A mathematical model of Liesegang type precipitation and its simulations

Daishin Ueyama
(Meiji University)

Abstract:
The so-called Liesegang bands (rings) give us varied interests and many researchers in several field of research have studied the phenomenon over 100 years. We have introduced a new type of reaction diffusion model for the Liesegang system and we will demonstrate the reproducibility of the patterns. The mechanism of the pattern formation processes can be relatively easy to understand due to the model is based on the phase-field type model. Moreover, we can have some phenomenological understanding for the mechanism of the transition between periodic patterns and tree-like complex patterns.