

Ekhard Salje

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PREFACE**Special issue in honour of the 60th birthday of
Professor Ekhard Salje FRS**

A conference took place during October 2006 to celebrate the 60th birthday of Professor Ekhard Salje, which was based on the general topic of 'Ferroics'. Rather than defining a specific focus for the workshop, the title 'Ferroics' provided more of a name for the thread around which the different topics and lectures of the conference were organised, reflecting the extremely fruitful, influential, rich and varied research path of Professor Salje's career. For example, Landau theory has featured as one of the main tools, used to provide new understandings of the phase transitions in complex materials and minerals. Experimental and theoretical studies of perovskites have led to new studies of many different types of ferroic and multiferroic systems, which in turn have been extended to studies of high- T_c superconductors and back to minerals. Some of these lines extended into *a priori* unexpected fields, like the study of radiation damage in materials and of durability of ceramic hosts for nuclear waste containment, or, most recently, new scaling laws for the elastic response of rocks and analogous heterogeneous materials. Professor Salje's contributions have been seminal in the many fields represented at the conference, and the work of many different scientists have continued his contributions. The conference was a clear demonstration of this fact, with a very wide variety of subjects, but a visible thread joining them. This issue of *Journal of Physics: Condensed Matter* contains a selection of the new contributions presented at the conference that reflect both the variety and the underlying threading theme, all of them reflecting a school of thought that encompasses depth in understanding with relevance to science and society.

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