

## Registration Information

- Pre-registration: on or before June 24 (Friday) 2022
- Submit registration form (<http://www.kvs.or.kr>) to KVS office
- ZOOM link will be provided after registration

Position	Pre-registration	Registration
Regular	140,000 won	150,000 won
Graduate	90,000 won	100,000 won
Undergraduate	50,000 won	60,000 won

## Contact :

- KVS Office
- Tel : 02-567-9486, Fax : 02-556-5675
- E-mail : [kvs@kvs.or.kr](mailto:kvs@kvs.or.kr)
- Roy Byung Kyu Chung (KNU)  
Tel : 053-950-5567, E-mail : [roy.b.chung@knu.ac.kr](mailto:roy.b.chung@knu.ac.kr)

• **Chair** Jin Soo Kim (Jeonbuk N. U.)

• **Secretary** Roy Byung Kyu Chung (Kyungpook N. U.)

## Committee

Jang-Won Kang(Mokpo N. U.)	Chang-Hee Cho(DGIST)
Soo Min Kim(Sookmyung W. U.)	Ki-Kang Kim(SKKU)
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## Welcome Message

We cordially invite you to '1<sup>st</sup> International Symposium on Semiconductor & Thin Films'.

Most of all, I am very honored to announce the 1<sup>st</sup> International Symposium held by 'Semiconductor & Thin-Film Division (S&TD)' of the Korean Vacuum Society (KVS). Over the past 30 years, the KVS-S&TD has operated various scientific programs including 'Division Workshop' to provide platforms for mutual exchange and communication among members. By expanding the various successful programs so far, the KVS-S&TD is scheduled to hold the 1<sup>st</sup> International Symposium.

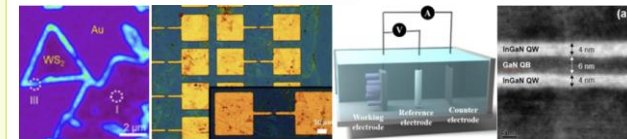
In the '4<sup>th</sup> Industrial Revolution Era', we are experiencing a big change in the life paradigm and rapid social development that we have never experienced before. In this revolutionary era, the semiconductor science and technology are also facing a new challenge different from those of the past. In order for semiconductor field to effectively contribute to social development and to provide new opportunities to its member, the KVS-S&TD has launched this symposium. I am sure that this symposium provides a good forum to share research results and thoughts among members. In addition, I hope that members will have more in-depth and beneficial sharing opportunities for the future.

I would like to thank all the invited speakers for their valuable contribution and the organizing committee for making this event possible during this tough time with the COVID-19.

**Semiconductor & Thin-Film Division  
of Korean Vacuum Society  
Chair, Jin Soo Kim**

## Korean Vacuum Society Semiconductor & Thin-Film Division

## 1<sup>st</sup> International Symposium on Semiconductor & Thin Films



◆ June 30~July 01 2022

◆ Engineering Bldg No. 12, Room No.114, Kyungpook National University (off-online hybrid)

◆ Organized by KVS Semiconductor & Thin-Film Division

### Co-organized by

- KNU Advanced Material Research Institute (KNU)
- Institute of Quantum Convergence Technology (KNU)
- PBL Oriented Semiconductor Equipment Engineer Recruits (CNU)
- (BK21-Four) Center for Optics & Semiconductor Based Advanced Functional Materials & Devices (CNU)
- Institute of Quantum Systems (CNU)
- Research Institute for Nanoscale Science & Technology (CBNU)
- Future Energy Convergence Core Center (JBNU)
- Research Center of Advanced Materials Development (JBNU)
- (BK21-Four) Smart Electronic Information Materials (JBNU)
- (BK21-Four) Innovation Graduate Education Program for Global High-tech Materials & Parts (PNU)

### ■ OPENING (June 30<sup>th</sup>)

09:00 ~ 09:30 **Registration**

09:30 ~ 10:00 **Opening Remarks, Division Chair Jin Soo Kim (Jeonbuk Nat. Univ.)**

### ■ SESSION-I : Semiconductors & Thin-Film I ..... Chair : Sangwook Lee (Kyungpook Nat. Univ.)

10:00 ~ 10:30 **Freestanding Nanomembranes towards Future Electronics,**

**Sanghoon Bae** (Washington University in St. Louis)

10:30 ~ 11:00 **Electrospun Triple-cation Perovskite for IR (Infred) Photodetection,**

**Min-Woo Kim** (New York University)

11:00 ~ 11:30 **Few Atom-thick Optical Nonlinear van der Waals Metamaterials,**

**Bumho Kim** (University of Pennsylvania)

11:30 ~ 12:00 **Liner Mode Avalanche Photodiode for Short-wavelength Infrared Applications,**

**Seunghyun Lee** (The Ohio State University, Columbus)

### ■ SESSION-II : Semiconductors & Thin-Film II ..... Chair : Seoung-Ki Lee (Pusan Nat. Univ.)

13:30 ~ 14:00 **Highly Stable Photoanode for Photoelectrochemical Water Splitting using GaN Pyramidal Dots in Two-electrode Configuration,**

**Sangmoon Han** (Washington University in St. Louis)

14:00 ~ 14:30 **Discovery of Persistent Photocurrent Effect in Heterostructure of Molybdenum Disulfide and Lanthanum Aluminate,**

**Junhong Na** (Kyungnam Univ.)

14:30 ~ 15:00 **Understanding Chalcogenide Materials via an Emerging New Chemical-bonding Concept,**

**Tae Hoon Lee** (Kyungpook Nat. Univ.)

15:00 ~ 15:30 **Coffee Break**

### ■ SESSION-III : Semiconductors & Thin-Film III ..... Chair : Young Duck Kim (Kyunghee Univ.)

15:30 ~ 16:00 **Non-Destructive Optical Characterization of 2D Materials Toward High Performance Device Applications,**

**Un Jeong Kim** (Samsung Advanced Institute of Technology)

16:00 ~ 16:30 **Analysis of the Emission Mechanisms of Green InGaN/GaN Light-emitting Diodes with Si-doped Graded Short-period Superlattices (GSLs),**

**Sanam SaeidNahaei** (Yeungnam University)

16:30 ~ 17:00 **Long Range Charge Carrier Mobility within Perovskite Thin Films,**

**Jongchul Lim** (Chungnam Nat. Univ.)

17:00 ~ 17:30 **Coffee Break**

### ■ SESSION-IV: Division Discussion for 2022 Summer conference of KVS (July 1<sup>st</sup>)

09:30 ~ 10:30 **Introduction of KNU Advanced Material Research Institute**

10:30 ~ 11:30 **Division Discussion for 2022 KVS Summer Conference**

11:30 ~ 12:00 **Closing**