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Titolo	Theory of simple liquids [[electronic resource]] : with applications to soft matter // Jean-Pierre Hansen, Ian R. McDonald
Pubbl/distr/stampa	Oxford, England, : Academic Press, c2013
ISBN	0-12-387033-X
Edizione	[4th ed.]
Descrizione fisica	1 online resource (637 p.)
Altri autori (Persone)	McDonald Ian R (Ian Ranald)
Disciplina	530.42
Soggetti	Liquids Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Half Title; Title Page; Copyright; Contents; Preface to the Fourth Edition; Preface to the Third Edition; Preface to the Second Edition; Preface to the First Edition; 1 Introduction; 1.1 The Liquid State; 1.2 Intermolecular Forces and Model Potentials; 1.3 Experimental Methods; References; 2 Statistical Mechanics; 2.1 Time Evolution and Kinetic Equations; 2.2 Time Averages and Ensemble Averages; 2.3 Canonical and Isothermal-Isobaric Ensembles; 2.4 The Grand Canonical Ensemble and Chemical Potential; 2.5 Particle Densities and Distribution Functions 2.6 Particle Densities in the Grand Canonical Ensemble 2.7 Molecular Dynamics Simulation; 2.8 Monte Carlo Methods; References; 3 Static Properties of Liquids: Thermodynamics and Structure; 3.1 A Fluid in an External Field; 3.2 Functionals and Functional Differentiation; 3.3 Functional Derivatives of the Grand Potential; 3.4 Density Functional Theory; 3.5 Direct Correlation Functions; 3.6 The Density Response Function; 3.7 Diagrammatic Methods; 3.8 Diagrammatic Expansions of the Direct Correlation Functions; 3.9 Virial Expansion of the Equation of State; 3.10 Binary Systems; References 4 Distribution Function Theories 4.1 The Static Structure Factor; 4.2 The YBG Hierarchy and the Born-Green Equation; 4.3 Functional Expansions and Integral Equations; 4.4 The Percus-Yevick Equation; 4.5 The Mean Spherical Approximation; 4.6 Diagrammatic Expansions of the Pair

Functions; 4.7 Extensions of Integral Equations; 4.8 Asymptotic Decay of the Pair Correlation Function; References; 5 Perturbation Theory; 5.1 Introduction: The van der Waals Model; 5.2 The ϵ -Expansion; 5.3 Singular Perturbations: The f -Expansion; 5.4 Soft-Core Reference Systems; 5.5 An Example: The Lennard-Jones Fluid 5.6 Treatment of Attractive Forces 5.7 Mean Field Theory of Liquid-Vapour Coexistence; 5.8 Scaling Concepts and Hierarchical Reference Theory; References; 6 Inhomogeneous Fluids; 6.1 Liquids at Interfaces; 6.2 Approximate Free Energy Functionals; 6.3 The Liquid-Vapour Interface; 6.4 A Microscopic Expression for the Surface Tension; 6.5 Fundamental Measure Theory; 6.6 Confined Fluids; 6.7 Density Functional Theory of Wetting; 6.8 Density Functional Theory of Freezing; 6.9 Fluids Adsorbed in Porous Media; 6.10 Thermodynamics of Glasses; References 7 Time-dependent Correlation and Response Functions 7.1 General Properties of Time Correlation Functions; 7.2 An Illustration: The Velocity Autocorrelation Function and Self-Diffusion; 7.3 Brownian Motion and a Generalised Langevin Equation; 7.4 Correlations in Space and Time; 7.5 Inelastic Scattering of Neutrons and X-Rays; 7.6 Linear Response Theory; 7.7 Applications of the Linear Response Formalism; References; 8 Hydrodynamics and Transport Coefficients; 8.1 Thermal Fluctuations at Long Wavelengths and Low Frequencies; 8.2 Space-Dependent Self Motion 8.3 The Navier-Stokes Equation and Hydrodynamic Collective Modes

Sommario/riassunto

Comprehensive coverage of topics in the theory of classical liquids Widely regarded as the standard text in its field, Theory of Simple Liquids gives an advanced but self-contained account of liquid state theory within the unifying framework provided by classical statistical mechanics. The structure of this revised and updated Fourth Edition is similar to that of the previous one but there are significant shifts in emphasis and much new material has been added. Major changes and Key Features in content include: Expansion of existing sections on simulation me

2. Record Nr.	UNISA996389480703316
Titolo	Tiomna Nuadh ar dTighearna agus ar Slanaightheora Josa Criod [electronic resource] : ar na tarruing gu firinneach as greigis gu gaoideilg, // re hUilliam O Domhnuill .
Pubbl/distr/stampa	[Dublin] Ata so ar na chur a gclo a mbaile Atha Cliath, : a dtigh mhaighistir Uilliam Uiseir Chois an Droichthid, re Seon Francke., 1602
Descrizione fisica	214 leaves
Altri autori (Persone)	O'DomhnuillHuelliam <d. 1628.>
Lingua di pubblicazione	Irlandese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	<p>Translator's preface signed "Uilliam O'Domnuill". Translator's dedication to King James "William Daniell". The translation was begun by Nicholas Walsh, John O'Kearney, and Nehemias Donellan.</p> <p>The printing was begun by Kearney, possibly in 1595-97, and finished by Francton (Cf. STC).</p> <p>Front free endpaper has inscription dated 1707, "...prius M. Jacobi Sutherland."</p> <p>Device of cherub's head (McK. 219) on t.p.; head-piece, initials.</p> <p>The initial T of the dedication is in a factotum; Irish dedication and three Irish half-titles are present. Cf. STC (2nd ed.) for printing variations.</p> <p>Signatures: first 5 leaves unmarked, A-V² 2A-2V² 3A-3V² A-V² 2A-2V² 3A-3H².</p> <p>Reproduction of original in: National Library of Scotland.</p>
Sommario/riassunto	eebo-0097