

## Meeting Agenda

### 22 April

**14-00 to 19-00**

#### **Registration**

Address: 3F Banquet Hall, L.GEM Hotel Shenzhen

### 23 April (Day 1)

**9-00 to 9-30**

#### **Opening session**

**Session Chair: Prof. Yury Illarionov, SUSTech**

**9-00 to 9-15**

#### **Prof. Yury Illarionov**

Southern University of Science and Technology, China

**“Welcome message from General Chair”**

**9-15 to 9-20**

#### **Senior Management Member**

Southern University of Science and Technology, China

**“Welcome message from SUSTech”**

**9-20 to 9-30**

#### **Prof. Evgenii Aleksandrov**

Bauman Moscow State Technical University, Russia

**“Welcome message from Bauman Moscow State Technical University”**

**9-30 to 10-50**

#### **Plenary session I**

**Session Chair: Prof. Yury Illarionov, SUSTech**

**9-30 to 10-10**

#### **Prof. Alfred Ngowi**

Central University of Technology, Free State, South Africa (Deputy Vice Chancellor)

**“Smart Materials for Healthcare and Environmental Applications: Harnessing South Africa’s Rare Earth Resources”**

**10-10 to 10-50**

#### **Prof. Xing Cheng**

Southern University of Science and Technology, China

**“Nanoimprint based high-resolution and large-scale micro and nanopatterning techniques and their applications”**

<b>10-50 to 11-10</b>	<b>Coffee break + posters</b>
<b>11-10 to 12-30</b>	<b>Plenary session II</b> Session Chair: Prof. Yu Zhou, Central South University
<b>11-10 to 11-50</b>	<b>Prof. Evgenii Aleksandrov</b> Bauman Moscow State Technical University, Russia “Digital design and prediction of polymeric materials”
<b>11-50 to 12-30</b>	<b>Prof. Hassan Arafat</b> Khalifa University, UAE “Oxidation-stable MXene inks for additive manufacturing of high-performance energy storage devices”
<b>12-30 to 14-00</b>	<b>Lunch</b>
<b>14-00 to 15-20</b>	<b>Plenary session III</b> Session Chair: Prof. Yu Zhou, Central South University
<b>14-00 to 14-40</b>	<b>Prof. Ye Zhou</b> Shenzhen University, China “Neuromorphic tactile sensing device”
<b>14-40 to 15-20</b>	<b>Prof. Baowen Li</b> Southern University of Science and Technology, China “Thermal diode and its applications in solid state cooling”
<b>15-20 to 15-40</b>	<b>Coffee break + posters</b>
<b>15-40 to 17-50</b>	<b>Theory and quantum technologies</b> Session Chair: Prof. Evgenii Aleksandrov, Bauman MSTU
<b>15-40 to 16-10</b> <b>(Keynote)</b>	<b>Prof. Raimundo Costa Filho</b> Federal University of Ceara, Brazil “Chiral states in $\alpha$ -T <sub>3</sub> lattices”
<b>16-10 to 16-30</b>	<b>Prof. Nan Wang</b> GTIIT, China “Modelling superelastic folding in freestanding ferroelectric thin films”

---

**16-30 to 16-50**

**Dr. Roman Eremin**

AIRI Institute (New Materials Design), Russia

**“Combined DFT/data-driven solutions for accelerated exploration of composition/configuration spaces of chemically disordered crystals”**

---

**16-50 to 17-10**

**Prof. Dmitrii Chermoshentsev**

Russian Quantum Center, Russia

**“Microring resonators for soliton generation, quantum states engineering and coherent computing”**

---

**17-10 to 17-30**

**Prof. Ilya Semerikov**

Russian Quantum Center, Russia

**“Algorithms on 25 qudit (50 qubit) ion quantum computer”**

---

**17-30 to 17-50**

**Dr. Sergei Andreev**

Ioffe Institute, Russia

**“Controllable fusion of electromagnetic bosons in 2D semiconductors”**

---

**17-50 to 18-00**

**Technical break**

---

**18-00 to 19-30**

**Round table discussions**

**I. Honorary Guest Country panel:**

**“Careers of outstanding Nigerian scientists in STEM research: what BRICS+ society could do to support genius students from African countries?”**

Prof. Olusoji Olusola Ilori, Prof. Adebayo Simeon Bamire, Prof. Ganiyu Adesola Aderounmu, Prof. Kayode Peter Ayodele, Obafemi Awolowo University, Nigeria

