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Altri autori (Persone)	ReinhardPaul-Gerhard DuraudEric
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Nota di contenuto	An Introduction to Cluster Science; Contents; Preface; Units; 1 Clusters in Nature; 1.1 Atoms, Molecules and Bulk; 1.1.1 Scales of Matter Down to Atoms; 1.1.2 More on Time Scales; 1.1.3 Binding in Atoms, Molecules and Bulk; 1.2 A New State of Matter?; 1.2.1 From Atom to Bulk, Small and Large Clusters; 1.2.2 Cluster Types; 1.2.3 Cluster Science; 2 Measuring Clusters; 2.1 Cluster Production; 2.1.1 Cluster Sources; 2.1.2 Sizes and Temperatures; 2.2 Excitations of a Cluster; 2.2.1 Collisions with Projectiles; 2.2.2 Laser Fields; 2.2.3 Coupling to Light and Optical Response 2.3 Measuring Cluster Properties2.3.1 Mass Distributions; 2.3.2 Magnetic Moments; 2.3.3 Photon Signals; 2.3.4 Electron Signals; 3 How to Describe Clusters; 3.1 Approximations for the Ions; 3.1.1 The Adiabatic, or Born-Oppenheimer, Approximation; 3.1.2 Born-Oppenheimer Dynamics; 3.1.3 Beyond the Born-Oppenheimer Approximation; 3.1.4 Structure Optimization; 3.1.5 Approaches Eliminating Electrons; 3.2 Approximation Chain for Electrons; 3.2.1 Overview of Approaches for the Electronic Subsystem; 3.2.2 Ab initio

Methods; 3.2.3 Phenomenological Electronic Shell Models
3.2.4 Density Functional Theory3.2.5 Semiclassical Approaches; 3.3 Approximation Chain for the Ion-Electron Coupling; 3.3.1 Pseudopotentials; 3.3.2 Jellium Approach to the Ionic Background; 3.4 Observables; 3.4.1 Energies; 3.4.2 Shapes; 3.4.3 Stationary Response: Polarizability and Conductivity; 3.4.4 Linear Response: Optical Absorption Spectra; 3.4.5 Electron Emission; 4 Some Properties of Free Clusters; 4.1 Ionic and Electronic Structure; 4.1.1 Magic Numbers; 4.1.2 Shell Structure and Deformation; 4.2 Optical Response; 4.2.1 Basic Features; 4.2.2 Impact of Deformation
4.2.3 Thermal Shape Fluctuations4.2.4 The Width of the Mie Plasmon Resonance; 4.3 Photoinduced Electron Emission; 4.3.1 Total Ionization; 4.3.2 Photoelectron Spectra (PES); 4.3.3 Photoelectron Angular Distributions (PAD); 4.4 Cluster Nonlinear Dynamics; 4.4.1 Tunability of Lasers; 4.4.2 On Ionization Mechanisms; 4.4.3 Production of Energetic Ions and High Charge States; 4.4.4 Variation of Pulse Profile; 5 Clusters in Contact with Other Materials; 5.1 Embedded and/or Deposited Clusters; 5.1.1 On the Relevance of Embedded or Deposited Clusters; 5.1.2 The Impact of Contact with Another Material
5.1.3 From Observation to Manipulation5.2 On the Description of Embedded/Deposited Clusters; 5.2.1 Brief Review of Methods; 5.2.2 An Example of QM/MM for Modeling of Deposited/Embedded Clusters; 5.2.3 A Few Typical Results; 5.3 Clusters and Nanosystems; 5.3.1 Towards More Miniaturization; 5.3.2 On Catalysis; 5.3.3 Metal Clusters as Optical Tools; 5.3.4 Composite Clusters and Nanomaterials; 6 Links to Other Areas of Science; 6.1 Clusters in the Family of Finite Fermion Systems; 6.2 Clusters in Astrophysics; 6.3 Clusters in Climate; 6.3.1 Impact of Clusters in Climate Science
6.3.2 From Aerosols to Water Droplets

Sommario/riassunto

Filling the need for a solid textbook, this short primer in cluster science is ideal for a one-semester lecture for advanced undergraduate students. It is based on a series of lectures given by the well-established and recognized authors for the past ten years. The book covers both the basics of the domain as well as up-to-date developments. It can be divided roughly into two parts. The first three chapters introduce basic concepts of cluster science. Chapter 1 provides a general introduction, complemented by chapter 2 on experimental and chapter 3 o

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Collana	Law & Society
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Nota di bibliografia	Includes bibliographical references.
Sommario/riassunto	This book portrays evidence and gathering of evidence under the current Croatian regulation relating to evidence and in practice. In this context, the author first analyses the fundamental principles of Croatian civil procedure and law of evidence. Then, the general principles of evidence and gathering of evidence are discussed, as well as the general rule on the burden of proof. The question of gathering of evidence through modern technology (videoconferencing, etc.) in the Croatian law and practice is also discussed. Separate parts of this book contain the analysis of means of proof regulated by the Croatian Civil Procedure Act: inspection of object ('view'), documents, witness testimony, expert testimony, and party testimony. The rules on costs caused by gathering of evidence, including the costs for translation are analysed, as well as the rules on language. The concepts of illegally obtained evidence and illegal evidence in the Croatian law and practice are discussed. This volume contains the report about the Council Regulation (EC) No 1206/2001 and the multilateral and bilateral legal assistance treaties to which Croatia is a party. There are several appendices to this book: a table of authorities according to the Regulation No 1206/2001, and relevant sources of Croatian civil procedure, table of case law on evidence, table portraying a

ordinary/common civil procedure timeline, table referring to legal interpretation in the Croatian legal system, and comparative tables focusing on functional differences between national regulation, bilateral legal assistance treaties, multilateral treaties, and Council Regulation (EC) No 1206/2001 on taking of evidence by hearing of witnesses. This book is a result of the Dimensions of Evidence in European Civil Procedure research project commissioned by European Commission, Directorate-General Justice.