



## **ANSO Symposium on Basic Science for Sustainable Development**

### **Sharing Light: Tradition and Innovation**

#### **1. Background**

Optics is all about light. As a representative of the basic science, optics plays an extremely crucial role in the activities of the entire human history, which helps us understand the world.

Optical applications can be found in every aspect of our lives, from contact lenses to fiber-optics communication; from diagnostic devices to solar panels. Optics and its related technologies have been widely used in exploring the origin of life, diagnosing medical diseases, creating clean energy, and transmitting image information. As the application of optical-based technology has pervaded all aspects of human activities, light has become one of the most important elements in scientific research, production and human lives. The use of optical technology to improve the quality of life in developing countries is the key to the achievement of sustainable development goals, and the importance of optical research and technology for global development has been fully recognized worldwide.

This meeting shall bring together all optical researchers and professionals, and provide a platform to share new ideas and advancing technologies in optics, especially those closely connected with sustainable and development of human beings.

#### **2. Date and Location**

- 21-23 September 2022
- Location: Xi'an, Shaanxi province, China
- Zoom link: TBC
- Live streaming: Bilibili & YouTube

#### **3. Key Issues and Main Topics of the Meeting**

(1) Basic research on optics

Optical propagation and diffraction

Quantum optics

Nonlinear optics



Micro nano photonics

Optical information processing

(2) Optical science device and its application

Synchrotron radiation source

Free electron laser

Ultrashort pulse laser

Laser fusion device

Interaction between light and matter

(3) Optics and the future

Optical materials and devices

Optical instrument

Light and advanced manufacturing

Light and energy

Optical computing

Photon quantum technology

Intelligent perception

**4. Preliminary Agenda**

**Moderators:**

Representative from TUBITAK

Representative from Pakistan Academy of Sciences

Representative from ANSO Sec.

Representative from XIOPM, CAS

Day 1		
Beijing time (GMT+8)	Activity	Host



14:00-17:00	ANSO Youth International Optical Talent Training	TBC
<b>Day 2</b>		
9:00-11:00	ANSO Youth International Optical Talent Training	TBC
11:00-14:00	Lunch break	
14:00-14:30	<p style="text-align: center;">Opening Ceremony</p> <p>Remarks by the Representatives from the Hosts (around 5 mins each)</p>	<ol style="list-style-type: none"> <li>1. Representative from ANSO</li> <li>2. President or other representative from the Pakistan Academy of Sciences</li> <li>3. President or other representative from the TUBITAK</li> <li>4. Representative from XIOPM, CAS</li> <li>...</li> </ol>
14:30-15:00	Presentation 1	TBC
15:00-15:30	Presentation 2	TBC
15:30-15:50	Presentation 3	TBC
15:50-16:10	Tea break	
16:10-16:30	Presentation 4	TBC
16:30-16:50	Presentation 5	TBC
16:50-17:10	Presentation 6	TBC



9:00-11:00	ANSO Youth International Optical Talent Training	TBC
11:00-14:00	Lunch break	
14:00-14:20	Presentation 7	TBC
14:20-14:40	Presentation 8	TBC
14:40-15:00	Presentation 9	TBC
15:00-15:20	Presentation 10	TBC
15:20-15:40	Tea break	
15:40-16:00	Presentation 11	TBC
16:00-16:20	Presentation 12	TBC
16:20-16:40	Presentation 13	TBC
16:40-17:00	Presentation 14	TBC
17:00-17:30	Closing Ceremony	TBC

### List of Speakers

- 1) Péter Dombi, Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Hungary (Confirmed)
- 2) Mikhail Frolov, Department of Quantum Radiophysics, Russian Academy of Sciences (Confirmed)
- 3) Dahi Ghareab Abdelsalam Ibrahim, Engineering and Surface Metrology Laboratory, National Institute of Standards (NIS), Egypt (Confirmed)
- 4) Katalin Varju, Science Director, ELI-ALPS Research Institute (TBD)



