The role of oxide interfaces in highly confined electronic and ionic conductors

Oxides bring not only new properties such as superconductivity, ferro-, pyro-, and piezoelectricity, ferromagnetism, and multiferroicity but also ionic and catalytic properties. Such richness arises from a strong interaction between the charge, orbital, spin, and lattice degrees of freedom. Interfacing two oxide-based materials results in broken lattice symmetry as well as electronic and/or atomic reconstructions from which a wealth of new intriguing properties can emerge. Here, we provide an overview and perspective of electronic, ionic, and ionotronic properties in oxide systems with confinement designed by broken lattice symmetry.

General information
State: Published
Organisations: Functional Oxides, Department of Energy Conversion and Storage
Contributors: Christensen, D. V., Chen, Y., Esposito, V., Pryds, N.
Number of pages: 8
Publication date: 2019
Peer-reviewed: Yes

Publication information
Journal: A P L Materials
Volume: 7
Issue number: 1
Article number: 013101
ISSN (Print): 2166-532X
Ratings:
Web of Science (2019): Indexed yes
Web of Science (2018): Indexed yes
Scopus rating (2017): CiteScore 3.78 SJR 1.63 SNIP 0.942
Web of Science (2017): Impact factor 4.127
Web of Science (2017): Indexed yes
Scopus rating (2016): CiteScore 3.67 SJR 2.177 SNIP 1.151
Web of Science (2016): Impact factor 4.335
Web of Science (2016): Indexed yes
Scopus rating (2015): CiteScore 3.76 SJR 2.081 SNIP 1.236
Web of Science (2015): Impact factor 4.323
Scopus rating (2014): CiteScore 2.9 SJR 1.628 SNIP 1.195
Web of Science (2014): Impact factor 2.789
Original language: English
DOIs:
10.1063/1.5052057
Source: PublicationPreSubmission
Source-ID: 162623769

Research output: Research - peer-review › Journal article – Annual report year: 2019