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New Prospectives in Quantum Control of Atomic and Molecular Systems

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Message from the Guest Editors

Quantum mechanics developed in the first half of the 20th century has modified our understanding of physics, but also of chemistry and biology. Optical quantum control provided by photonics represents a powerful approach. The great flexibility in manipulating quantum objects places atomic, molecular, and optical physics researchers in a very good position to develop and test new quantum control protocols.

This Special Issue, "New Prospectives in Quantum Control of Atomic and Molecular Systems", will welcome basic, methodological and applied cutting-edge research contributions, such as regular and review papers, dealing with different issues on the quantum control of atoms and molecules, and including the following:

- Protocols based on the Autler–Townes effect, and electromagnetically induced transparency and super-adiabatic protocols;
- Coherent control of collisions and chemical reactions for ultracold atoms and molecules;
- Quantum control of atoms confined in nanofibers;
- New quantum control protocols in cold atoms and molecules, as well as in Rydberg states;
- Cavity-controlled chemistry in molecular systems.

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Message from the Editor-in-Chief

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