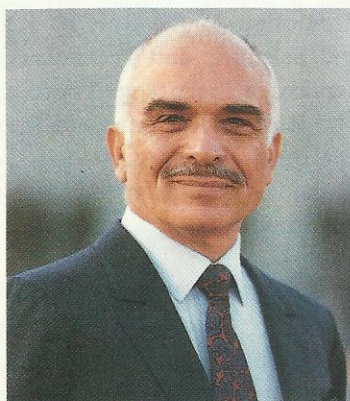
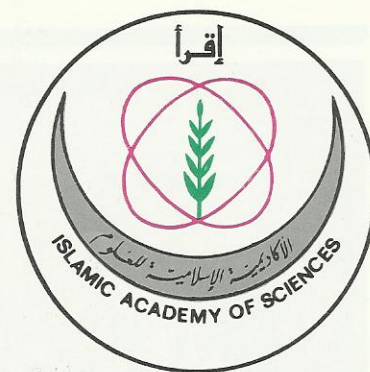


NEWSLETTER

ISLAMIC ACADEMY OF SCIENCES

SEPTEMBER 1990

ISSUE NO. 12



H.M. King Hussein of the H.K. of Jordan



H.E. Mr. Turgut Ozal, President of Turkey

H.M. KING HUSSEIN RECEIVES MESSAGE FROM IAS PRESIDENT

His Majesty King Hussein Ibn Talal of the Hashemite Kingdom of Jordan, received a message from Prof. Dr. Kazi, IAS President concerning the support of IAS.

Prof. Kazi expressed deep gratitude to H.M. the King, to HRH Crown Prince Al-Hassan Ibn Talal and to the Government of the Hashemite Kingdom of Jordan for their continuous support and encouragement for IAS and its projects.

The message was delivered to the Royal Court by the Executive Director General (EDG) of IAS.

H.E. PRESIDENT OZAL PATRONIZES THE CONFERENCE ON TECH. TRANSFER

The fourth IAS joint Conference on "Technology Transfer for the Development in the Muslim World" will be patronized by the President of Turkey H.E. Mr. Turgut Ozal. The Conference which is scheduled for 19-21 November, 1990 is organized in cooperation with the Turkish Scientific and Technical Research Council (TUBITAK) and the Islamic Foundation for Science, Technology and Development (IFSTAD).

Many Islamic and international agencies, institutes and industries

will take part and around 125 participants are expected to take part in this activity. The conference is intended to be an open activity for all those interested in technology transfer.

IAS 8TH COUNCIL MEETING CONVENED

The 8th meeting of IAS Council was held at IAS headquarters during the period 23-24th June 1990. Eight members attended the meeting.

Several important issues on the agenda were discussed. The major part of deliberations focussed on the future activities, IAS programme and the financial situation of the Academy. Other issues including the Secretariat activities' report, Technology Transfer Conference, IAS Journal and election of new fellows, were also discussed.

The Council decided to adopt a plan for formulating a solid programme after reviewing the programmes of relevant Islamic and international organizations and scanning the needs of Islamic countries in the various fields of S&T.



IAS Council in its 8th Meeting

IAS Fellows will be requested to contribute with their input in this domain. The Council also approved several steps regarding future activities and promotion of IAS role in the Muslim World.

The Council deliberated at length on the issue of IAS Standing Committees and possible venues of activating their role in IAS activities.

In this context, the Council requested Prof. M. Dourk, IAS F. F. to prepare a working paper on this issue and possible measures to augment the role of Standing Committees. The report will be discussed in the coming Council meeting in November prior to presenting it for the consideration of IAS General Assembly.

The Council also approved the institution of a medal after the late Prof. M. Ibrahim, IAS F.F. and Council member in the field of Diabetes. The Council also agreed on the financial contribution of IAS towards this medal in cooperation with Prof. Ibrahim's family.

IAS 4TH CONFERENCE ON TECHNOLOGY TRANSFER SCHEDULED FOR NOVEMBER 90

IAS Secretariat is pursuing its contacts and preparations for organizing the international conference on "Technology Transfer for the Development of the Muslim World" which is scheduled for 19-21 November 1990 in Antalya, Turkey.

The conference is organized in cooperation with the **TUBITAK** and **IFSTAD**. **UNESCO** is also a sponsor of the conference.

The conference is designed as an open activity to provide an effective forum for the exchange of knowledge, experience and views on technology transfer and also to evaluate the needs and future prospects for technology transfer in the Muslim World.

