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**Agus Muhammad Hatta
Aulia Nasution
Ruri Agung Wahyuono**
Editors

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Introduction

First of all, I would like to cordially welcome all of distinguished speakers, presenters, and all participants of ISPhOA 2020. Welcome to this Virtual Seminar that is held for the first time due to pandemic COVID-19 that spreads worldwide, including in Indonesia. Even through facing a difficult situation due to the pandemic, thankfully we are still able to organize this biennial seminar in 2020.

Thanks to all distinguished invited speakers that are still committed to deliver their inspiring lectures to this year's biennial event, as well as all authors that are contributing their valuable papers to be shared in this seminar. On behalf of all members of the Committee I would like to express my highest gratitude to your "never give up" spirit to combating this difficult pandemic situation together. Of course... life must go on

Back to the seminar, this ISPhOA 2020 is the fourth biennial scientific seminar series, after its predecessors in 2014, 2016, and 2018. This scientific forum is dedicated to providing a venue for discussions, the sharing of expertise, and the hope to be an ideal place to build a strong network among the stake holders from Universities, R&D Centers, Industries, and Government Officials that are actively involved in the development of Optics and Photonics. It is also hoped to promote the transfer of R & D outcomes into applications that match with societal and industrial needs, particularly the ones across nationwide and ASEAN regions.

Light plays a vital role in our daily lives and is an imperative cross-cutting discipline of science in the 21st century. Optics, Photonics, and their applied light-based technologies have promoted sustainable developments and provide solutions to global challenges in energy, education, agriculture and health. It has revolutionized medical cares, opened up international communication via the Internet, and continues to be central to link the cultural, economic and political aspects in the global society. The UNESCO even had declared 16 May as the International Day of Light, to yearly commemorate its important contributions in many aspects of human life.

I would like to thank all of our distinguished plenary speakers, that, even though in this difficult worldwide pandemic situation, have still committed to accept our previous invitation to share their novel and recent research achievements and expertise with other participants of the seminar. Thanks also for the researchers and academicians that have sent their working papers to be shared and presented in the seminar forum. High appreciation is also dedicated to members of the Technical Committee, that have helped us to review and choose the submitted contributions that fulfil the scientific quality standards set for the seminar.

To all of the sponsors from companies and societies in Optics and Photonics (ICO, OSA, as well as OSA Indonesia Section) that give their valuable support to the successful organizing of the seminar. Last, but not least, many thanks to the Institut Teknologi Sepuluh Nopember, Faculty of Industrial Technology and Systems Engineering, and the Department of Engineering Physics for the total and endless support in facilitating the preparation and organizing of the seminar.

Finally on behalf of all presenters and participants of ISPhOA 2020, I hope that you all will have a successful seminar and have nice, successful, and fruitful discussions and networking. We are looking forward to your coming contribution to the 5th International Seminar on Photonics, Optics and its Applications (ISPhOA) 20220. See you again!

Agus Muhamad Hatta