ICAMNSM — 2026

ADVANCED MATERIALS, NANOTECHNOLOGIES AND SOLAR MATERIALS SCIENCE FOR SUSTAINABLE DEVELOPMENT

INTERNATIONAL SCIENTIFIC CONFERENCE | OFFICIAL PROGRAMME

29–30 October 2026 • Tashkent & Parkent, Uzbekistan

From Solar Energy to the Materials of the Future!

Welcome Address

Dear Distinguished Guests, Colleagues and Participants,

On behalf of the Organizing Committee, it is our pleasure to welcome you to the International Scientific Conference “Advanced Materials, Nanotechnologies and Solar Materials Science for Sustainable Development” (ICAMNSM-2026).

Advances in materials science are essential to the competitiveness of modern industry, the energy transition and sustainable development. By bringing together scientists, engineers, industrial partners and young researchers, this conference creates an opportunity to exchange new results and turn scientific ideas into practical technologies.

Our program covers advanced functional materials, nanotechnologies, critical and rare metals, solar-driven processes, hydrogen technologies and sustainable energy. The second day includes the Azimov Readings at Uzbekistan’s unique Big Solar Furnace, highlighting the scientific legacy of Academician S. Azimov and the future of concentrated solar energy in materials processing.

We hope that the discussions will lead to joint research, international consortia, researcher training, technology transfer and long-term partnerships with industry. I wish all participants productive discussions, inspiring meetings and a memorable visit to Uzbekistan.

***Organizing Committee* | ICAMNSM-2026**

About the Conference

Purpose

To strengthen international scientific and technological cooperation in advanced materials, nanotechnologies and solar materials science, and accelerate the translation of research results into sustainable industrial applications.

Key Objectives

- Share recent scientific achievements in functional materials, nanostructures and emerging materials technologies.
- Discuss the use of concentrated solar energy for materials synthesis and processing.
- Advance research on rare and critical metals, clean energy, hydrogen and environmental technologies.
- Connect research institutes, universities and industrial enterprises for joint projects and technology transfer.
- Develop international research consortia, researcher mobility and training opportunities for young scientists.

Expected Outcomes

New research partnerships, proposals for collaborative projects, exchange of expertise, and practical pathways from laboratory research to pilot-scale demonstration and industrial implementation.

Practical Information

Day 1: Academy of Sciences, 70 Ya. Gulamova Street, Tashkent.

Day 2: Big Solar Furnace, Parkent District, Tashkent Region. Buses depart at 08:30 from the Physical-Technical Institute / hotel.

Conference at a Glance

29 OCTOBER 2026 — TASHKENT

Time	29 October	Venue
09.15-10.00	Registration	Academy of Sciences, Entrance. 70, Ya.Gulamova str., Tashkent
10.15-10.30	Opening	Conference Hall
10.30-12.30	1. Plenary Lectures	Conference Hall
12.30-14.00	Lunch/Poster session	“Tantana” Restaurant
14.00-15.40	2. Plenary Lectures	Conference Hall
15.40-16.00	Coffee break/Poster session	Foyer of the Conference Hall
16.00-17.20	Oral Presentations	Conference Hall

30 OCTOBER 2026 — BIG SOLAR FURNACE, PARKENT

Time	30 October	Venue
08.30	Visit to the Unique Scientific Facility “Big Solar Furnace”	Buses will depart at 08:30 from the Physical-Technical Institute / Hotel.
10.30-10.45	Opening	IMS Conference Hall
10.45-12.35	3. Plenary Lectures	IMS Conference Hall
12.35-14.00	Lunch/Poster session	IMS Dining Hal
14.00-15.40	Oral Presentations	Conference Hall
15.30-15.50	Coffee break/Poster session	Foyer of the Conference Hall
15.50-17.10	Oral Presentations	Conference Hall
17.30	Departure to Tashkent	Buses will return to Physical-Technical Institute / Hotel.