The programme of the conference consists broadly of three major

parts. **In part 1**, experts will present review papers on major aspects of technology transfer in the topical dimension. This part will include the following papers:

- A Keynote paper on "Fundamental Aspects of Industrial Technology Transfer.
- The Role of Governments in Creating an Entrepreneurial Environment for Technology Transfer.
- Promotion of the Role of R&D and Scientific and Technological Services in Technology Transfer.
- The Role of Regional and International Organizations in Technology Transfer to Developing Countries.

Part 2 of the conference will be devoted to sectorial issues where case studies of industrial technology transfer in several areas of industry in the Muslim World will be presented and discussed. This part will include case studies of:

**Aeronautics,
Pharmaceuticals,
Fertilizers,
Petrochemicals,
Electronics,
Metallurgy,
Textiles,
Glass and Ceramics,
Engineering Consultancies.**

In part 3 of the programme, participants in the conference will take an active part in deliberations through three working groups, which will address three important issues.

These are:

- Selection, Acquisition and Diffusion of Foreign Technologies.
- Role of National R&D Institutions in Technology Transfer.
- Cooperation Between Islamic Countries for Technology

Transfer. Working papers on the above themes will be prepared and the recommendations of the three working groups will be presented and discussed in a general meeting including all participants.

Another aspect of the Technology Transfer Conference is the poster session activity, through which previously accepted papers will be displayed and the participants will have the chance to have a direct dialogue with the authors.

ANTALYA TECHNOLOGY FAIR

Plans are almost complete for the organization of the Technology Fair which is planned as a major activity to coincide with the forthcoming conference on Technology Transfer scheduled for 19-21 November in Antalya, Turkey.

Many firms from different countries have expressed interest in participating in the Fair but due to limitation of space, only (15) companies will be taking part in this activity.

In addition to technology-oriented products of major Turkish Firms, some firms from other Islamic countries will display their products in the field of laboratory chemicals, laboratory equipment and pharmaceuticals.

It is hoped that the Fair will help in promoting dialogue between Muslim industrialists as well as avenues of cooperation in technology transfer aspects.

EDITORIAL LETTER

The recent years have witnessed an enormous impact of technology on the social and economic development of the nations. The late awakening of the developing countries did not hinder them from exerting great efforts to possess technology through various means of which technology transfer for industry is of major importance.

Almost, all Islamic Countries have been trying to pursue their technological development through the transfer of technology with varying degrees of success. The failure was mainly due to two major reasons. The first is that little attention was given to developing endogenous technological capacity (with the exception of few cases among the Islamic countries). The second reason is that many countries comprehended technology transfer as the ability to acquire. The other aspects of selecting, developing, diffusing and managing of imported technology were not well apprised. The most significant lesson that the Muslim World in particular and the developing countries in general have learned thereby, is the fact that the management of foreign technology represents a rather complex process and would require a careful evaluation of a number of factors.

It is one of the objectives of the Islamic Academy of Sciences, to act as an initiator for the promotion of the technological capability of the Muslim Ummah. The timely step of the Academy to organize the conference on technology transfer and development in cooperation with TUBITAK and IFSTAD is pursued within this perspective. It is hoped that the wide participation in the conference will provide an effective forum for the exchange of knowledge, experience and views on this important issue. It is also hoped that the outcome of this activity will be widely echoed so that the needs and future prospects for technology transfer and development in the Muslim World would be well assessed and valued.



Prof. M. Ergin, IAS F.F. President of TUBITAK.

SCIENTIFIC-ORGANIZING COMMITTEE FOR 1990 CONFERENCE CONCLUDES MEETING AT IAS H.Q.

The Scientific and Organizing Committee for the 1990 conference on Technology Transfer for the Development of the Muslim World met at IAS H.Q. during the period 24-25 June 1990. The Committee which is headed by Dr. M. Ergin reviewed progress in the preparations for the conference and the necessary arrangements to ensure its success.

The Committee deliberated on the quality of the papers submitted to the conference and selected referees from different Islamic countries for their evaluation. The Committee also agreed on necessary measures to ensure wide participation in this activity.

IFSTAD AND UNESCO SUPPORT THE CONFERENCE ON TECHNOLOGY TRANSFER

Following the efforts of IAS Secretariat to promote financial

support for the forthcoming conference on technology transfer, the Islamic Foundation for Science, Technology and Development (IFSTAD) through the goodwill of its Director General, Dr. A. Al-Tamemi, has agreed to co-sponsor the conference. IFSTAD has contributed (20,000) U.S.D to cover part of the expenses of the conference and (10,000) U.S.D for the publishing of its proceedings.

UNESCO also has kindly agreed to contribute (10,000) U.S.D to the conference following the good efforts of the Asst. Director General for Science, IAS Fellow Dr. A. Badran whom IAS Secretariat contacted earlier seeking his support.

