

UNIVERSITY OF SOUTHAMPTON

**A STUDY IN BIOMIMETICS:
NANOMETER-SCALE,
HIGH-EFFICIENCY, DIELECTRIC
DIFFRACTIVE STRUCTURES ON THE
WINGS OF BUTTERFLIES AND IN THE
SILICON CHIP FACTORY**

by
Luca Plattner

A thesis submitted for the degree of
Doctor of Philosophy

FACULTY OF ENGINEERING AND APPLIED SCIENCES
DEPARTMENT OF ELECTRONICS AND COMPUTER SCIENCE

May 2003