

1. Record Nr.	UNISA996466818703316
Titolo	Proceedings of the Third International Conference on Numerical Methods in Fluid Mechanics [[electronic resource]] : Vol. II Problems of Fluid Mechanics // edited by Henri Cabannes, Roger Temam
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1973
ISBN	3-540-38392-1
Edizione	[1st ed. 1973.]
Descrizione fisica	1 online resource (VII, 279 p. 77 illus.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 19
Disciplina	531
Soggetti	Mechanics Classical Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	A numerical method for highly accelerated laminar boundary-layer flows -- Relaxation methods for transonic flow about wing-cylinder combinations and lifting swept wings -- Calcul D'un Ecoulement Viscoelastique Dans une Cavite Carree -- Oscillations Libres d'un Bassin en Rotation -- Numerical approach for investigating some transsonic flows -- The computation of three-dimensional viscous internal flows -- Inviscid reattachment of a separated shear layer -- Time dependent calculations for transonic flow -- Two calculation procedures for steady, three-dimensional flows with recirculation -- Numerical solutions of the supersonic, laminar flow over a two-dimensional compression corner -- Laminar boundary layers with assigned wall shear -- Application de la Methode Hodographique au Traitement des Ecoulements Transsoniques Avec Onde de Choc -- Finite difference treatment of strong shock over a sharp leading edge with navier-stokes equations -- A vortex method for the study of rapid flow -- Numerical studies of the heat conduction equation with highly anisotropic tensor conductivity -- Turbulence transitions in convective flow -- The numerical solution of the vorticity transport equation -- Reflexions D'ondes de Choc Sur L'axe en Ecoulement Permanent de Revolution -- Computational problems in three and four dimensional boundary layer theory -- A direct method for computing the steady

flow at mach number one past a given wing airfoil -- The structure of a reflecting oblique shock wave -- Calculation of separated flows at subsonic and transonic speeds -- Numerical solutions of blast wave propagation problems -- Stratified flow over a vertical barrier -- Developement de la Methode Des Singularites a Repartition Discretisee Pour L'Etude Des Ecoulements Incompressibles et Compressibles -- The numerical solution of convective heat transfer in the space shuttle base region by Telenin's method -- A relaxation method for calculating transonic flows with detached bow shocks -- Transient three-dimensional fluid flow in the vicinity of large structures -- Flow patterns around heart valves -- Calcul de L'ecoulement D'un Fluide Visqueux Compressible Autour D'un Obstacle de Forme Parabolique -- Solutions Numeriques des Equations de Navier-Stokes Pour les Ecoulements en Couches Visqueuses -- Numerical simulation of small-scale thermal convection in the atmosphere -- Some comparisons between mixing-length and turbulent energy equation models of flow above a change in surface roughness -- Numerical solution of the unsteady navier-stokes equations in curvilinear coordinates: The hypersonic blunt body merged layer problem -- Probleme de Mecanique des Fluides, non Lineaires, Stationnaires en Meteorologie.

2. Record Nr.	UNINA9910820868003321
Titolo	Nanocomposite coatings and nanocomposite materials // edited by A. Ochsner, W. Ahmed, N. Ali
Pubbl/distr/stampa	Stafa-Zuerich ; ; Enfield, New Hampshire : , : Trans Tech Publications, , [2009] ©2009
ISBN	3-03813-322-1 1-61344-685-3
Descrizione fisica	1 online resource (398 p.)
Collana	Materials science foundations, , 1422-3597 ; ; volumes 54-55
Disciplina	620.5
Soggetti	Nanostructured materials Composite materials Coatings Thin films
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.
Nota di contenuto	Nanocomposite Coatings and Nanocomposite Materials; Preface; Table of Contents; Table of Contents; CHAPTER 1 Nanostructured, Nanocomposite Tribological Coatings; 1. Inroduction; 2. Classification of Nanostructured, Nanocomposite Tribological Coatings; 3. Background of Nanostructured Super-Hard Coatings; 4. New Directions for Nanostructured Super-Tough Coatings; 5. Other Possible Properties of Nanostructured Coatings; 6. New Processes for Industrial Applications of Multifunctional Tribological Coatings; 7. Case Studies: Preparation - Microstructure - Properties of Nanostructured Coatings 8. Concluding Remarks. References.CHAPTER 2 Nanocharacterisation of Nanocomposite Materials; 1. Introduction; 2. Morphological Characterization of Nanocomposite Materials; 3. Chemical Analysis of Nanocomposite Materials; 4. Summary. References; CHAPTER 3 Hierarchical Nanocomposites; 1. Introduction; 2. Nanocomposites; 3. Hierarchical Nanocomposites; 4. Multiscale Hierarchical Nanocomposites; 5. Nanoresin-Based Multiscale Hierarchical Compound Nanocomposites; 6. Conclusions; References; CHAPTER 4

Fumed Silica Reinforced Nanocomposites; 1. Introduction; 2. Fumed Silica
3. Thermoplastic Polymeric Matrices 4. Thermoset Polymeric Matrices; 5. Biocomposites; References; CHAPTER 5 Hard and Tough Nanocomposite Coatings: Design, Synthesis and Characterization; 1. Introduction. 2. Classification.; 3. Design Methodology for Nanocomposite Coatings; 4. How to Enhance Coating Hardness and Toughness; 5. Deposition Techniques; 6. Microstructures of Hard and Tough Nanocomposite Coatings; 7. Characterization of Coating Hardness and Toughness; 8. Concluding Remarks; References
CHAPTER 6 Plasma Enhanced Magnetron Sputter (PEMS) Deposition of Thick Nanocomposite Coatings for Erosion Protection 1. Introduction. 2. Erosion of Materials.; 3. Plasma Enhanced Magnetron Sputter Deposition; 4. Parametric Study of Nanocomposite Coatings Using the PEMS Process; 5. Discussion; 6. Concluding Remarks and Future Outlook; References; CHAPTER 7 Synthesis of Nanowires; 1. Introduction; 2. Solution-Based Methods; 3. Vapor-Based Methods; 4. Direct Oxidization; 5. Hybrid Nanowires; 6. Conclusions and Future Outlook; References
CHAPTER 8 Synthesis and Applications of Inorganic-Organic Hybrid Nanostructured Materials 1. Introduction. 2. Zeolite-Like Inorganic-Organic Hybrids.; 3. Ship-in-a-Bottle Zeolites; 4. Mesoporous Silica with an Organic Surface; 5. Multi-Layered Nanoparticles; 6. Conclusions. References; CHAPTER 9 Nanolayers and Nanostructured Films; 1. Introduction; 2. Metallic Nanolayers; 3. Ceramics Nanolayers; References

Sommario/riassunto

Nanocomposite materials are formed by mixing two or more dissimilar materials at the nanoscale in order to control and develop new and improved structures and properties. The properties of nanocomposites depend not only upon the individual components used but also upon the morphology and the interfacial characteristics. Nanocomposite coatings and materials are among the most exciting and fastest-growing areas of research; with new materials being continually developed which often exhibit novel properties that are absent in the constituent materials. Nanocomposite materials and coatings theref
