

International conference on “Impact of Nanoscience on Energy Technologies (NanoSET-14)

Three days International conference from March 18-20, 2014, on the “Impact of Nanoscience on Energy Technologies (NanoSET-2014)” was organized by Physics Department, COMSATS Lahore. The purpose of this conference was to bring together ideas from all over the world in developing environmentally and economically sustainable nanotechnologies in energy sector. The researchers, engineers, academicians as well as industrial professionals from diverse backgrounds shared their thoughts and has been the tremendously successful conference. The conference covered the impact of nanotechnology on the areas of Clean Energy, Solar, Hydro, Wind, Biomass, Fuel Cell and Batteries.

Experts from the international Universities especially from Sweden, United Kingdom, Finland, Iran, Austria, Saudi Arabia and various universities of Pakistan participated in the international conference and shared their achievements.



*The conference started with the Recitation from the Holy Quran following the opening remarks by **Prof. Dr. Saleem Farooq Shaukat**, who explained the objectives of the Conference and welcomed the honorable guests.*

Prof. Arshad Saleem Bhatti, Dean of the Sciences, CIIT shared the details of the Conference and gave a thought-provoking talk about the energy situation in Pakistan.

Prof. Dr. Bin Zhu, from KTH, Sweden had a conspicuous discussion on synthesis of conductive electrodes using nanotechnology. Prof. Dr. Bin Zhu is the head of Advanced Fuel Cell and Solar Cell group, which is a part of the Heat and Power Division of Department of Energy Technology at KTH, Sweden.



After the interesting talk of Dr. Bin Zhu, honorable chief guest **Dr. Muhammad Khaleeq-ur-Rahman**, Vice Chancellor, Government College University Lahore, addressed the august audience of NanoSET-14.



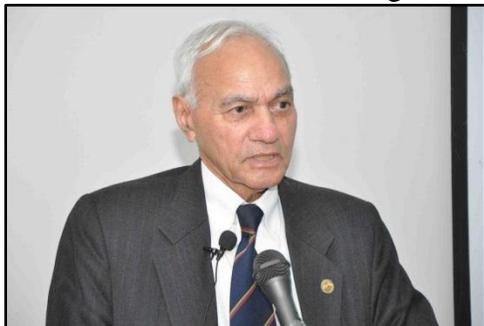
The worthy Director COMSATS, **Prof. Dr. Mahmood A. Bodla** addressed the participants of the NanoSET-14 and greeted them at **COMSATS, Lahore**.



Hundreds of Scientists, Scholars and Researchers participated in the international conference **NanoSET-14, CIIT Lahore** from various universities of the world. The foreign speakers, Prof. Bin Zhu from Sweden, Prof. Viktor Hacker from Austria, Prof. Shanwen Tao from UK, Prof. Mahmood Aliofkhae from Iran and a large number of speakers / audience from Government College University Lahore, Punjab University Lahore, F C College, Education University, Lahore, UET Lahore, Quaid-e-Azam University Islamabad, Ghulam Ishaq Khan Institute, Government College University Faisalabad, NIBGE Faisalabad, University of Gujrat, Malakand University, Kahota Research Laboratories, PINSTECH and COMSATS Islamabad actively participated in the mega event. All the participants / guests appreciated the efforts of Dr Rizwan Raza and Dr. Hafiz Muhammad Ashfaq in making this mega event really successful.



Prof. NM Butt, Chairman, (PINSAT, Islamabad) gave an introductory talk on the Need of Formal Education and Training in Nanotechnology.



Prof. Viktor Hacker had a discussion about low temperature fuel cell. Prof. Viktor Hacker is heading the fuel cell research group at the Institute of Chemical Engineering at Graz University of Technology.



Prof. Shanwen Tao, Strathclyde University, Glasgow, UK gave a talk on Intermediate Temperature Fuel Cells. Prof. Tao has been active in developing new ionic/electronic conducting materials for fuel cells, particularly solid oxide fuel cells (SOFCs). His group has developed the first urea/urine fuel cell, as highlighted by BBC News and New Scientist.



Dr. Syed Munawer Bukhari, Research Fellow at University of St Andrews, School of Chemistry UK, gave a talk on growth of Cu and Ni nanoparticle for Solid oxide fuel cell applications. During his PhD research work, he developed new perovskite oxide materials for the Low Temperature Solid Oxide Fuel cells (LT-SOFCs) and the Sensors applications. In his current role, he is addressing the catalyst aging issues caused by high mobility and poisoning of metal nanoparticles deposited by the conventional deposition techniques. His research interests are Materials Science, Surface Science, Catalysis, Sensors, and Solid Oxide Fuel Cells.



