

DIESE WOCH

PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 11.6.2014, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1

Prof. Andrew Mackenzie

Max Planck Institute for Chemical Physics of Solids, Dresden, Germany, and
University of St Andrews, Scotland

Complex oxides: a new playground for physics and technology

Bednorz and Müller's Nobel Prize winning 1986 paper on doped La_2CuO_4 is best known for the discovery of high temperature superconductivity, but I will argue that its influence was broader still. Prior to their work, research on oxides was largely the domain of fields like chemistry and earth sciences. Condensed matter physics still concentrated on compounds that were less complex from the materials science point of view. A quiet revolution has taken place over the past quarter of a century. Experiments performed in the past five years have shown the extent to which complex oxides are 'coming of age'. Various ingenious crystal growth and thin film preparation techniques mean that they can be prepared with mean free paths of thousands of lattice spacings, opening up a range of new possibilities for both fundamental and applied science.

Die Dozenten der Physik

Kolloquium