Record Nr. UNISA996466833303316 Microscopic Quantum Many-Body Theories and Their Applications **Titolo** [[electronic resource]]: Proceedings of a European Summer School. Held at Valencia, Spain, 8–19 September 1997 / / edited by Jesus Navarro, Artur Polls Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 1998 **ISBN** 3-540-69787-X Edizione [1st ed. 1998.] Descrizione fisica 1 online resource (XIII, 386 p. 4 illus.) Lecture Notes in Physics, , 0075-8450;; 510 Collana Disciplina 530.14/4 Soggetti Atoms **Physics** Physical chemistry Quantum computers **Spintronics** Quantum physics Atomic, Molecular, Optical and Plasma Physics **Physical Chemistry** Mathematical Methods in Physics Numerical and Computational Physics, Simulation Quantum Information Technology, Spintronics **Quantum Physics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di contenuto The coupled cluster method -- Atomic and molecular applications of the coupled cluster method -- A thermal cluster-cumulant theory --Correlated basis function theory for fermion systems --Inhomogeneous quantum liquids: Statics, dynamics, and thermodynamics -- Some applications of correlated basis function theories in finite and infinite nuclear systems -- Monte carlo methods in quantum many-body theories -- Monte carlo calculations of nuclei

-- Diffusion Monte Carlo for excited states: Application to liquid

helium.

Sommario/riassunto

Quantum many-body theories have become an essential tool for all physicists. The field is interdisciplinary, predicting the properties of macroscopic matter based on the fundamental interactions between the elementary constituents. This book presents a systematic and pedagogical approach to the coupled cluster method, correlated basis function theory and Monte Carlo methods. These topics are widely recognized and provide the most powerful and widely applicable theories of all available formulations of QMBT. As the future evolution of QMBT depends to a large measure on establishing links between these different methods, the authors discuss hyprid procedures that can build even further upon the huge strengths and great advantages of each theory.

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Autore Noel Lance

Titolo Vehicle-to-Grid: A Sociotechnical Transition Beyond Electric Mobility /

/ by Lance Noel, Gerardo Zarazua de Rubens, Johannes Kester,

Benjamin K. Sovacool

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Soggetti Transportation engineering

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Lingua di pubblicazione Inglese Formato Materiale a stampa Livello bibliografico Monografia Introduction -- Chapter One: History, definition and current state of Nota di contenuto V2G -- Chapter Two: The Potential Benefits of V2G -- Chapter Three: The Technical Challenges to V2G -- Chapter Four: The Economic and Business challenges to V2G -- Chapter Five: The Political and Regulatory Challenges to V2G -- Chapter Six: Consumers, Society and V2G -- Chapter Seven: V2G Deployment Pathways and Policy Recommendations -- Chapter Eight: Realizing and Problematizing a V2G Future. This book defines and charts the barriers and future of vehicle-to-grid Sommario/riassunto technology: a technology that could dramatically reduce emissions, create revenue, and accelerate the adoption of battery electric cars. This technology connects the electric power grid and the transportation system in ways that will enable electric vehicles to store renewable energy and offer valuable services to the electricity grid and its markets. To understand the complex features of this emergent technology, the authors explore the current status and prospect of vehicle-to-grid, and detail the sociotechnical barriers that may impede its fruitful deployment. The book concludes with a policy roadmap to advise decision-makers on how to optimally implement vehicle-to-grid and capture its benefits to society while attempting to avoid the impediments discussed earlier in the book. Lance Noel is a postdoctoral researcher at Aarhus University, Denmark, where he is lead researcher on a \$1.6 milliongrant on the sociotechnical benefits and barriers of electric vehicles and vehicle-to-grid in the Nordic region. Gerardo Zarazua de Rubens is a doctoral fellow at Aarhus University, Denmark, working on energy and transport systems, data analytics and business development. His recent focus has been on Electric Vehicle and Vehicle-to-Grid implementation in Europe. Johannes Kester is a postdoctoral researcher at Aarhus University, Denmark, working on sociotechnical transformations in electricity and alternative transport systems, energy policy, and the role of security in these transformations. Benjamin K. Sovacool is Professor of Energy Policy at the School of Business, Management, and Economics, University of

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Sussex, UK. He is also Director of the Center for Energy Technologies and Professor of Business and Social Sciences in the Department of Business Development and Technology at Aarhus University in