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Active Photonic Materials IV

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Introduction

Artificially structured materials can enable unprecedented and dramatic control of electromagnetic energy, offering unique possibilities in light matter interaction. The extra-ordinary properties of these complex photonic media emanate from the material composition of their constituents as well as their patterned features. Incorporation of active components, such as gain or non-linear materials can enhance the functionality of these advanced photonic materials to a higher level. Active complex photonic media are most promising platforms opening up new possibilities in a wide range of applications including biological/chemical sensing, nanoscale thresholdless lasing, solid state lighting as well as chip-scale optical computing. This vast potential for high impact applications has been a driving force in active photonic materials research.

This symposium has brought together theorists and experimentalists to exchange state-of-the art results in this rapidly growing area of research. In particular, the many engaging presentations encompassed a wide range of topics including gain material dynamics in complex photonic media, novel magnetophotonic phenomena, slow light and non-linear waveguides, strong coupling and cavity QED systems as well as non-classical photonic platforms and single photons.

As conference chairs, we would like to express our sincere thanks to all the participants of the 8095 conference who contributed with their presentations as well as manuscripts to make this conference a successful and truly interesting event.

Ganapathi S. Subramania
Stavroula Foteinopoulou