Detailed Scientific Programme

DAY 1 | 29 OCTOBER 2026

October 29		
	Opening of the International Conference Welcome remarks Academician, Shamansur Sagdullaev, First Vice-president of the Uzbekistan Academy of Sciences	
10.15-10.30	Pardaev Ilkhomjon, Deputy director of Agency for the Development of Industrial Cooperation and Public Procurement of the Republic of Uzbekistan	
	Prof. Olimjon Tuychiev, Rector of the Turin Polytechnic University in Tashkent, Uzbekistan	
I. Plenary Session. Advanced Functional Materials. Moderator: Prof. O. Tuychiev		
10.30-11.00	Dr. Odilkhuja Parpiev, Institute of Materials Science, Uzbekistan Strategy of the Uzbekistan Academy of Sciences for the Development of Materials Science through 2035	
11.00-11.30 Invited Lecture	Prof. Bum Sung Kim, Korea Institute of Industrial Technology (KITECH), Korea Korea–Uzbekistan Cooperation for Sustainable Rare Metals Supply Chains	

11.30-12.00 Invited Lecture	Prof. Jingxiang Low, Tiangong University, China Potential Applications of Solar-Driven Small Molecule Conversion	
12.00-12.30 Invited Lecture	Dr. Moulay Rachid Babaa Associate Professor, New Uzbekistan University, Uzbekistan Programmable Nanostructure Formation in Polymer Nanocomposites: From Kinetic Control to Functional Materials Design	
12.30-14.00	Group photo/ Lunch	
Moderator: Prof. Jingxiang Low		
14.00-14.25 Keynote Lecture	Prof. Ulugbek Shoislamov, National University of Uzbekistan Functional Metal Oxide Nanomaterials for Solar-Driven Energy and Environmental Applications	
14.25-14.50 Keynote Lecture	Dr. Ji-Hun Yu, Korea Institute of Materials Science (KIMS), Korea Recent R&D Activities on Rare Metals in KIMS	
14.50-15.15 Keynote Lecture	Prof. Zhirong Zhang, Anhui Institute of Optics and Fine Mechanics, HFIPS, Chinese Academy of Sciences, Hefei, China Development of a multi-modal laser detector for copper and geological minerals	

15.15-15.40 Keynote Lecture	Prof. Aziz Ibragimov, Director of the Institute of General and Inorganic Chemistry of the Uzbekistan Academy of Sciences, Uzbekistan TBD	
15.40-16.00	Coffee Break	
Moderator: Prof. Ulugbek Shoislamov		
16.00-16.20	Dr. Jai Prakash, Department of Chemistry, National Institute of Technology Hamirpur, India Emerging Photocatalysts as Sustainable, Recyclable and Multifunctional Platform for Next-Generation Technologies	
16.20-16.40	Dr. Wen He, Anhui University, Hefei, China Synergistic Construction of Textile-Based Self-Powered Microsystems Integrating Energy Harvesting, Storage and Sensing	
16.40-17.00	Prof. Bunyod Allabergenov, Urgench State University, Uzbekistan Investigation of the Phase Transition and Thermochromic Properties of Multilayer TiO2/VO2/TiO2 Nanostructures for Energy-Efficient Smart Windows	
17.00-17.20	Dr. Sirajul Haq, Institute of Fundamental and Applied Research (IFAR, Uzbekistan), Pakistan Unlocking the Photocatalytic Potential of Amorphous Nanomaterials: Zinc-Driven Optimization of Bio-Capped Co–Cu–Zn Layered Hydroxides	
17.20	Summary 1st day	

DAY 2 | 30 OCTOBER 2026 • AZIMOV READINGS

II. Plenary Session. Concentrated Solar Energy and Solar Furnaces for the Production and Processing of Advanced Materials (Azimov Readings)

