



TRR 80 Seminar

Am Dienstag, den 24. Januar um 16:00 Uhr

spricht

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über das Thema

Oxide heterostructures: Growth challenges and interface coupling

Heterostructures of strongly correlated oxides provide a rich playfield to design films and to manipulate interfaces with the main goal to obtain new phases with potentially useful electronic properties. So called emergent interfacial phases appear at the interface between two chemically different materials, e.g. $\text{LaAlO}_3/\text{SrTiO}_3$, and show new electronic (metallic) behavior not present in the corresponding bulk phases. Perovskite heterostructures have been grown by means of metalorganic aerosol deposition (MAD) technique equipped with in situ growth control by optical ellipsometry. The global and local structure as well as magnetism of $\text{LaMnO}_3/\text{SrMnO}_3$ ($\text{LMO}_2\text{n}/\text{SMO}_n$) digital superlattices (SLs) will be discussed. SLs on $\text{STO}(100)$ show a complex magnetic behavior with low-(LTP) and high-temperature (HTP) ferromagnetic phases, originating from the LMO-like bulk and an interfacial 2D-like highly anisotropic ferromagnetic phase, respectively. The role of interfacial charge transfer and epitaxy strain on HTP is disclosed. Magnetic decoupling within manganite spin-valve structures was obtained by using Ruddlesden-Popper $\text{SrO}(\text{SrTiO}_3)$ interfaces.

Gäste sind herzlich willkommen!

Der Vortrag findet im Seminarraum S-288, Institut für Physik, Universität Augsburg statt.

Gastgeber: Prof. Dr. Philipp Gegenwart
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