# 2019 7th SKKU

# Workshop on Materials Frontier Research

Jan. 21 – 22, 2019

Rm 9B217 International Hall (국제관)

SKKU Seoul, Korea

### Sustainable Global Values

Global AMSE: Bring in the world's best

## Topics on

## Atomically Engineered Materials and Processing

### **Invited Speakers**

Jean-Marc Triscone (University of Geneva, Switzerland)

(Eindhoven University of Technology, Netherlands) **Erwin Kessels** 

Jamie Teherani (Columbia University, USA)

(Tokyo Institute of Technology, Japan) Taro Hitosugi

**Rodney Ruoff** (UNIST, Korea)

**Chang-Beom Eom** (Univ. of Wisconsin-Madison, USA)

Jeehwan Kim (MIT, USA)

(SKKU, Korea) Sang-Ho Oh

**Sang-Woo Kim** (SKKU, Korea)









### 2019 7<sup>th</sup> SKKU Workshop on Materials Frontier Research

-Topics on

Atomically Engineered Materials and Processing-

**Date** 

Jan. 21 - 22, 2019

#### Venue

Room 9B217 International Hall (국제관), Sungkyunkwan University, Seoul, Korea

### Welcome to SKKU Workshop on Materials Frontier Research (SWMFR-7)

We are pleased to announce that the 7<sup>th</sup> SKKU Workshop on Materials Frontier Research (SWMFR-7) with a subject of Atomically engineered materials and processing will be held at Sungkyunkwan University, Seoul, Korea from Jan. 21 to 22, 2019.

The workshop was initiated by BKPlus 21, GEC Center for Emergent Materials, School of Advanced Materials Science and Engineering, Sungkyunkwan University (SKKU) at 2013. The SKKU workshop is intended to exchange new ideas and results, and promote interaction and cooperation between SKKU faculty and world-wide distinguished scientists in materials science and engineering.

Continuing the previous workshops, we focus the workshop topic on "Atomically engineered materials and processing" and invite world-wide distinguished scientists at the leading edge of Atomically engineered materials and processing.

We believe that this workshop gives an insight and perspective to scientists and students attending the workshop. All scientists in the relevant research area who are interested in the workshop, are welcome.

#### **Program**

#### Jan.21 (Mon.)

Session I

10:30~11:50

Chang-Beom Eom Sang-Ho Oh

Session II

13:30~14:50

Erwin Kessels Rodney Ruoff

Session III

15:20~16:40

Jeehwan Kim Jamie Teherani

#### Jan.22 (Tue.)

Session IV

10:00~10:40

Jean-Marc Triscone

Session V

10:50~12:10

Taro Hitosugi Sang-Woo Kim

#### **Invited Speakers**

Jean-Marc Triscone (University of Geneva, Switzerland)

Erwin Kessels(Eindhoven University of Technology, Netherlands)

Jamie Teherani (Columbia University, USA)

Taro Hitosugi (Tokyo Institute of Technology, Japan)

Rodney Ruoff (UNIST, Korea)

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Sang-Ho Oh (SKKU, Korea)

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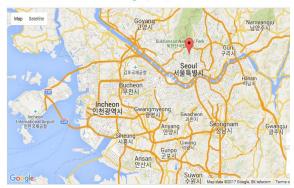
#### Registration

· Registration fee is complimentary.

#### Location

The conference will be held at Room 9B217 International Hall, Sungkyunkwan University (SKKU) in Seoul. SKKU is located at the heart of Seoul and easily accessible to cultural relics including many historic palaces and Insadong Antique Street in walking distance. Several public transportations, limousine or subway train, are serviced to reach SKKU in an hour from Incheon International Airport.

#### Humanities and Social Sciences Campus(Seoul)















### 2019 7th SKKU Workshop on Materials Frontier Research (Jan. 21-22, 2019)

### Sungkyunkwan University (SKKU), Seoul (Humanities and Social Sciences Campus), International Hall, Room 9B217, Korea

Date	Division	Time	Invited Speakers	
Jan. 21 (Mon.)	Opening Remark	10:20 ~ 10:25	Sung-Jin Song Vice president of SKKU	
		10:25 ~ 10:30	Jaichan Lee Director of BK21 Program in Adv. Mater. Sci. & Eng., SKKU : Introduction of Adv. Mater. Sci. & Eng. and BK21 Program	
	Session I		Session Chair : <b>Prof. Jaichan Lee</b>	
			<b>Prof. Chang-Beom Eom (Univ. of Wisconsin-Madison, USA)</b> : Defect-free Synthesis of Quantum Heterostructures via Metalorganic Pulsed Laser Deposition	
			Prof. Sang-Ho Oh (SKKU, Korea) : Direct Observation of Interface and Surface Reconstruction of Oxides by In-situ Electron Microscopy	
	Lunch	11:50 ~ 13:30		
	Session II	Session Chair : <b>Prof. Sang-Ho Oh</b>		
		13:30 ~ 14:10	Prof. Erwin Kessels(Eindhoven University of Technology, Netherlands) : Forefront research approaches in atomic layer epositionand etching	
		14:10 ~ 14:50	Prof. Rodney Ruoff (UNIST, Korea) : Carbon and Related Materials	
	Coffee Break	14:50 ~ 15:20	Coffee Break	
	Session III	Session Chair : <b>Prof. Jung Heon Lee</b>		
			Prof. Jeehwan Kim (MIT, USA) : Material challenges and opportunities in next generation electronics: from non-silicon electronics to artificial neural networks	
			Prof. Jamie Teherani (Columbia University, USA) : Transferred via contacts as a device platform for ideal 2D transistors	
	Social Banquet		Vice president of SKKU, all invited speakers, and AMSE faculty members * restaurant information will be provided	

Date	Division	Time	Invited Speakers	
Jan. 22 (Tue.)	Session IV	Session Chair : Prof. Yong-Hoon Kim		
			Prof. Jean-Marc Triscone (University of Geneva, Switzerland) : Structural and electronic properties of nickelate heterostructures	
	Coffee Break	10:40 ~ 10:50	Coffee Break	
	Session V	10:50 ~ 11:30	Prof. Taro Hitosugi (Tokyo Institute of Technology, Japan) : Atomically Engineered Interfaces in Solid-state batteries	
			Prof. Sang-Woo Kim (SKKU, Korea) : Triboelectric Nanogenerators for Powering Wearable and Body-Implantable Devices	
	Closing Remark	12:10 ~ 12:30	<b>Dongmok Whang</b> Chair of Adv. Mater. Sci. & Eng.	