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Introduction

With an emphasis on new scientific exploration and emerging technological applications of liquid crystals in optics, photonics, information display and nanotechnology, the 2011 SPIE Photonics West conference on Emerging Liquid Crystal Technologies VI was organized to address current developments concerning the most important themes by bringing together the world's leading scientists in the field. Participation from renowned researchers guaranteed that the conference had significantly advanced the knowledge and understanding within the broad field of liquid crystal science and technology. In addition, the group of participants also included a good number of contributed oral presentations and poster papers from a mix of young and well established researchers which fostered the excitement of brain storming.

The scope of the conference was extremely broad, especially with a featured keynote presentation on liquid crystal photonic crystal fibers and their applications, and many frontier topics including the organic semiconductors, grating, beam steering, and photonic bandgap devices, adaptive optics and optical microcavities, nonlinear optics, lasing, and waveguide, advances in display technologies, alignment and nanostructured surfaces, photonic and optical response materials, and switchable filters and reflectors. Technical programs with such broad objectives rarely satisfy all needs. This conference is no exception; however, these papers constitute a representative progress report on advancements in emerging liquid crystal technologies.

The symposium and this publication provided platforms for leading principle investigators to present unpublished or the latest important results in a broad spectrum, and enlightening discussion and idea exchange on the issues is still in debate. The cooperation of the authors, attendees, program committee members, and SPIE staff during the course of the symposium and publication preparation is greatly acknowledged.

Liang-Chy Chien