



Special Issue

Control and Enhancement of Quantum Coherence in Nanostructured Materials

Guest Editors:

Prof. Dr. Andrea Perali

Università di Camerino, Scuola
del Farmaco e Divisione di
Fisica, Edificio di Fisica, Via
Madonna delle Carceri, 9 -
62032 – Camerino (MC), Italy
andrea.perali@unicam.it

Dr. Alessandro Ricci

Deutsches Elektronen-
Synchrotron DESY,
Notkestraße 85, D-22607
Hamburg, Germany
phd.alessandro.ricci@
gmail.com

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Message from the Guest Editors

Dear Colleagues,

The problem of controlling and enhancing the properties of quantum coherent phenomena in nanostructured materials is attracting a large research effort, involving international research collaborations with cross-topic character. In particular, the understanding and control of superconductivity at the nanoscale and in complex configurations is a central issue in condensed matter physics, but after several decades of work the role of competition/cooperation of charge, spin and lattice orders in these systems is still not well established. Recently, a renewed excitement followed results showing important effects of complex geometries in the quantum coherence mechanism that govern magnetism, ferroelectricity and superconductivity in hybrid systems and other novel nanostructures, that can drive electron-hole superfluidity in layered heterostructures. This special issue is to collect recent results (from experiments, theory and simulations) around this problem and to provide a view on how the control and enhancement of quantum coherence in nanostructured materials can be converted into new technological applications and quantum devices.

Prof. Dr. Andrea Perali
Dr. Alessandro Ricci
Guest Editors

Author Benefits

Open Access: - free for readers, free publication for well-prepared manuscripts submitted in 2017.

Rapid publication: manuscripts are peer-reviewed and published online approximately 24 days after submission; acceptance to publication is undertaken in 5 days (median values for papers published in this journal in 2016).

