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Titolo	Applications of turbulent and multiphase combustion [[electronic resource] /] / Kenneth K. Kuo, Ragini Acharya
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Altri autori (Persone)	AcharyaRagini
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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	Applications of Turbulent and Multiphase Combustion; Contents; Preface; Chapter 1 Solid Propellants and Their Combustion Characteristics; 1.1 Background of Solid Propellant Combustion; 1.1.1 Definition of Solid Propellants; 1.1.2 Desirable Characteristics of Solid Propellants; 1.1.3 Calculation of Oxygen Balance; 1.1.4 Homogeneous Propellants; 1.1.4.1 Decomposition Characteristics of NC; 1.1.5 Heterogeneous Propellants (or Composite Propellants); 1.1.6 Major Types of Ingredients in Solid Propellants; 1.1.6.1 Description of Oxidizer Ingredients; 1.1.6.2 Description of Fuel Binders 1.1.6.3 Curing and Cross-Linking Agents 1.1.6.4 Aging; 1.1.7 Applications of Solid Propellants; 1.1.7.1 Hazard Classifications of Solid Propellants; 1.1.8 Material Characterization of Propellants; 1.1.8.1 Propellant Density Calculation; 1.1.8.2 Propellant Mass Fraction,; 1.1.8.3 Viscoelastic Behavior of Solid Propellants; 1.1.9 Thermal Profile in a Burning Solid Propellant; 1.1.9.1 Surface and Subsurface Temperature Measurements of Solid Propellants; 1.1.9.2 Interfacial Energy Flux Balance at the Solid Propellant Surface; 1.1.9.3 Energy

Equation for the Gas Phase

1.1.9.4 Burning Rate of Solid Propellants 1.1.9.5 Temperature Sensitivity of Burning Rate; 1.1.9.6 Measurement of Propellant Burning Rate by Using a Strand Burner; 1.1.9.7 Measurement of Propellant Burning Rate by Using a Small-Scale Motor; 1.1.9.8 Burning Rate Temperature Sensitivity of Neat Ingredients; 1.2 Solid-Propellant Rocket and Gun Performance Parameters; 1.2.1 Performance Parameters of a Solid Rocket Motor; 1.2.1.1 Thrust of a Solid Rocket Motor; 1.2.1.2 Specific Impulse of a Solid Rocket Motor; 1.2.1.3 Density-Specific Impulse; 1.2.1.4 Effective Vacuum Exhaust Velocity 1.2.1.5 Characteristic Velocity C^* 1.2.1.6 Pressure Sensitivity of Burning Rate; 1.2.1.7 Thrust Coefficient Efficiency; 1.2.1.8 Effect of Pressure Exponent on Stable/Unstable Burning in Solid Rocket Motor; 1.2.2 Performance Parameters of Solid-Propellant Gun Systems; 1.2.2.1 Energy Balance Equation; 1.2.2.2 Efficiencies of Gun Propulsion Systems; 1.2.2.3 Heat of Explosion (Hoex); 1.2.2.4 Relative Quickness, Relative Force, and Deviations in Muzzle Velocity; 1.2.2.5 Dynamic Vivacity; Chapter 2 Thermal Decomposition and Combustion of Nitramines
2.1 Thermophysical Properties of Selected Nitramines 2.2 Polymorphic Forms of Nitramines; 2.2.1 Polymorphic Forms of HMX; 2.2.2 Polymorphic Forms of RDX; 2.3 Thermal Decomposition of RDX; 2.3.1 Explanation of Opposite Trends on - and -RDX Decomposition with Increasing Pressure; 2.3.2 Thermal Decomposition Mechanisms of RDX; 2.3.2.1 Homolytic N-N Bond Cleavage; 2.3.2.2 Concerted Ring Opening Mechanism of RDX; 2.3.2.3 Successive HONO Elimination Mechanism of RDX; 2.3.2.4 Analysis of Three Decomposition Mechanisms; 2.3.3 Formation of Foam Layer Near RDX Burning Surface
2.4 Gas-Phase Reactions of RDX

Sommario/riassunto

A hands-on, integrated approach to solving combustion problems in diverse areas. An understanding of turbulence, combustion, and multiphase reacting flows is essential for engineers and scientists in many industries, including power generation, jet and rocket propulsion, pollution control, fire prevention and safety, and material processing. This book offers a highly practical discussion of burning behavior and chemical processes occurring in diverse materials, arming readers with the tools they need to solve the most complex combustion problems facing the scientific community today.

2. Record Nr.	UNINA9910791955003321
Autore	Spillman Deborah Shapple
Titolo	British Colonial Realism in Africa [[electronic resource]] : Inalienable Objects, Contested Domains // by Deborah Shapple Spillman
Pubbl/distr/stampa	London : , : Palgrave Macmillan UK : , : Imprint : Palgrave Macmillan, , 2012
ISBN	1-280-68023-7 9786613657169 0-230-37801-3
Descrizione fisica	1 online resource (258 p.)
Collana	Palgrave Studies in Nineteenth-Century Writing and Culture
Classificazione	SOC002010LIT004120LIT004010
Disciplina	820.9/12 820.9008 820.912
Soggetti	Literature, Modern-19th century Literature-Philosophy British literature African literature Ethnology Culture-Study and teaching Nineteenth-Century Literature Literary Theory British and Irish Literature African Literature Cultural Anthropology Cultural Theory Africa In literature
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Contents; List of Illustrations; Preface and Acknowledgments; Introduction: Reading Colonial Realism; 1 Taking Objects for Origins: Victorian Ethnography and Conrad's Heart of Darkness; 1 Ethnographic Doubling; 2 Of Trifles and Trade: Conrad's Ethnography of Colonialism; 3 Authenticity on the Market, an Afterword; 2 The Uncanny Object

Lessons of Mary Kingsley and Edward Blyden; 1 If Objects Could Speak, "many a wild story the handles of your table knives could tell"; 2 Out of England: Objects and Others; 3 Not "an object in the midst of other objects"

3 Realism and Realia in Colonial Southern Africa1 Collecting Cape Colony Life; 2 Specimens and Curiosities in Carey-Hobson's The Farm in the Karoo; 3 Outside the Realist Collection: Reckless Generosity and Other Notions of Expenditure; 4 Curses and Gifts in Anna Howarth's Karoo Novels; 4 Artful Tales and Indigenous Arts in Olive Schreiner's The Story of an African Farm; 1 A Portrait of the Artist as a Colonial South African; 2 Schreiner's Grotesque Realism; 3 Histories and "Bushman" Painters; Coda; Bibliography; Index

Sommario/riassunto

What role do objects play in realist narratives as they move between societies and their different systems of value as commodities, as charms, as gifts, as trophies, or as curses? This book explores how the struggle to represent objects in British colonial realism corresponded with historical struggles over the material world and its significance.
