

Seminar

15th of December 2022
17:00 h

Zoom Virtual Meeting:

<https://tuhh.zoom.us/j/82631283465>

Meeting-ID: 826 3128 3465

Password: 978444



Kenneth G. Libbrecht

Professor of Physics, California Institute of Technology Caltech, Pasadena (USA)

The Physical Dynamics of Ice Crystal Growth

The humble snowflake presents a remarkably difficult challenge for scientific analysis, as the seemingly simple process of water vapor freezing into ice yields a rich menagerie of self-assembling morphologies depending on environmental conditions. Physically realistic computational growth models are beginning to show promise, but they cannot yet reproduce even basic laboratory experiments. In large part, this unfortunate situation exists because the ice crystal exhibits a complex solid/vapor interface exhibiting surface premelting and highly anisotropic molecular attachment kinetics. I will describe the phenomenology of snow crystal growth provided by laboratory measurements along with a new physical model that may finally provide a comprehensive picture of the underlying molecular processes.



Reference: <http://www.snowcrystals.com>