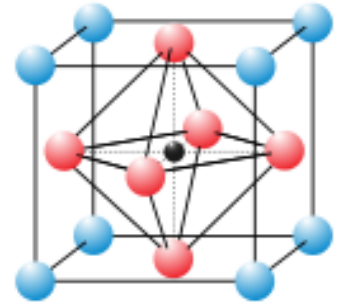


NRC主催／物理工学コース／談話会
平成28年3月15日(火)13:00～14:00
総合研究棟W棟 7階 W701 演習室

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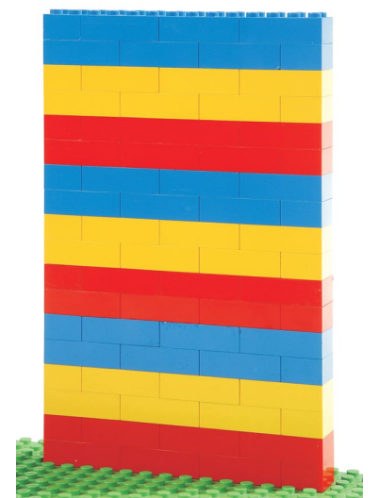


Theory of Phase Transitions in Ferroelectric Superlattices

Ferroelectric superlattices are currently a topic of active research because of their fundamental interests and potential applications. As the physical properties of ferroelectric superlattices can be dominated by the behavior at interfaces, a natural starting point is to construct a model for their interface structures. In this presentation, we first present our approach to understand the ferroelectricity of an interface structure based on the Landau-Ginzburg theory. An interface energy term is introduced in the free energy to capture the essential physics associated with polarization continuities or discontinuities, intermixing and local polarization coupling. The approach is extended to ferroelectric superlattices. Finally, the current status and future directions of this work will be addressed.

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