Vanadium diffusion in ferrite SUNGHO KIM, JEFFREY HOUZE, SEONG-GON KIM, MARK HORSTEMEYER, Mississippi State University — Vanadium is a very important additive in high strength steel alloys. Small amount of vanadium addition strengthens the steel alloys. As a first step to study the effect of vanadium addition in steel alloys we calculated the diffusion path and the migration energy of vanadium atom in ferrite crystal using first principles calculations.