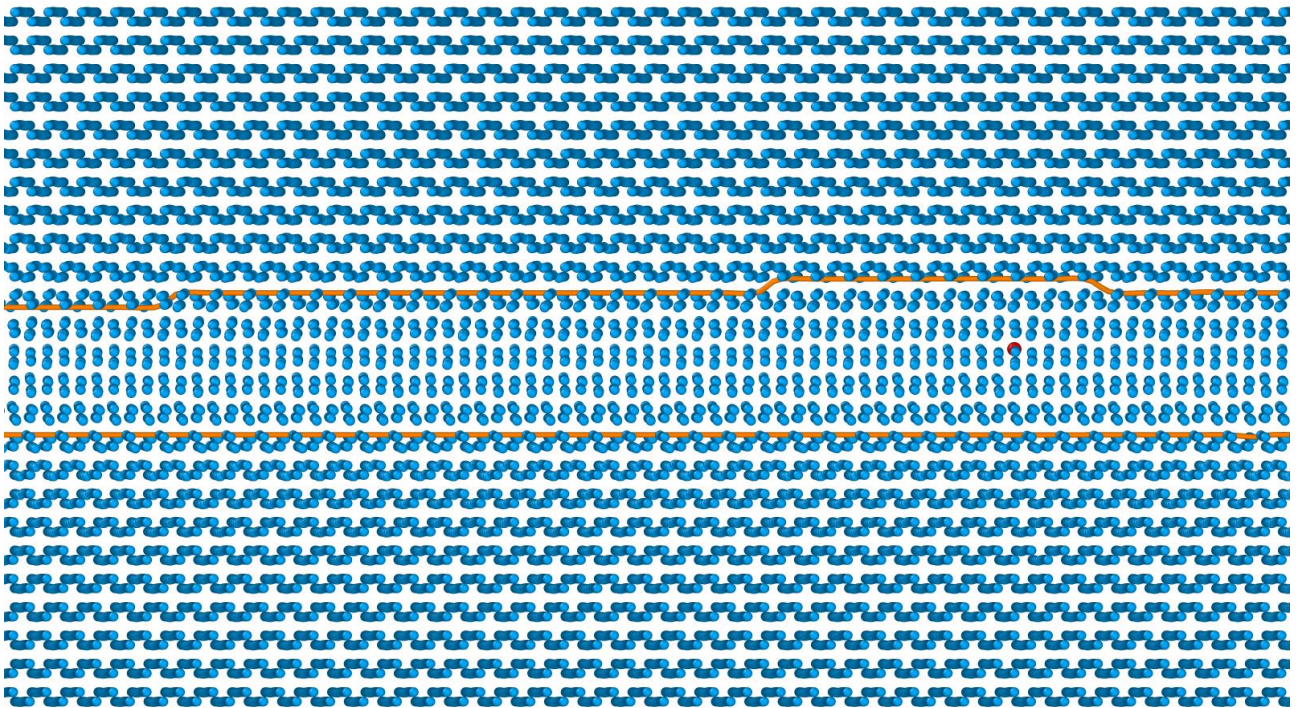


Effect of a single calcium atom in magnesium alloys



Can you spot the chubby calcium atom? It is the only one out of 1 million magnesium atoms in this structure. However, because of its large size, calcium affects the dislocation dissociation even at distances very far from it!

Computer simulations of the atomic structure give us a better understanding of how calcium improves some mechanical properties of magnesium-based materials, for example strength and ductility, important in applications such as car and plane parts.