


Hojatoleslam Haghghian:

When young, if we manage to maintain belief in "God" and be pious in all aspects of our life, it will surely be beneficial for us and for our society.

Peter Fecko: The reason behind my participation in this conference was to get connected with the scientific-research center and initiate the collaboration needed for the enhancement of knowledge; and this matter was warmly welcomed by the officials of the Research Center.



News

Number 5, S

Latest News

Holding talks with F



Research Council Meeting

On the 24th of June, 2008, after the valedictory ceremony held for Mr. Haghgou (the former research manager), Dr. Zamzamiyan was appointed as the new manager for research affairs. Afterwards; the research council announced its final approval for the following proposals and projects:

"The Effect of the Composition and Proportion of Liquid to Powder on the Behavior of Cephalixin made from Bone Cement Phosphate Calcium-Calcium Phosphate", "Synthesis of Refractory Components in Ti, Si, C System by SHS Method", "Feasibility Study for the Production of Biodiesel as a Renewable Energy through Different Methods".

Continued on page 2



Communiqué of Faculty Members' Promotion Code of Practice

The code of practice for the promotion of faculty members of universities, research centers and higher education institutes was announced.

Two years probationary period of this new code of practice began in January 21, 2009.

Continued on page 3



Reflections of the Exhibition of Fuel, Energy, and Environment

Eleven domestic and foreign companies/organizations, some with remarkable activities in the field of new energies, took part in the Fuel, Energy, and Environment Exhibition. Clean fuels and new energies will have a lead role in the contemporary world and their use and applicability have become more important nowadays.

Continued on page 3



Manufacture and launching of

In the past few months, there have been negotiations between MERC and science and research centers abroad. In order to boost the scientific cooperation of domestic research centers with Indonesian research institutes, a meeting was held at the Ministry of Science, Research and Technology with the Indonesian delegation. In this meeting Dr. Jahangirian (technology deputy of the MSRT) and representatives from the Ministry of Health, Treatment and Medical Education, Seismology Research Center, Aerospace Research Center, Genetic Research Center, Deputy of the MSRT and Dr. Sad and Dr. Salardini from MERC were present. At this meeting, it was decided that research and expert teams of both countries would visit research centers to assess the existing conditions so that they can determine the most suitable scientific collaborations between the two countries in the follow-up meetings.

The exchange of scientists and researchers, data and scientific documents, planning and implementation of bilateral training and the holding of conferences were among the issues covered in this meeting.

In the same line, Dr. P. Sardjono, the Indonesian Physic Research Center, discussed some of the facilities and equipments at the MERC. He also discussed 10 titles and other common themes for cooperation with the officials of the M





Research Council Meeting

Continued from page 1:

In research council assembly held in June 3rd 2008, the following research projects were discussed and their final reports were approved:

- * **Production and study of the alpha alumina parts with a density close to the theoretical density.**
- * **Production of titania nanoparticles for disinfection purposes.**
- * **The evaluation of the natural catalyst clinopetiolite for the synthesis of dimethyl ether from methanol.**
- * **Feasibility study for the solar furnace applicability for preheating of the steel products in industrial steel plants.**



Glorification of women in the Mothers' day

In Tuesday June 25th which coincided with birthday of the Holy Fatemeh (p.b.u.h) - the daughter of the holy prophet of Islam - also called the mothers' day, a ceremony was held at the prayer chapel of the MERC. The services of the ladies working in the MERC was appreciated and they were given acknowledgement gifts. Subsequent to the prayers congregation, in presence of the director of the Materials and Energy Research Center, Hojatolislam Teimori posed a question and three persons who could correctly answer the question were given prizes by the public relations officer.



Commemorating the demise anniversary of Imam Khomeini(s)

On Sunday, June 1, 2008 a ceremony commemorating the anniversary of late Imam Khomeini(s) was held in the auditorium of the MERC attended by Hojatolislam. Haghghiyan, the Friday prayer leader of Meshkin Dasht and Mohammad Shahr, Dr. Sadrnezhaad, war veterans, faculty members and the MERC employees. In this ceremony, Prof.



Interview with Mr. Mohammad Reza Shayeghi

Mohammad Reza Shayeghi has a degree in Materials Science from Sharif University of Technology. He has worked at Razi Metallurgy Center, Shibeh Company and is currently in charge of technology and equipment office of the MERC.

⇒ **Why did you join the MERC?**
To do research projects.

⇒ **What made you to be designated as the officer in charge of MERC's Technology and Equipment office?**

I started my work as a research assistant. Since research works require various equipments and machinery, I was necessary to deal with worn-out work machineries and equipment required repair. Therefore, with the assistance of some colleagues and the support of the MERC, I began to fix the equipment. With Sadrnezhaad's full support and further motivation to continue, because of the positive response to the pressing needs of the researchers to the working conditions, the director of the research center asked me to form a skilful team for the repair and maintenance of the equipments. Up to now, more than 15 worn-out work machineries and/or equipment have been repaired by this team.

