4.4.1 Microwave Melting; 4.4.2 Microwave Steel-making; 4.4.3 Heat Treatment and Annealing; 4.4.4 Diffusion Coating; 4.4.4.1 Microwaves and Aluminization; 4.4.4.2 Microwaves and Chromization 4.4.4.3 Microwaves and Boronization
Sommario/riassunto	Using microwaves to treat metal-based materials is rapidly emerging as an energy-efficient tool to interact with metals for a number of processes such as sintering, melting, brazing, carburizing and annealing. Microwaves can sinter a wide variety of metal compacts with comparable or enhanced end properties, while at the same time delivering tremendous energy savings over conventional sintering. Microwave processes are therefore gaining increasing attention and adoption in both academia and industry. Gupta and Wong have written this comprehensive text to introduce readers to the world of micr