**II. “Which research funding programs we would need in BRICS+ countries”**

Prof. Yury Illarionov + panelists representing different countries

**III. “Opportunities in BRICS+ countries for interdisciplinary research and collaborations”**

Prof. Yury Illarionov + panelists representing different countries

---

## 24 April (Day 2)

**9-00 to 11-00**

**SUSTech special session: lab introductions**

**Session Chair: Prof. Yury Illarionov, SUSTech**

**9-00 to 9-15**

**Prof. Jiazhen Wu**

Department of Materials Science and Engineering, Southern University of Science and Technology, China

**9-15 to 9-30**

**Prof. Changjian Li**

Department of Materials Science and Engineering, Southern University of Science and Technology, China

**9-30 to 9-45**

**Prof. Kai Xiao**

Department of Biomedical Engineering, Southern University of Science and Technology, China

**9-45 to 10-00**

**Prof. Zhen He**

Department of Materials Science and Engineering, Southern University of Science and Technology, China

**10-00 to 10-15**

**Prof. Ruitao Wen**

Department of Materials Science and Engineering, Southern University of Science and Technology, China

**10-15 to 10-30**

**Prof. Yury Illarionov**

Department of Materials Science and Engineering, Southern University of Science and Technology, China

**10-30 to 10-45**

**Prof. Yanan Dai**

Department of Physics, Southern University of Science and Technology, China

**10-45 to 11-00**

**Prof. Jinhui Zhong**

Department of Materials Science and Engineering, Southern University of Science and Technology, China

**11-00 to 11-30**

**Coffee break + posters**

<b>11-30 to 12-30</b>	<b>Honorary Guest Country special session: Nigerian delegation overview talks</b> Session Chair: Prof. Yury Illarionov, SUSTech
<b>11-30 to 12-00</b>	<b>Prof. Ganiyu Adesola Aderounmu and Prof. Kayode Peter Ayodele</b> Obafemi Awolowo University, Nigeria “Driving Knowledge, Innovation, and Collaboration in Africa: The ACE OAK-PARK Vision”
<b>12-00 to 12-30</b>	<b>Prof. Adebayo Simeon Bamire</b> Obafemi Awolowo University, Nigeria (Vice-chancellor) “Obafemi Awolowo University: A Hub for Research, Innovation, and International Collaboration”
<b>12-30 to 14-00</b>	<b>Lunch</b>
<b>14-00 to 14-40</b>	<b>Plenary session IV</b> Session Chair: Prof. Jinhui Zhong, SUSTech
<b>14-00 to 14-40</b>	<b>Prof. Wenkai Zhang</b> Beijing Normal University, China “Charge and energy transfer dynamics in organic photovoltaic materials”
<b>14-40 to 16-00</b>	<b>Spectroscopy and microscopy methods I</b> Session Chair: Prof. Jinhui Zhong, SUSTech
<b>14-40 to 15-10 (Keynote)</b>	<b>Prof. Rene Alfonsoa Nome</b> Universidade Estadual de Campinas, Brazil “Integrating Timescales from Femtoseconds to Real Time: concepts, methods, examples”
<b>15-10 to 15-40 (Keynote)</b>	<b>Prof. Donghai Li</b> University of Science and Technology of China, China “Exciton interactions in low-dimensional materials studied by coherent multi-dimensional spectroscopy”

<b>15-40 to 16-00</b>	<b>Dr. Liming Zheng</b> Peking University, China “Push the resolution of multi-dimensional electron microscopy via graphene”
<b>16-00 to 16-40</b>	<b>Coffee break + posters</b>
<b>16-40 to 18-10</b>	<b>Spectroscopy and microscopy methods II</b> Session Chair: Prof. Jinhui Zhong, SUSTech
<b>16-40 to 17-10 (Keynote)</b>	<b>Prof. Tingchao He</b> Shenzhen University, China “Second harmonic generation circular dichroism in chiral metal halides”
<b>17-10 to 17-30</b>	<b>Dr. Yakun He</b> KAUST, Saudi Arabia “Photophysics of organic solar cells investigated using ultrafast spectroscopy”
<b>17-30 to 17-50</b>	<b>Prof. Khadga Jung Karki</b> GTIIT, China “Nonlinear optical response from MoS <sub>2</sub> /gold nanoparticles hybrid system”
<b>17-50 to 18-10</b>	<b>Prof. Huayan Yang</b> Shenzhen University, China “From chiral atomically precise nanoclusters to chiral nanoparticles”
<b>19-00 to 22-00</b>	<b>Conference Dinner</b>

