E-MRS & MRS-J BILATERAL SYMPOSIUM

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Scope:

We aim to make the symposia an opportunity to contribute toward the development of advanced functional oxide materials.

Oxides have been attracting attention as next generation electronic materials showing unique and novel functionalities.

The strong electron and/or spin correlation produces oxides showing various functions such as superconductivity, dielectricity, magnetism and so on.

This symposium devotes an exchange of information about the fabrication processes and the properties of functional-oxide based bulk and thin films.

The fabrication of novel heterostructures and nanostructures consisting of the different kinds of oxides has been enabling us with the development of innovative functional devices exhibiting

unexpected and novel properties in recent years.
Interaction between fundamental materials science and applied science will promote our idea and lead to discovery and innovation based on new concept design.

機能性酸化物材料やワイドバンドギャップ材料は幅広い分野で活発に研究開発が行われている。これらの材料は高度でユニークな物性を示す。本シンポジウムは様々な機能を発現ずるこれらの材料に関して、研究発表・討論を通して最新の情報を共有するとともに新しい研究開発ターゲットを見出すことを目的としている。

4th E-MRS & MRS-J Bilateral Symposium on Advanced Oxides Topics

The bilateral symposium will cover a wide range of topics relating to science and technology of oxide materials including, but not limited to:

- Bulk, thin films, heterostructures, nanostructures, nanosheets of functional oxides and their fabrication processes.
- Oxide materials exhibiting insulating, superconducting, dielectric, ferroelectric, ferromagnetic, maltiferroic, magnetoelectric, and so on.
- Application of oxide thin films for renewable energy and next generation plasmonics: photovoltaics, water splitting, solid oxide fuel cells,
  advanced batteries, thermoelectrics, low-optical-loss NIR plasmonics and so on.
- Functional-oxide based devices such as power devices, chemical sensor and resistive memory, and their fabrication.
- Theory and computational science on crystal structure, physical properties, device process and functionality for functional oxide materials.