

# Atomistic approach to alloy scattering in SiGe

## CHALLENGE

- Empirical approach to alloy scattering with *fitting parameters*.

## OBJECTIVE

- Provide a theoretical justification to the fitting parameter  $\Delta U$ .
- Understand the role of alloy scattering in SiGe.

## APPROACH

- Treat (a) atomistic SiGe as a perturbation over (b) SiGe VCA.

## IMPACT

- Able to match and explain the role of alloy scattering in bulk SiGe.
- Published in *Applied Physics Letters* 98 (17), 173503-173503-3

