National Workshop on
Applied Vacuum Technologies

December 22-24, 2014

Venue: National Institute of Vacuum Science & Technology (NINVAST), Islamabad.

Introduction

Vacuum technology is one of the most important, resourceful and promising technologies of the modern world. It is very versatile and considered as fundamental for all the modern technological fields such as surface science and engineering, electronic materials and processing, nanometer structures, thin films, plasma science and technique, bio interfaces, renewable energy technologies, etc. Despite its wide use, there is lack of properly skilled manpower to run, maintain and design vacuum systems. Hence, awareness, education and training of this important technology are much needed for scientists, researchers, industrialists and plant operators.

Although vacuum technology is rapidly growing world over, it is in infancy in Pakistan. Many industries, research organizations and universities are using vacuum technology equipment but they are deficient in technical personnel having adequate basic knowledge and concepts. The national workshop on Applied Vacuum Technologies has been designed to assist all those handling vacuum systems at various levels in different scientific organizations and industries. The workshop will focus mainly on the type of vacuum being used and its applications in various fields and will certainly enhanced the knowledge and understanding of the participants regarding basic physical processes/concepts relevant to vacuum technology. It will also provide an opportunity to the participants to exchange views, develop collaboration, and adapt appropriate methodologies for incorporating vacuum science and technology in their future endeavors. Practical demonstrations and exhibition of vacuum technology equipments will provide further support for better understanding of the subject.

Objectives of the Workshop

The main objectives of the workshop are to:

- Provide knowledge about the vacuum science & technology and its applications in the modern and applied fields of research and production engineering.
- Cope with the latest trends, applications and future role of the vacuum technology in the latest research and industrial applications.
- Realize the barriers for the adaptation and promotion of vacuum science and technology and to resolve the practical problems related to this technology for a better, clean and healthy future.
- Enhance collaborative research and development activities among various industries, research organizations and industries of Pakistan.

Workshop Contents

- Introduction to vacuum technology and its applications
- Vacuum generation: Techniques and equipment
- Vacuum measurement: Techniques & instruments
- Vacuum standardization
- Leaks and leak detection techniques
- Design of industrial vacuum systems
- Vacuum coating systems
- Specialized materials for vacuum system
- Vacuum Electronics
- Vacuum insulations
- Vacuum in renewable energy technologies
- Vacuum in Nanotechnology
- Surface analysis and characterization
- Vacuum in electron microscopy
- XPS and STM techniques
- Bio interfaces
- Practical demonstrations

Resource persons

1. Dr. Pervaiz Akhter, Air University, Islamabad
2. Dr. Syed Wilayat Husain, IST, Islamabad
3. Dr. Ihtzaz Qamar, IST, Islamabad
4. Dr. Javaid Ahsan Bhatti, NINVAST, Islamabad
5. Dr. Dr. M. Aslam, PVS, Islamabad
6. Dr. Haji M. Akram, NINVAST, Islamabad
7. Dr. Talib Hussain , PVS, Islamabad
8. Dr. Shoaib Hassan, NUST, Islamabad
9. Dr. Attiya Rizwan, NUST, Islamabad
10. Dr. Hamid Zaigham, IICS, Islamabad
11. Ch. Tariq Sattar, PVS, Islamabad
12. Dr. M. Maqsood, NINVAST, Islamabad
13. Dr. Khalid Alamgir, NINVAST, Islamabad
14. Dr. Suleman Qaiser, PVS, Islamabad
15. Dr. Wakil Khan, NINVAST, Islamabad
16. Dr. Shahid Nisar, IICS, Islamabad
17. Mr. M. Sarwar Khan, NINVAST, Islamabad

Targeted participants

Teachers, researchers, scientists, engineers, technologists, system designers, process managers, plant operators, equipment suppliers, PhD and MPhil students, universities and high-tech industries.

The officials from all types of industries including automotive, electrical & electronics, glass & ceramics, foods & beverages, fiber optics, refrigeration & air conditioning, image processing, lasers & optics, robotics, packaging, textile, soap & detergents, batteries, fuel cells, semiconductors, coatings, tobacco, aerospace, marine, solar panels, pharmaceuticals, paper and pulp, plastic moulding, petro-chemicals, oil refineries, medical, sugar, cement, fertilizers, agriculture, steel, accelerators, oil & ghee, leather processing, etc.

Registration Fee

General participants:	Rs. 8000/-
PVS members:	Rs. 5000/-

Concession in registration fee will be granted to a limited number of PhD and M Phil students.

Local Hospitality and Travel

PVS will provide accommodation at economical rates to all interested participants. Travel grants are available for a limited number of PhD and M Phil students. Pick and drop service on arrival and during workshop days will be available from Faizabad to NINVAST on specific times.

How to Register for the Workshop?

- Download application form from www.pvs.com.pk or www.ninvast.edu.pk
- Submit completed application form to pvs@comsats.net.pk.
- Selected candidates will receive acceptance email two weeks before the workshop opening date.
- Participants will be required to send a bank draft of Rs. 8000/- in favour of Pakistan Vacuum Society (PVS) as registration fee. The fee can also be deposited in cash at the time of registration on the first day of the workshop.

Last Date for Applications: December 01, 2014

For queries, please contact:

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