Foreword

I am much obliged to everyone who is supporting our new group, “Tanabe Photonic Structure Group,” in the department of Electronics and Electrical Engineering, Faculty of Science and Engineering, in Keio University, Japan.

We started our research activities in year 2011 after four Bachelor students are assigned to our group. From a research aspect, we are trying to explore innovative photonic devices that enable to save the power required for signal processing by using the nature of light. On the other hand, as a faculty staff of an educational institution, I am responsible to train young students and researchers to allow them to become an active part in the research and industrial world. Although research and educational activities work closely together, I would like to focus on the research activities in this report.

This year, I enjoyed my research activities with four students. They all showed great capability and worked very hard to start the research from-scratch. One constructed a small clean-room (Class 1000), other built a measurement setup, and set up numerical simulation environments. The details can be found in our homepage. In this report, I would like to focus on some of the research topics.

Although it is not long since our group has started, I am appreciating and glad if you find some interest in our research activities.


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