PROCEEDINGS OF SPIE

Nanophotonics II

David L. Andrews
Jean-Michel Nunzi
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Editors

7–9 April 2008
Strasbourg, France

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Published by
SPIE

Volume 6988

Proceedings of SPIE, 0277-786X, v. 6988

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Please use the following format to cite material from this book:
Author(s), "Title of Paper," in *Nanophotonics II*, edited by David L. Andrews, Jean-Michel Nunzi, Andreas Ostendorf, Proceedings of SPIE Vol. 6988 (SPIE, Bellingham, WA, 2008) Article CID Number.

ISSN 0277-786X
ISBN 9780819471864

Published by
SPIE
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445
SPIE.org

Printed in the United States of America.

Publication of record for individual papers is online in the SPIE Digital Library.

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Introduction

It is now recognized that many physical structures exhibit an optical response that is very substantially modified — in some cases almost entirely determined — by nanoscale features. In such systems, the character of optical propagation and measurement commonly involves an intricate interplay of structural, spectroscopic, electromagnetic, and quantum optical features, concisely exhibited by the term 'nanophotonics'. This highly distinctive field is experiencing phenomenal growth, both at the fundamental research level and in emerging applications. An increasingly extensive range of structures is being actively researched, encompassing areas such as nanofabricated surfaces, supramolecular and polymeric systems, thin films, and nano-antennas.

The interest in nanophotonics is not limited to the special characteristics of optical phenomena such as absorption, scattering, and fluorescence, however. At the nanoscale, a number of processes and effects arise that have no direct counterpart or are insignificant in larger scale systems. Here, for example, one finds near-field interactions, evanescent waves, surface plasmon interactions, sub-wavelength aperture effects, cavity nanophotonics, and the like. In such an arena, the behaviour of light itself is very different from what most of us originally learned to understand, and for those involved, there is a frequent need to reappraise and critically re-evaluate familiar concepts. As ever, the character of light itself proves elusive.

This nanophotonics conference, the second to take place under the auspices of Photonics Europe, this time in the memorable city of Strasbourg, attracted a splendid set of contributions of a uniformly high standard, addressing the full range of subject matter — theory, experiment, and applications. It is my pleasure to thank all who contributed to the meeting; those who presented papers and delivered high-quality manuscripts for these proceedings, and my co-chairs and fellow members of the Program Committee who helped put the conference together. Finally, I record my sincere thanks to the members of SPIE staff who have been involved at every stage, for their uncompromising and characteristic professionalism, and above all for their keen support.

David L. Andrews