

## Higher order far-field developments around lattice defects

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We examine the elastic deformation induced by lattice defects in crystalline materials. The deformation is given as a (local) minimizer of an atomistic energy. We give a novel far-field development of such minimizers based on continuum PDEs and multi-pol terms. This expansion is given up to arbitrary high-order. We also showcase how to use this expansion for very efficient atomistic simulations of defects.