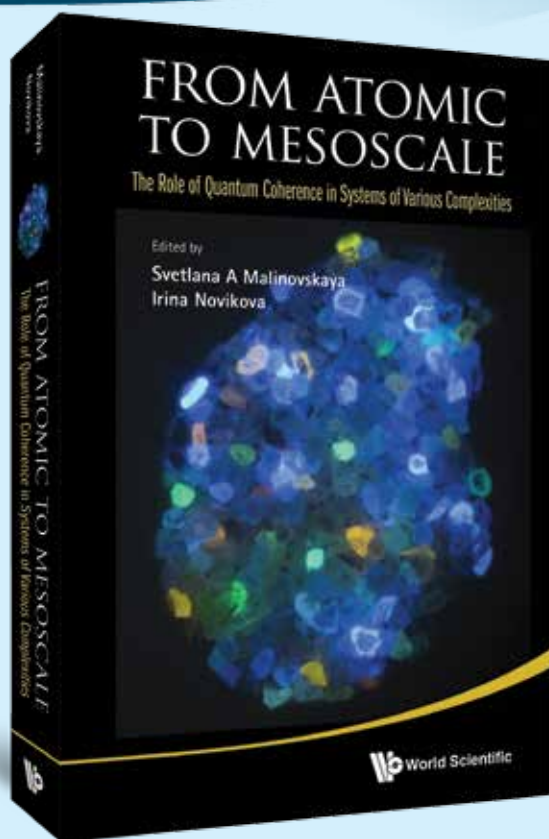


20% Off
 Enter WSSLPS20
 (Valid till 31 December 2015)



FROM ATOMIC TO MESOSCALE

The Role of Quantum Coherence in Systems of Various Complexities

edited by

Svetlana A Malinovskaya (Stevens Institute of Technology, USA)
 & **Irina Novikova** (College of William and Mary, USA)

This volume presents the latest advancements and future developments of atomic, molecular and optical (AMO) physics and its vital role in modern sciences and technologies. The chapters are devoted to studies of a wide range of quantum systems, with an emphasis on understanding of quantum coherence and other quantum phenomena originated from light-matter interactions. The book intends to survey the current research landscape and to highlight major scientific trends in AMO physics as well as those interfacing with interdisciplinary sciences. The volume may be particularly useful for young researchers working on establishing their scientific interests and goals.

Readership: For professional researchers as well as young academics in the field of Atomic, Molecular and Optical (AMO) physics.

272pp Jun 2015
 978-981-4678-69-8 US\$88 £58

Contents: Collective Phenomena and Long-Range Interactions in Ultracold Atoms and Molecules: Quantum Magnetism with Ultracold Molecules (M L Wall, K R A Hazzard and A M Rey); Optical Manipulation of Light Scattering in Cold Atomic Rubidium (R G Olave, A L Win, K Kemp, S J Roof, S Balik, M D Havey, I M Sokolov and D V Kupriyanov); Seeing Spin Dynamics in Atomic Gases (D M Stamper-Kurn)

Atom-like Coherent Solid State Systems: Precision Magnetic Sensing and Imaging Using NV-Diamond (R L Walsworth); Entanglement and Quantum Optics with Quantum Dots (A P Burgers, J R Schaibley and D G Steel)

Coherent Nanophotonics and Plasmonics: Enhancement of Single-Photon Sources with Metamaterials (M Y Shalaginov, S Bogdanov, V V Vorobyov, A S Lagutchev, A V Kildishev, A V Akimov, A Boltasseva and V M Shalaev); Linear Optical Properties of Periodic Hybrid Materials at Oblique Incidence: A Numerical Approach (A Blake and M Sukharev)

Fundamental Physics: An Introduction to Boson-Sampling (B T Gard, K R Motes, J P Olson, P P Rohde and J P Dowling); New Approach to Quantum Amplification by Superradiant Emission of Radiation (G Shchedrin, Y Rostovtsev, X Zhang and M O Scully)

Ultrafast Dynamics in Strong Laser Fields: Circularly Polarized Attosecond Pulses and Molecular Atto-Magnetism (A D Bandrauk and K-J Yuan); Many-Electron Response of Gas-Phase Fullerene Materials to Ultraviolet and Soft X-ray Photons (H S Chakraborty and M Magrakvelidze)

Ultracold Chemistry: Collisions and Reactions in Ultracold Gases (N Balakrishnan and J Hazra)

Enter **WSSLPS20** to enjoy **20% discount!** (valid till 31 December 2015)

<http://www.worldscientific.com/worldscibooks/10.1142/9613>



