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Nota di contenuto	ADVANCES IN CHEMICAL PHYSICS; EDITORIAL BOARD; CONTRIBUTORS TO VOLUME 156; Preface to the Series; Contents; 1 Phase Space Approach to Solving The Schrödinger Equation: Thinking Inside the Box; I Introduction; II Theory; A. von Neumann Basis on the Infinite Lattice; B. Fourier Method; C. The Periodic von Neumann Basis (pvN); D. Biorthogonal von Neumann Basis Set (bvN); E. Periodic von Neumann Basis with Biorthogonal Exchange (pvh); III Application to Ultrafast Pulses; IV Applications to Quantum Mechanics; A. Time-independent Schrödinger Equation (TISE) B. Time-dependent Schrödinger Equation (TDSE) V Applications to Audio and Image Processing; VI Conclusions and Future Prospects; Acknowledgments; References; 2 Entropy-Driven Phase Transitions In Colloids: From spheres to anisotropic particles; I Introduction; II Predicting Candidate Crystal Structures; III Free-Energy Calculations; A. Fluid Phase; B. Crystal Phase; C. Plastic Crystal Phases; D. Orientationally Ordered Crystal Phases; IV Bulk Phase Diagram and Kinetic Pathways; A. Mapping Out Phase Diagrams; B. Nucleation, Gelation, and Glass Transition

V Phase Diagrams of Binary Hard-Sphere Mixtures VI Phase Diagrams of Anisotropic Hard Particles; A. Dumbbells; B. Snowman-shaped Particles; C. Asymmetric Dumbbell Particles; D. Spherocylinders; E. Ellipsoids; F. Cut-spheres; G. Oblate Spherocylinders; H. Cubes; I. Superballs; J. Bowl-shaped Particles; VII Entropy Strikes Back Once More; Acknowledgments; References; 3 Sub-Nano Clusters: The Last Frontier of Inorganic Chemistry; I Introduction; II Chemical Bonding Phenomena in Clusters; A. Multiple Aromaticity and Antiaromaticity (-, -, d-) in 2D and 3D  
B. Covalency in Clusters and its Conflict with Aromaticity C. Ionic Bonding and its Support for Stabilizing Bonding Effects; D. Super-Atom Model; III Cluster-Based Technologies and Opportunities; A. New Inorganic Ligands and Building Blocks for Materials; B. Superconductivity in Metal Clusters; C. Cluster Motors; D. Clusters in Catalysis; IV Conclusions; Acknowledgments; References; 4 Supercooled Liquids and Glasses by Dielectric Relaxation Spectroscopy; I Introduction; II Permittivity Fundamentals; A. Steady State Equations; B. Time-Domain Relations; C. Frequency-Domain Relations  
D. Fluctuations and Noise III Response Functions; A. The Debye Response; B. Dispersive Response Functions; C. Conductivity; IV Linear Experimental Techniques; A. Time-Domain Methods; B. Thermally Stimulated Depolarization; C. Frequency-Domain Methods; D. Noise Measurements; E. Capacitors for Permittivity Measurements; F. Limitations from Blocking Electrodes; V Nonlinear Experimental Techniques; A. Large DC Fields; B. Large AC Fields; C. Pump-Probe Techniques; VI Applications; A. Static Properties; B. Dynamic Properties: Equilibrium; C. Dynamic Properties: Nonequilibrium; D. Conductivity E. Local Detection

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#### Sommario/riassunto

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