

Tuning Domain Wall Thickness in Non-magnetic Ferroics

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The recent developments in the physics of non-magnetic ferroics identified ferroic domain walls as candidates for functional elements. It is well known that the domain wall thickness in non-magnetic ferroics is much smaller than that in magnetics. However, the fact that it is not zero is essential for the understanding of domain-wall-related phenomena. This fact is also crucial for possible future applications of domain walls in electronics. The wall thickness itself can be viewed as an important parameter of walls as functional elements. For instance, a thinner wall may mean a smaller element. On the other hand, in some aspects, too thin walls might not be advantageous. The present paper discusses the relation between the wall thickness in non-magnetic ferroics on the one hand and the type of the wall and materials parameters of the ferroic on the other hand.