

Special Issue

Ultrafast Electronic Dynamics in Solids

Message from the Guest Editor

Dear Colleagues: The development and perfecting of a number of ultrafast time-resolved probing techniques (optical pump-probe, time resolved magneto-optics, time-resolved ARPES, ultrafast imaging, ultrafast THz spectroscopy, etc.) have allowed unprecedented insight into out of equilibrium electronic distributions.

Dynamics, that in the past could only be inferred from low time-resolution measurements, can now be probed directly. On the theoretical side, this has led to the development of a number of approaches that directly attempt at tackling the complexity inherent to out-of-equilibrium systems. Different strategies, with varying degrees of approximations and capabilities (TD-DFT, out-of-equilibrium DMFT, Keldysh formalism, time dependent Schrodinger equation, Boltzmann equation, etc.), have been adopted to address the often extremely numerically challenging descriptions of these systems, especially when spatial heterogeneity, transport and interaction with electromagnetic fields play important roles.

Guest Editor

Dr. Marco Battiatto

School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, Singapore

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
appls-ci@mdpi.com

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

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