Prof. Mahmood Ali ofkhazraei, TarbiatModares University, Tehran, Iran delivered a talk on Nano-composites. Dr. Aliofkhazraei's research interests include nanotechnology and its use in surface and corrosion science. One of his main interests is plasma electrolysis and he published more than 40 papers and a book in this area. Totally he has published more than 12 books and 90 journal papers. He is on the advisory editorial board of several materials science and nanotechnology journals. He is a member of the national association of surface sciences, Iranian corrosion association, and national elite foundation of Iran.



Dr. Khurram Saleem Joya, King Abdullah University of Science and Technology, Saudi Arabia, delivered a talk on Photo-Electrocatalysis for Solar Fuels. His research interests are very much wide-spread.

The 2nd day of conference was started by the plenary talks of honorable speakers Prof. Victor Hacker and Prof. Riaz Ahmad on the fuel cell Technology. After the plenary talks, participants entertained with refreshment along with the poster presentations. Then parallel sessions C & D of interactive talks were started.



An excursion trip to the cultural place “Shalimar garden” and Flag ceremony at Wahga boarder was arranged for the participants of NanoSET-14. Foreigners adored this visit a lot.





The proceedings of the third day of NanoSET2014 were commenced at 9:00 am. The session E was chaired by Prof. Dr. Riaz Ahmad in seminar room (A-Block) while the session F was chaired by Prof. Dr. Shahid Rafiq in room A-7.

The auspicious closing ceremony on March 20, 2014 was started with the recitation from the Holy Quran by Mr. Hafiz Farrukh.

Three days International Conference report was presented by Prof. Dr. Saleem Farooq Shaukat . He shared a brief about presented talks, the poster session and the panel discussion. It's worth mentioning here that the establishment of "Energy Centre" has been the major focus in panel discussion. The foreign guests assured their full support and collaboration in the establishment of Energy Centre. Prof. Saleem mentioned that the Physics Colloquium has become a permanent tradition of the Department of Physics at COMSATS, Lahore in every semester. A series of Seminars by eminent Physicists from different parts of the country having diverse backgrounds shared their research and reviews in the Colloquium. Three consecutive Colloquiums have been held very successfully and Today's long series of 26 Lectures in Parallel are being designated as the Fourth Most Successful Colloquium as well.

The MoU between COMSATS Lahore and Synergy Enterprises (Pvt.) Ltd., a partner of Danish Company, Quantum Wave, was executed and signed under the benefaction and in the presence of His Excellency, Jasper M. Sorensen, Ambassador of Denmark and Prof. Mahmood Ahmad Bodla, Director Lahore Campus.



The Ambassador, H E, Jasper M. Sorensen bestowed the prizes to the position holders in poster presentations. The honorable Chief Guest, Dr. Samar Mubarak, awarded the souvenirs to the Speakers, Session Chairs of the NanoSET-14.



The chief guest **Dr. Samar Mubarakmand** lauded the organization of International Conference on the hot subject of Nano Technology. Dr. Samar Mubarakmand is currently supervising coal mining practiced on scientific lines for the Thar Coal Power Project which is the one of the largest reserve of its kind in the world. He is the founding Chairman of Pakistan's National Engineering and Scientific Commission. A pioneer in the field of Fluid and Aerodynamics in Pakistan. He has been honored with a long list of civil awards including Sitara-e-Imtiaz; Hilal-e-

Imtiaz and Nishan-e-Imtiaz. He has also served as a special assistant to Prime minister on Science and Technology and as a member of planning commission.



*In the end vote of thanks were given to all by the **Director, Prof. Dr. Mahmood Ahmad Bodla**, he also congratulated the organizing team of Physics Department CIIT, Lahore for the successful completion of three days conference.*

The organizers/participants of the conference would be able to provide solutions based on the need of the 21st century after having free and frank deliberations on the energy issues. It can also help to make Energy Policies for the country. The present energy crisis and future energy demands have triggered a significant interest in the development of energy sources and efficient power generators to cater the needs across the globe. Therefore, it is the need of the day to take initiatives in this area.

