

Close-ups of snowflakes win Lennart Nilsson Award

October 25 2010



Kenneth Libbrecht photographs snowflakes. Credit: Private

The Lennart Nilsson Award for 2010 is to be awarded to the US physicist Kenneth Libbrecht. He is awarded the prize, which is worth SEK 100,000, for his images of snowflakes – images that open our eyes to the beauty of nature. The award ceremony will take place in Stockholm's Berwald Hall on 3 November 2010 in connection with the ceremonial installation of professors at Karolinska Institutet. Lennart Nilsson himself will be in attendance.

The Lennart Nilsson Award is the world's most prestigious distinction in scientific and medical photography, and is presented annually in honour of the legendary Swedish photographer. Like Lennart Nilsson, Kenneth Libbrecht has created [images](#) that communicate advanced research to the general public.

The board's citation: "Kenneth Libbrecht's images open our eyes to the regularity and beauty of nature. With his photographs of [snowflakes](#), he turns mathematics, physics and chemistry into images of great beauty."

Kenneth Libbrecht is a professor of physics and chairman of the Physics Department at the California Institute of Technology (Caltech) in Pasadena. Born in 1958, he received his PhD in solar physics from Princeton University in 1984 and has been at Caltech ever since. His work is currently divided between the LIGO observatory for the detection of gravitational waves in space and investigations into the [physics](#) of crystal growth. In the latter area, he grows ice crystals from water vapour under controlled conditions in order to create synthetic snowflakes.

The astronomer and mathematician Johannes Kepler discovered back in the early 1600s that all snowflakes are hexagonal, and that each individual crystal has its own unique shape. Professor Libbrecht is attempting to understand how these shapes arise by making precise measurements of snow crystals in the lab. His goal is to map the underlying physical mechanisms, such as how temperature and electric charges affect the molecular dynamics of crystal growth.

Dr. Libbrecht also takes beautiful photographs of both natural and synthetic snowflakes, photographs that have reached a wide audience. He has created a website with information about snow and ice, and he has published seven books describing the art and science of snowflakes. Dr. Libbrecht's photographs of snowflakes have made the covers of a wide range of publications, been featured on a set of US stamps, and in November 2010 the Swedish Postal Service will issue a set of stamps featuring his images of snowflakes from Kiruna in Northern Sweden.

More information: Kenneth Libbrecht's snowflake website:
www.its.caltech.edu/~atomic/snowcrystals/

Provided by Karolinska Institutet

Citation: Close-ups of snowflakes win Lennart Nilsson Award (2010, October 25) retrieved 24 April 2024 from <https://phys.org/news/2010-10-close-ups-snowflakes-lennart-nilsson-award.html>

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