

# **Lattice model for kinetics and grain-size distribution in crystallization**

M. Castro Ponce; A. Sánchez; F. Dominguez Adame

## **Abstract-**

**We propose a simple, versatile, and fast computational model to understand the deviations from the well-known Kolmogorov-Johnson-Mehl-Avrami kinetic theory found in metal recrystallization and amorphous semiconductor crystallization. Our model describes in detail the kinetics of the transformation and the grain size distribution of the product material, and is in good agreement with the available experimental data. Other morphological and kinetic features amenable of experimental observation are outlined, suggesting directions for further validation of the model.**

**Index Terms-** avrami kinetics, growth, nucleation, recrystallization, silicon, films

Due to copyright restriction we cannot distribute this content on the web. However, clicking on the next link, authors will be able to distribute to you the full version of the paper:

[Request full paper to the authors](#)

If your institution has an electronic subscription to Physical Review B, you can download the paper from the journal website:

[Access to the Journal website](#)

## **Citation:**

*Castro, M.; Sánchez, A.; Dominguez-Adame, F. "Lattice model for kinetics and grain-size distribution in crystallization", Lattice model for kinetics and grain-size distribution in crystallization, vol.61, no.10, pp.6579-6586, March, 2000.*