Special Issue

New Insights into Metal–Insulator Transitions

Message from the Guest Editors

Metal–insulator transitions (MITs) are one of the most important phenomena in condensed-matter physics. They connect two opposite boundaries: the metallic, where elementary excitations are single particles of a fermionic nature, and insulating, where elementary excitations are collective of a bosonic nature. MITs have been observed in a variety of materials, with various exotic insulating ground states, including different charge and spin orderings, density waves, Mott insulators, etc. Additionally, interesting is the conducting side of MITs, where deviations from conventional Fermi liquid are often found. The transition between different states can be driven by a change in temperature, pressure, magnetic field, chemical substitution or doping. The aim of this Special Issue is to report on novel experimental and theoretical findings regarding MITs and related intriguing phenomena, with the potential possibly of ascertaining numerous novel questions and future directions.

Guest Editors

Prof. Dr. Emil Tafra
Department of Physics, Faculty of Science, University of Zagreb, Bijenicka Cesta 32, HR-10000 Zagreb, Croatia

Dr. Matija Čulo
Institute of Physics, Bijenicka Cesta 46, HR-10000 Zagreb, Croatia

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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