

Global Young Academy

Young Scientist Ambassador Programme



Country of Origin:
India

Country of destination:
Uzbekistan

Time of Visit:
16-19 October 2018

Ambassador:

Mahesh Kumar

Mission Report

YSAP Activities Overview:

- (i) Initiating a research collaboration on renewable energy sources and energy efficient sensors for environmental monitoring.
- (ii) Network with the National University of Uzbekistan to inform scientists about the Global Young Academy and to recruit new members
- (iii) (Encouraging young minds to be involved in science to solve community as well as global issues;
- (iv) (iii) Introducing the Global Young Academy and its mission, including Global Young Scientist Ambassador Programme;
- (v) (iv) Familiarizing young minds with available fellowships/scholarships for continuation of their higher education (e.g., PhD)

Background

The energy crisis is a broad and complex topic. Most people do not feel connected to its reality unless the price of gas goes up. The energy crisis is something that is on-going and getting worse, despite many efforts. Due to the increase in demand for energy over the past few decades, the resources required to meet these demands are being drastically depleted. There have been several developments in the field of energy conservation. The greenhouse effect is another major issue and accounts for global climate change. Carbon dioxide is one of the chief greenhouse gases responsible and it is prompted, not only uses the green energy sources but also reduce the power consumption. My scientific focus is on development new materials for sustainable energy sources (Solar cells and hydrogen generation) and energy efficient devices such as LEDs and sensors for environmental gas monitoring. The cost of solar cells, Photocatalyst, LEDs, Sensors and other renewable energy sources is decided by the availability of materials. I am working on new cost effective materials for solar cells and photocatalyst for hydrogen generation. Uzbekistan has lot of natural resources and can produce the low cost materials for renewable energy sources and energy efficient devices.

YSAP activity at Faculty of Chemistry, Samarkand State University Samarkand on 17th October 2018



The university was originally organized in 1927 as the Uzbek Pedagogical Institute and in 1930, it was renamed the Uzbek State Pedagogical Academy and in 1933, upon merger of the Pedagogical Academy and the Uzbek State Medical Institute into the Uzbek State University. In 1941—2016, the University was named after poet and philosopher Ali-Shir Nava'i (alternative transliteration Alisher Navoi). In 1961, the Uzbek State University was finally renamed the Samarkand State University, a name it keeps to date. Currently, the University comprises the following faculties: Philology; History and Philosophy; Teaching; Physics and Mathematics; Biology; Economy; Tajik Philology; Russian Philology; Law; Physical education.

During the meeting Dr. Mahesh Kumar made a presentation on the topic of nanocrystalline ZnO gas sensors for hydrogen. After the presentation students asked questions related to the topic. Dr Mahesh Kumar wholeheartedly invited scientists to apply for the GYA Membership.

YSAP activity at Tashkent Medical Academy, Academic Lyceum Tashkent on 18th October 2018

Tashkent Medical Academy was founded on the basis of abolished 1st and 2nd Tashkent State Medical Institutes through the Decree of the President of the Republic of Uzbekistan on 19 July 2005. Main tasks of the Academy are (a) ensuring preparation of highly qualified medical personnel for quality improvement of health care being provided to population and participation in improvement of the structure of healthcare system and (b) coordination and methodological guidance of higher medical education facilities as the leading educational facility in the country on education, postgraduate education of medical personnel, as well as performing research works in health care and public health, shaping healthy life styles. Dr. Mahesh Kumar has delivered a talk to pre-medical students and discussed about international opportunities.





YSAP activity at National University of Uzbekista, Faculty of Chemistry Tashkent on 19th October 2018

National University of Uzbekistan is the oldest and largest university of Uzbekistan; it has 12 schools. The university was founded in 1918 as Turkestan People's University, with 1,200 students; in 1920 it was reorganized as Turkestan State University and in July 1923 it was renamed the First Central Asian State University, a name it retained through the end of the 1950s. In 1960 the name was changed to the V.I. Lenin Tashkent State University. With the independence of Uzbekistan it became the National University of Uzbekistan. Dr. Kumar has delivered the talk on energy efficient devices and discussed about the GYA mission and oppurtunities.



YSAP Follow-up:

Mahesh Kumar (India) and Dr. Mirabbos Hojamberdiev (Uzbekistan) will continue their research collaboration on developing suitable and low-cost inorganic materials for renewable energy sources and knowledge transfer and submit project proposals for international funding for collaborative research.

**GYA member Mahesh Kumar
25 October 2018**