Domain walls and phase boundaries as nanoscale functional elements

Jan Seidel

School of Materials Science and Engineering, UNSW Sydney, Sydney NSW 2032, Australia.
email: jan.seidel@unsw.edu.au website: spm.materials.unsw.edu.au

Topological structures in functional materials, such as domain walls and skyrmions, see increased attention due to their properties that can be completely different from that of the parent bulk material [1]. I will discuss recent results on multiferroic phase boundaries, domain walls in BiFeO₃ [2, 3, 4, 5, 6] using SPM, TEM and ab-initio theory, and discuss future prospects [7, 8].

References