Title: High Temperature Superconductivity: Theory and Experiment.

Guest Editor:

Bechlaghem A.

Département de Biologie, Faculté des Sciences de la Nature et de la Vie
Université d'Oran 1 Ahmed Ben Bella, Algeria
E-mail: alibechlaghem@yahoo.fr

Proposal:

High temperature superconductivity is a very interesting issue during the period following the discovery of this phenomenon in lanthanum compound by Bednorz and Muller in 1986. Since this discovery, other compounds are discovered and the superconducting transition temperature has reached values of order of 135 K. During this period, there is an intense research both experimentally and theoretically to understand the mechanism of superconductivity in these compounds. There are many unsolved problems both in the normal and superconducting states. Although, the fundamental theory of superconductivity for conventional metal was established in 1957 by Bardeen-Cooper-Schrieffer (BCS theory), there is no theory which can explain the mechanism of superconductivity in the new compounds.

Potential Topics Include:

1. Superconductivity in Organic Conductors.
2. Superconductivity in Alkali Fullerenes.
3. Superconductivity in Heavy Fermions.
4. Superconductivity in Cuprates.
5. Iron Based Superconductors.
6. Superconducting Junctions (Josephson Junctions and SQUID: Superconducting Quantum Interference Device).
7. Electronic Structures.
8. Magnetic Properties.
9. Thermodynamic Properties.
10. Normal State Transport Properties.
11. Electrodynamics of Superconductors.

If you are interested in contributing to this special thematic issue, please send your abstract / manuscript as soon as possible. Further, you are requested to forward this invitation among your colleagues who are specialized in this field.

Please follow the Author's Guidelines before submission of your manuscript:

Author's Guidelines

© 2015 Cosmos Scholars Publishing House