KFAS SUPPORTS IAS JOURNAL

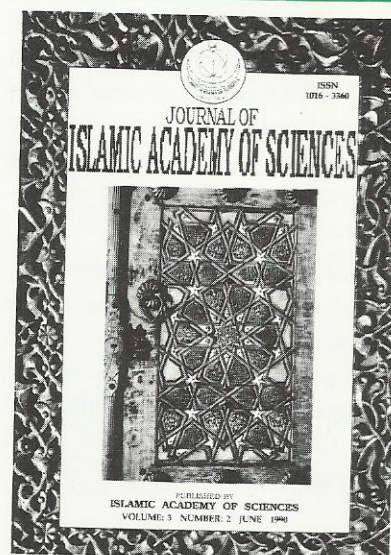
The Kuwait Foundation for the Advancement of Sciences (KFAS) has graciously agreed to a 5-year plan of financial support to IAS Scientific Journal (JIAS) starting 1990.

In the first year, KFAS will contribute (35,000) U.S.D and (25,000) U.S.D annually for the following four years. The first payment for 1990 has already been received by IAS Secretariat.

The Financial support of KFAS will be utilized to maintain the periodicity of the Journal, to increase the number of the annual issues from 4 to 6 issues and to increase and improve its contents.

On behalf of IAS Council, President Dr. M. Kazi sent a letter of thanks and gratitude to KFAS Director General for the continuous support of KFAS to IAS activities.

KFAS contribution crystallized through the good offices of IAS F.F. Dr. Ali Al-Shamlan, Director General of KFAS.



IAS JOURNAL MAINTAINS PERIODICITY AND PROGRESS

The Scientific Journal of IAS (JIAS) which first appeared in August 1988 has made a good record of periodicity and quality. The Journal has recently acquired an ISSN number (ISSN 1016-3360) which is a form of an international recognition.

The latest issue of the Journal Vol. 3, No.2 was issued in June 1990, in 170 pages. The issue comprises high quality papers by muslim scientists in various disciplines of physical and medical sciences.

Following the recent approval of KFAS to financially support the Journal for the coming five years starting 1990, it is expected that JIAS will appear in six issues per year.

The Editorial Board takes this opportunity to congratulate Chief Editor, IAS F.F. Dr. N. Bor and his colleagues on their dedication and serious effort and calls upon all IAS Fellows and muslim scientists to help in promoting and publicizing the Journal.

ELECTION OF NEW IAS FELLOWS FOR 1990

The Secretariat has recently distributed to all IAS Fellows, the ballots for the election of new fellows for the year 1990. The ballot was sent with the C.V.'s of 27 nominees from different Islamic countries of whom 19 were nominated in 1989.

In accordance with IAS By-laws, IAS Fellows are requested to vote for a maximum of 18 nominees.

The deadline for receiving the voted ballots is the 1st October 1990

NEW IAS COUNCIL TO BE ELECTED NEXT NOVEMBER

The term of office of the present IAS Council will be concluded next November thus completing four years. In accordance with IAS Statutes and By-Laws, a new Council will be elected by IAS General Assembly scheduled for November 1990, alongside the Joint "Technology Transfer" Conference.

The Council deliberated on this matter in its last meeting and since this is the first Council election in the history of IAS, the Council formed a Committee to propose an election mechanism. The Committee submitted its proposals, to the IAS Council which included three choices for the election procedure. The Council decided to circulate the proposals of the committee to all IAS Fellows to get their consensus on the most feasible procedure prior to the final approval of the General Assembly. The election of the new Council will be a highlight of IAS General Assembly meeting.

IAS PLANS MAJOR INDUSTRIAL WORKSHOPS FOR 1991

The Oil and Petrochemical industry is one of the major industrial activities in many Islamic countries. This sector has its own problems of which material failure and corrosion are of primary concern.

With this in mind and as part of its efforts to diversify its scope of activities, the IAS has embarked upon preparations for training programmes that deal with welding and corrosion of metals, and highlight the major aspects of material failure.

It has always been a fact that material failures in the Chemical and Petrochemical industries are caused by a wide variety of corrosive environments.

Corrosion statistics based on internal case histories from 1968 to 1972 revealed the fact, that the share of mechano-electrochemical failures amount to about 50 percent of the total number of corrosion failures found in chemical and petrochemical industry.

It is also safe to claim that the high quality alloys generally used in chemical and petrochemical industry are more susceptible to sudden failures. This would disturb and trouble the plant operation causing thereby high economic losses.

Another factor in this regard would be the limited accessibility of critical positions in the chemical and petrochemical equipment making the control of cracking extremely difficult. The great impact of this situation on safety has been the middle point of interest in recent years.