- 5) Speaker from Germany, Suggested by Shanghai Advanced Research Institute, Chinese Academy of Sciences (TBD)
- 6) Speaker(s) from China (to be confirmed)
- 7) 1 Speaker from Pakistan Academy of Sciences (to be confirmed)
- 8) 1-2 Speakers from TUBITAK/Turkey (to be confirmed)

## 5. Hosts

The Alliance of International Science Organizations (ANSO)

Xi'an Institute of Optics and Precision Mechanics (XIOPM), Chinese Academy of Sciences

Pakistan Academy of Sciences (PAS)

The Scientific and Technological Research Council of Turkey (TUBITAK)

Department of Science and Technology of Shaanxi Province

## 6. Organizers

Xi'an Institute of Optics and Precision Mechanics (XIOPM), Chinese Academy of Sciences

Xi'an Science and Technology Bureau

Chinese Society for Optical Engineering (CSOE)

## 7. Co-organizer

XIOPM Industrial Development Co., Ltd.

## 8. Introduction of the Hosts

### **The Alliance of International Science Organizations (ANSO)**

The Alliance of International Science Organizations (ANSO) is a non-profit and non-governmental international scientific organization founded in 2018 by 37 international science and education institutions from around the world, and it now has 67 member organizations from 48 countries and regions.



ANSO catalyzes and implements a series of projects and activities in Science, Technology, Innovation and Capacity Building (STIC), such as collaborative research projects, training projects, and visiting fellowship on mega-science facilities, to tackle with major global environmental challenges and to help advance the UN SDGs under the principles of extensive consultation, joint contribution and shared benefits.

### **Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences**

Founded in 1962, the Xi'an Institute of Optics and Precision Mechanics (XIOPM), Chinese Academy of Sciences (CAS), is one of the largest CAS institutes in Northwest China. XIOPM conducts basic research and technology innovation on transient optics and photonics, high-resolution, high-speed information acquisition by optical technology, etc. After more than 60 years of development, it has become a comprehensive research base on applied basic research and high-tech innovation.

The institute now has 32 research units, including one national key laboratory, three CAS key laboratories, two Shaanxi Engineering and Technology Centers, one Shaanxi Provincial Key Laboratory and Xi'an Key Laboratory. There are 914 staff in XIOPM including 364 senior researchers. In 2016, XIOPM/CAS was awarded “National Demonstration Base for Training of Innovative Talents” by the Ministry of Science and Technology in China.

### **Pakistan Academy of Sciences (to be revised by PAS)**

Pakistan Academy of Sciences (PAS) was established in 1953 to promote science and technology, disseminate scientific knowledge and honour eminent scientists primarily through their election as fellows. In addition to having exchange programmes with scientific societies, academies and learned bodies in several countries, the Academy also publishes a scientific journal and monographs on topics of national interest. It also arranges seminars, symposia, conferences and workshops at national and international levels.

The Academy is a non-governmental and non-political supreme scientific body of distinguished scientists in the country. The Government of Pakistan has given the consultative and advisory status to the Academy “on all problems relating to the development of scientific efforts in the country”, and “generally on such matters of national and international importance in the field of science as may be referred to the Academy”. The affairs of the Academy are regulated by its Charter and Bye-Laws approved by the Fellows.

### **The Scientific and Technological Research Council of Turkey (TÜBİTAK) (to be**



revised by TUBITAK)

The Scientific and Technological Research Council of Turkey (TÜBİTAK) is the leading agency for management, funding and conduct of research in Turkey. It was established in 1963 with a mission to advance science and technology, conduct research and support Turkish researchers. The Council is an autonomous institution and is governed by a Scientific Board whose members are selected from prominent scholars from universities, industry and research institutions.

TÜBİTAK is responsible for promoting, developing, organizing, conducting and coordinating research and development in line with national targets and priorities. It also acts as an advisory agency to the Turkish Government on science and research issues, and is the secretariat of the Supreme Council for Science and Technology (SCST), the highest S&T policy making body in Turkey.

## 9. Contacts

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