## 25 April (Day 3)

**9-00 to 10-30**

**Special session of Brazil as the BRICS Chairman Country 2025**

**Session Chair: Prof. Yury Illarionov, SUSTech**

**9-00 to 9-40**

**Prof. Cecília de Carvalho Castro e Silva**

MackGraphe – Mackenzie Institute for Research in Graphene and Nanotechnologies, Brazil

**“Advanced Materials for Sustainable Healthcare and Environmental Applications”**

**9-40 to 10-10**

**Prof. Diego Rabelo do da Costa**

Universidade Federal do Ceará, Brazil

**“Moiré excitons in twisted van der Waals hetero-bilayers”**

**10-10 to 10-30**

**Prof. Benedito Guimarães Aguiar Neto**

MackGraphe – Mackenzie Institute for Research in Graphene and Nanotechnologies, Brazil

**“The MackGraphe and its Challenges in Transforming Knowledge in Nanotechnology into Innovation in Brazil”**

**10-30 to 10-50**

**Coffee break + posters**

**10-50 to 12-20**

**Advanced treatment methods**

**Session Chair: Prof. Yu Zhou, Central South University**

**10-50 to 11-20**

**(Keynote)**

**Prof. Mikhail Zyuzin**

ITMO University, Russia

**“Light-sensitive functional nanomaterials for therapy and temperature sensing inside cells”**

**11-20 to 11-50**

**(Keynote)**

**Prof. Sandeep Somvanshi**

Dr. Babasaheb Ambedkar Marathwada University, India

**“Treating Cancer with Next-Generation Nanomedicines and 3D Cell Culture Models”**

**11-50 to 12-20**

**(Keynote)**

**Prof. Alessandro Parodi**

Sirius University of Science and Technology, Russia

**“From Algae to cancer cells: AIEgen-based nanoparticles for tracking cellular processes in cancer and ecotoxicology”**

<b>12-20 to 13-50</b>	<b>Lunch</b>
<b>13-50 to 15-50</b>	<b>Electronics based on 2D and thin film materials I</b> Session Chair: Prof. Yury Illarionov, SUSTech
<b>13-50 to 14-20</b> <b>(Keynote)</b>	<b>Prof. Olusoji Olusola Ilori</b> Obafemi Awolowo University, Nigeria “Fabrication and Characterization of Metal Organic Chemical Vapor Deposited Transparent Thin Film Transistor”
<b>14-20 to 14-50</b> <b>(Keynote)</b>	<b>Prof. Xiuju Song</b> Zhejiang University, China “2D Materials for wearable sensors”
<b>14-50 to 15-20</b> <b>(Keynote)</b>	<b>Prof. Yangbo Zhou</b> Nanchang University, China “Local laser oxidation enabling high-k dielectrics in van der Waals-integrated transistors”
<b>15-20 to 15-50</b> <b>(Keynote)</b>	<b>Prof. Yu Zhou</b> Central South University, China “2D polar materials growth and devices applications”
<b>15-50 to 16-10</b>	<b>Coffee break + posters</b>
<b>16-10 to 17-20</b>	<b>Electronics based on 2D and thin film materials II</b> Session Chair: Prof. Yury Illarionov, SUSTech
<b>16-10 to 16-40</b> <b>(Keynote)</b>	<b>Prof. Junyang Liu</b> Xiamen University, China “Electronic devices for logic operations and future integration through single-molecules”
<b>16-40 to 17-00</b> <b>(Student)</b>	<b>Ms. Yezhu Lv</b> Group of Prof. Yury Illarionov Southern University of Science and Technology, China “Modeling the impact of localized defects on the stability of 2D FETs using advanced TCAD tools”