10.30-10.45	Opening of the Plenary Session. Welcome remarks. Dr. Odilkhuja Parpiev, Director of Institute of Materials Science, Uzbekistan	
	Prof. Khusniddin Olimov, Director of Physical-Technical Institute named after S. Azimov	

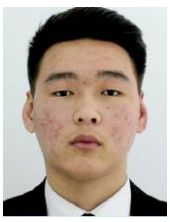
Moderator: Prof. Khusniddin Olimov

10.45-11.05	Dr. S. Suleymanov, Institute of Materials Science, Uzbekistan Academy of Sciences The Big Solar Furnace of Uzbekistan: From Academician S. Azimov's Scientific Vision to the Creation of Materials of the Future	
11.05-11.25	Prof. J. Akhatov, Physical-Technical Institute named after S. Azimov Promising materials used to enhance the efficiency of solar thermal energy system	
11.25-11.45	Dr. Shavkat Mamatkulov, Institute of Materials Science, Uzbekistan Academy of Sciences Atomistic Design of High-Entropy Materials: From Interatomic Interactions to Defects, Diffusion and Phase Stability	
11.55-12.15	Sherzod Kurbanbekov, Khoja Akhmet Yassawi International Kazakh-Turkish University Calculation of the Pd-Mg-Ti Ternary Phase Diagram: Thermodynamic Modeling Using Thermo-Calc Software	

12.15-12.35	Prof. Alisher Ishankulov, Samarkand State University, Uzbekistan Development of Next-Generation Luminescent Nanosensors Based on Carbon and Silicon Quantum Dots	
12.35-14.00	Lunch	

III. Materials for Sustainable Energy and Hydrogen Technology

Moderator: Dr. Wen He, Anhui University, Hefei, China

14.00-14.20	Dr. Boris Oksengendler, Institute of Materials Science, Uzbekistan Academy of Sciences Spectral model for synergism in radiation-technological processes at the Big Solar Furnace	
14.20-14.40	Dr. Oybek Tursunkulov, Center for Advanced Technologies under the Academy of Sciences of the Republic of Uzbekistan Influence of methane flow on the raman characteristics and spatial uniformity of CVD graphene grown on high-purity copper	
14.40-15.00	Dr. Akhtam Samiyev, Institute of Biochemistry, Samarkand State University, Uzbekistan Electrochemical Synthesis and Morphology of TiO2-Based Nanomaterials	
14.50-15.10	Berik Kaldar, Khoja Akhmet Yassawi International Kazakh-Turkish University Investigation of the Phase State and Hydrogen Interaction of the TiZrNbVTa High-Entropy Alloy Produced via Spark Plasma Sintering (SPS)	

15.10-15.30	Nietbay Uzakbergenov, Center for Advanced Technologies under the Academy of Sciences of the Republic of Uzbekistan Photocatalytic transformation of rhodamine b over thermally exfoliated g-c_3n_4 under UV irradiation	
15.30-15.50	Coffee Break	
Moderator: Dr. Shavkat Nurmatov, Institute of Materials Science		
15.50-16.10	Dr. Kh.B. Musaev, Institute of Fundamental and Applied Research under TIIAME National Research University Sol-gel synthesis and photocatalytic activity of TiO2/g-C3N4 nanocomposites	
16.10-16.25	Javlonbek Mamanazirov, Institute of Materials Science, Uzbekistan Academy of Sciences MXene@PVDF fibrous Membranes for Infrared Shielding film	
16.25-16.50	Avazkhon Azamjonov, Institute of Materials Science, Uzbekistan Academy of Sciences Interface-Driven Electronic and Optical Properties of Graphene–MXene–Metal Oxide Heterostructures	
16.50-17.10	Hoshimov Farhodjon, Institute of Materials Science, Uzbekistan Academy of Sciences Synthesis and Physicochemical Properties of Efficient Catalysts Based on Selected d-Metal Oxide Nanocomposites	
17.10	Conference Closing and Summary	
17.30	**Departure for Tashkent**	