

## **Simulation of solidification and heat treatment of alloys**

Written by Kamoutsi Eleni

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LoM has the necessary computational tools and the experience to conduct demanding simulations of metallurgical processes in the following areas:

### **Casting**

Simulation of solidification paths

Simulation of microsegregation of alloying elements during solidification

### **Heat treatment of Aluminum Alloys**

Simulation of homogenization after casting

Simulation of solution treatment

Simulation of aging treatment

Effect of alloying elements on the above treatments

### **Heat treatment of Steels**

Calculation of austenitization temperatures

Simulation of austenitizing treatments (time-dependent)

Simulation of annealing treatments

Simulation of carburizing and nitriding treatments

Effect of alloying elements on the above treatments

The computational tools include the powerful thermodynamics and kinetics software Thermo-Calc and DICTRA with the associated databanks. LoM operates these software packages for the last 15 years.

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