---

**17-00 to 17-20**

**(Student)**

**Mr. Zihan Liang**

**Group of Prof. Xiaolong Chen**

Southern University of Science and Technology, China

**“Infrared optoelectronics in twisted black phosphorus”**

---

**17-30 to 19-30**

**Poster session**

---

## 26 April (Day 4)

**9-00 to 11-00**

### **Plenary session V**

**Session Chair: Prof. Evgenii Aleksandrov, Bauman MSTU**

**9-00 to 9-40**

### **Prof. Amine El Moutaouakil**

University of United Arab Emirates, UAE

**“Terahertz technologies with 2D nanomaterials and their applications: from basic physical properties to market applications”**

**9-40 to 10-20**

### **Prof. Zinaida Terentyeva**

Bauman Moscow State Technical University, Russia

**“Application of machine learning methods to optimize the quality of the conductive surface and the permeability of porous structures obtained by selective laser melting”**

**10-20 to 11-00**

### **Prof. Jun Feng**

Southern University of Science and Technology, China

**“Dig into the zero-dimension materials and extend their application”**

**11-00 to 11-20**

### **Coffee break + posters**

**11-20 to 12-40**

### **Plenary session VI**

**Session Chair: Prof. Cecilia de Carvalho Castro e Silva, MackGraphe, Brazil**

**11-20 to 12-00**

### **Prof. Chernet Amente Geffe**

Addis Ababa University, Ethiopia

**“Prospective of Diluted Magnetic Semiconductors (DMSs) for the development of Technology”**

**12-00 to 12-40**

### **Prof. Luca Pasquali**

University of Modena and Reggio Emilia, Italy

**“Growth modes of ionic fluorides on conductive crystalline substrates”**

**12-40 to 14-00**

### **Lunch**

<b>14-00 to 15-20</b>	<b>Plenary session VII</b> <b>Session Chair: Prof. Cecília de Carvalho Castro e Silva,</b> <b>MackGraphe, Brazil</b>
<b>14-00 to 14-40</b>	<b>Prof. Ali Sadeghi</b> Shahid Beheshti University, Iran <b>“Computational Modelling of Nanostructures in the Age of Artificial Intelligence”</b>
<b>14-40 to 15-20</b>	<b>Prof. El-Sayed Rabie El-Sayed Hassan</b> Central Metallurgical Development Institute (CMRDI), Egypt <b>“Critical Metals in Egypt: Occurrence, Characterization and Advanced Processing”</b>
<b>15-20 to 15-40</b>	<b>Coffee break + posters</b>
<b>15-40 to 18-00</b>	<b>Light interaction with nanomaterials</b> <b>Session Chair: Prof. Jinhui Zhong, SUSTech</b>
<b>15-40 to 16-10</b> <b>(Keynote)</b>	<b>Prof. Wei Wang</b> Sichuan University, China <b>“Ultrafast coupling dynamics in bulk TMDC metasurfaces”</b>
<b>16-10 to 16-30</b>	<b>Prof. Wenxin Wang</b> Harbin Engineering University, China <b>“Lattice plasmons: from fabrication to applications”</b>
<b>16-30 to 16-50</b>	<b>Prof. Rouhollah Karimzadeh</b> Shahid Beheshti University, Iran <b>“Hydrodynamical tuning of birefringence in 2D-liquid crystals”</b>
<b>16-50 to 17-10</b>	<b>Prof. Chao Zhan</b> Xiamen University, China <b>“Plasmon-regulated electrochemical processes”</b>
<b>17-10 to 17-30</b>	<b>Dr. Leyi Zhao</b> The Hong Kong Polytechnic University, Hong Kong, China <b>“Strong coupling assisted enhancement of energy transfer between two-dimensional heterojunctions”</b>

---

**17-30 to 17-50**  
**(Student)**

**Mr. Kaizhen Liu**

**Group of Prof. Jinhui Zhong**

Southern University of Science and Technology, China

**“Tunable surface plasmon-exciton polaritons on engineered plasmonic nanostructure”**

---

**17-50 to 18-00**

**Technical break**

---

**18-00 to 18-20**

**Closing remarks and announcement of “3rd Open BRICS+ Conference on Novel Materials and Devices”**

**Prof. Yury Illarionov**, Southern University of Science and Technology, China

**Prof. Evgenii Aleksandrov**, Bauman Moscow State Technical University, Russia

**27 April (Not an official conference day)**  
**Brokerage meetings and cultural program**

**Morning**

**SUSTech campus tour and lab visit**  
**(By agreement with SUSTech PIs)**

---

**Afternoon**

**Cultural tour in Shenzhen for those who are interested**  
**(See the website)**

---