

RSof Application: Nano-Structured Phonic Structure

Objective

A decorative crystal manufacturer in Europe was inspired by the Morpho butterfly to create structured, color-based iridescent crystals for use in their products.

The Challenge

The challenge was to create a nano-structured phonic structure that could replicate the iridescent color of the Morpho butterfly. The structure needed to be composed of a periodic array of nano-structures that could diffract light in a way that produced the same color as the butterfly's wings.

The Solution

The solution was to create a nano-structured phonic structure that could replicate the iridescent color of the Morpho butterfly. The structure was composed of a periodic array of nano-structures that could diffract light in a way that produced the same color as the butterfly's wings. The nano-structures were arranged in a way that created a periodic array of nano-structures that could diffract light in a way that produced the same color as the butterfly's wings.



Figure 1. Morpho butterfly

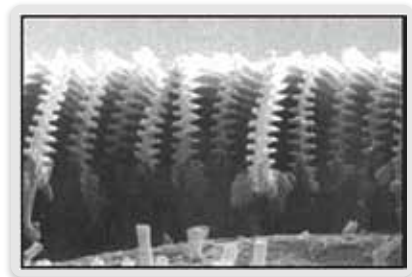


Figure 2. Nano-structured phonic structure. Image source: Smith et al., Detailed electromagnetic simulation of the structural color of butterfly wings, Applied Optics, 48 (2009)