⇒ **What factors have hindered the up-grading of laboratories and equipment?**

At the beginning, due to the lack of experience and the newness of the team, there were some oppositions from some individuals. These low performance and speed. Perseverance of the team, supports of the MERC and positive achievements, however, recognition of the elimination of the opposite side.

Materials and Energy
Research Center

Newsletter

Councils

Dr. Hassan Moradi visited the MERC after the inauguration of the National New Materials Congress

After the inauguration ceremony of New Materials Congress, Dr. Hassan Moradi, a member of the parliament's commission for energy, a member of the MERC board of trustees, holder of WTO post doctoral degree and a faculty member of Tehran University and the Law College of London paid a visit to MERC labs and energy-related equipments. Some of the equipments that were of interest to him included: (1) solar heaters, (2) proposal plans offered to the Ministry of Energy, (3) researches conducted on LED lamps to optimize energy consumption, (4) instruments for measurement of the liquid speed and yield, (5) ocean waves simulator, (6) wind turbine, (7) dryer, (8) desalinator, (9) solar fridge and oven, (10) solar panels and (11) water well and dormitory building of the MERC (which are entirely dependent on solar energy). After his visit, he went for an interview with Newsletter reporter.

•What is your assessment of the congress?

In sum, the conference was a success and considering the great number of articles submitted, it can be

regarded as a giant step towards the realization of research and scientific objectives of the country. If sufficient publicity had been given to the conference, more researchers and scholars could have taken part in the congress, but sad to say, few industrialists had participated in the conference. Long distance of the exhibition site from Tehran can be



here, so they should be preserved at all costs. The new staff serving in the MERC has to be briefed on the current projects and activities, so that they can monitor and reform them, so the newly invented systems and methods can be applied, and with the mercy of God we can achieve success.

•How do you evaluate the relation between the MERC and the industry sector?

Sad to say, currently the gap between the two is too wide. Most individuals active in industry are non

MERC enjoys high potentials and it has had great achievements, which should be preserved at all costs

- a c a d e m i c people who in fact have gained experience and skill through apprenticeship, nonetheless, research and scientific

communities of the country need to lower their expectations and by entering the industrial sector and through their proper behavior convince the industrialists and people engaged in industry that the presence of elite and experts can flourish the industry and bring economic prosperity to their businesses.

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Materials and Energy
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Newsletter

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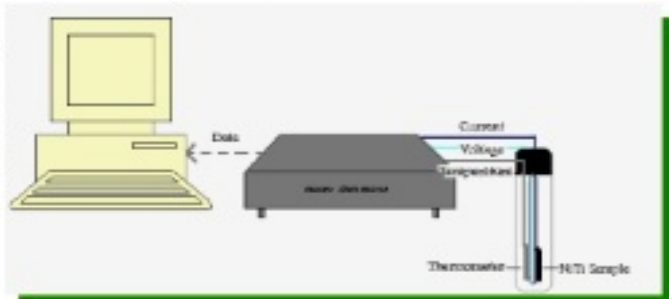
Manufacture and launching of thermo-micro-ohmmeter

Continued from page 1

The manufactured thermo-micro-ohmmeter is capable of measuring the variation of the electric resistance against temperature of such conductive materials as metals and alloys in a wide range of temperatures. This capability can be used to determine the phase transformation behavior of the metals.

Design of the Instrument:

In addition to a box containing the electric circuits, the thermo-micro-ohmmeter includes a glass container that holds the thermal sensor and the test sample. By applying an electric current to the sample, the electric resistance is measured and analyzed by a software program that transmit the data to the computer. The user can graphically monitor the diagram of the electric resistance on the screen and simultaneously obtain a printed text of the recorded data such as temperature (in °C) electric resistance (in mW.mm) and time (in s) and prepare the graphs by Excel. A schematic picture of the instrument is presented in the figure.



Some points about the testing sample:

The sample surface should be completely cleaned prior to the testing, otherwise any stain, spot or unwanted layer on the sample can produce wrong results.

Sample size:

The sample can be wire or strip shaped. There is no limitation for cross section shape of the sample. The cross section should, however, be symmetric and measurable. The diameter of the sample needs to be within the range of 0.3-3 mm and its length should not be less than 3 cm.

Approval of the students' proposals in the Graduate Council

The following proposals were approved in the session held in the 1st of July:

- Doctorate proposal of Mrs. Sara Bani Jamali
- MSc proposal of Mr. Seyed Ebrahim Hashemi entitled: **"Nanocomposite Synthesis of Cobalt Oxide / Zinc Oxide Core Shell"** supervised by Dr. Vaezi and Dr. Sadrnezhad.
- MSc proposal of Mr. Abolfazl Mohammadi Eshnari entitled: **"Production and Study of Mechanical Properties of Porous Bioactive Glass"** supervised by Dr. Maghsoudipour and Dr. Hesarak.
- MSc Proposal of Ms. Razihe Ghaderi entitled **"Synthesis of NiTi-TiC"**



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