

1. Record Nr.	UNINA9910781411703321
Titolo	Dynamics of explosions // editors, J.R. Bowen, J.-C. Leyer, R.I. Soloukhin
Pubbl/distr/stampa	New York, N.Y., : American Institute of Aeronautics and Astronautics, Inc., c1986
ISBN	1-60086-580-1 1-60086-361-2
Descrizione fisica	1 online resource (679 pages) : illustrations
Collana	Progress in astronautics and aeronautics ; ; v. 106
Altri autori (Persone)	BowenJ. R (J. Raymond) LeyerJ.-C SoloukhinRem Ivanovich
Disciplina	629.1 s 662/.2
Soggetti	Explosions Gas dynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Technical papers presented from the tenth International Colloquium on Dynamics of Explosions and Reactive Systems, Berkeley, California, August 1985, and subsequently revised for this volume." Companion volume to: Dynamics of reactive systems.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Cover""; ""Title""; ""Copyright""; ""Table of Contents""; ""Preface""; ""Chapter I. Flame Acceleration and Transition to Detonation""; ""On the Transition from Deflagration to Detonation""; ""Influence of Chemical Composition on the Deflagration-Detonation Transition""; ""Transmission of a Flame from a Rough to a Smooth-Walled Tube""; ""Investigation of the Explosion-Enhancing Properties of a Pipe-Rack-Like Obstacle Array""; ""The Effect of Transverse Venting on Flame Acceleration and Transition to Detonation in a Large Channel""; ""Truly Unconfined Deflagrations of Ethylene-Air Mixtures"" ""Chapter II. Initiation and Transmission of Detonations"" ""The Influence of Experimental Condition on the Reinitiation of Detonation Across an Inert Region""; ""Critical Diameter of Diffraction for Strong Plane Detonations""; ""Detonation Diffraction by Divergent Channels""; ""Normal Shock Wave Reflection on Porous Compressible Material"";

""Correlation Between Shock Flame Predetonation Zone Size and Cell Spacing in Critically Initiated Spherical Detonations""; ""Critical Charge for the Direct Initiation of Detonation in Gaseous Fuel-Air Mixtures""

""Chapter III. Detonation Structure and Limit Propagation"" ""Detonation Cell Size Measurements in Hydrogen-Air-Steam Mixtures""; ""Influence of Cellular Regularity on the Behavior of Gaseous Detonations""; ""Near-Limit Propagation of Detonation in Tubes""; ""Chapter IV. Detonation Kinetics, Structure, and Boundary Effects""; ""Chemical Kinetics of Hydrogen-Air-Diluent Detonations""; ""Chemical Kinetics and Cellular Structure of Detonations in Hydrogen Sulfide and Air""; ""Influence of Hydrocarbon Additives on the Detonation Velocity of Methane-Air Mixtures at Elevated Initial Pressures""

""The Influence of Physical Boundaries on Gaseous Detonation Waves""

""Chapter V. Explosions, Shock Reflections, and Blast Waves""; ""Oblique Shock Wave Reflections in SF6: A Comparison of Calculation and Experiment""; ""Mach Reflection from an HE-Driven Blast Wave""; ""Validation of Numerical Codes for the Simulation of Blast Generated by Vapor Cloud Explosions""; ""Approximate Analytical Solutions for Strong Shocks with Variable Energy""; ""The Effective Constraints for Maximum Entropy Formalism in Gas Explosion Systems""; ""Chapter VI. Heterogeneous Detonations and Explosions""

""Detonation Velocity in Heterogeneous Liquid Decane-Gas Systems""

""Direct Initiation of Detonation in a Decane Spray""; ""Experimental Study of Detonations in Starch Particle Suspensions with O<sub>2</sub>/N<sub>2</sub>, H<sub>2</sub>/O<sub>2</sub>, and C<sub>2</sub>H<sub>4</sub>/O<sub>2</sub> Mixtures""; ""The Chapman-Jouguet Condition and Structure of Detonations in Dust-Oxidizer Mixtures""; ""Structure of the Detonations in Gaseous Mixtures Containing Aluminum Particles in Suspension""; ""A Control System Model for Coal Dust Flame Transition from Combustion to Detonation""; ""An Experimental Study of Soot Film Detonations""; ""Influence of Turbulence on Dust and Gas Explosions in Closed Vessels""

---