Generally corrosion and its control is understood now sufficiently well. Unfortunately, this is not the case where failures are initiated and controlled by the localized type of corrosion. Therefore, continuous efforts are needed in this area for improving the understanding of these types of failure and to prevent them from occurring in service.

There are some estimates about the extent of losses caused by mechano-electrochemical failures in the chemical and petrochemical industry. As an example, the annual losses of West European industry resulting from repair work and shutdown, amount roughly to 65 million U.S. Dollars (excluding the product losses).

The Academy's Council, in its eighth meeting, approved a plan for organizing two major workshops on material failure and welding. These workshops will be pursued in cooperation with other national and international institutes such as UNIDO, JAIKA (Japanese institute), CMDI of Egypt as well the Middle East Technical University of Turkey.

The IAS Council has assigned Prof. M. K. Mahmoud FF IAS and Prof. M Doruk FF IAS, to follow up this programme and formulate a working plan in coordination with the IAS Secretariat.

It is hoped that this activity would provide an effective bases for the exchange of knowledge on the state of the art situation and also of experience acquired in the Islamic world and that these programmes would be financially self-sustaining.



DR. M. HALAIQAH, ASST. EDG ASSIGNS NEW POSITION

The Asst. Executive Director General of IAS Dr. Moh'd S. Halaiqah took a new assignment as the General Director of Amman Chamber of Industry as of August 1st. In its 8th meeting, IAS Council has grudgingly accepted the resignation of Dr. Halaiqah in light of his remarkable efforts and dedication during his services at IAS Secretariat.

Although Dr. Halaiqah will be leaving his job, he will continue to offer his services to IAS Secretariat.

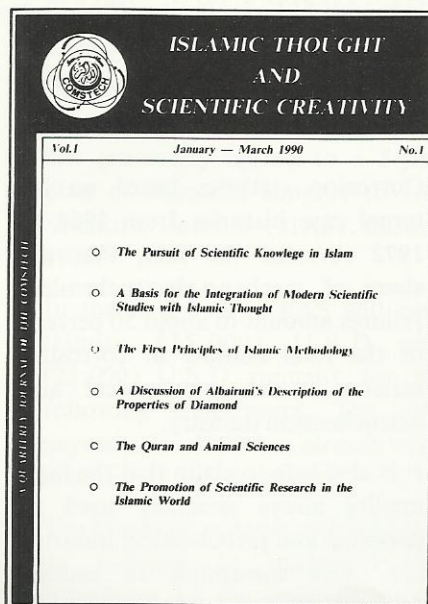
Dr. Halaiqah assumed his job at IAS headquarters as a technical relations officer shortly after the inception of the Academy in 1987. In July 1988, IAS Council took a decision of appointing Dr. Halaiqah as Assistant Executive Director General of IAS.

The Editor, on behalf of IAS Fellows and employees takes this opportunity to congratulate Dr. Halaiqah on his new position and to wish him every success.

ARABIC VERSION OF 'ISLAMIC THOUGHT AND SCIENTIFIC CREATIVITY' ON THE WAY

Following the directives of HRH Crown Prince Al-Hassan Ibn Talal, Patron of IAS and upon the request of the Standing Committee on Scientific and Technological Cooperation (COMSTech), and under its sponsorship, IAS has recently commissioned the translation into Arabic of COMSTech's Journal "Islamic Thought and Scientific Creativity" which is a high quality quarterly publication.

This step will ensure wide dissemination of the journal which is considered the first of its kind in the Muslim World.



PROCEEDINGS OF NEW TECH. CONFERENCE OUT OF PRESS SOON

The printing of IAS fourth publication, Proceedings of the conference on "New Technologies and the Development of the Muslim World" is in its final stages. The aforementioned conference was held in Kuwait in Dec. 1989.

The proceedings is expected to be a high quality reference publication with rich material on the various aspects of new technologies. The areas covered in the book include microelectronics, biotechnology, energy, informatics, new materials, space technology, food and agriculture. Review papers on areas of most promising applications of new technologies in the fields of natural resources, health, environment and education are in the proceedings also.

It is hoped that the publication will be ready for distribution by next November to coincide with the convening of the IAS's forthcoming conference on Technology Transfer.

INTERNATIONAL SYMPOSIUM ON 'THE INDUS, THE LIFE-LINE OF PAKISTAN'

The Pakistan Council of Research in Water Resources (PCRWR), is organizing an international symposium on the Indus as a first step of a multi-disciplinary research programme on the subject.

The symposium will take place in Islamabad during early March, 1991.

THE NEW IAS BROCHURE, OUT SOON

The Academy is in the process of publishing an up-to-date brochure presenting a historical background of the Academy, its nature, aims and objectives as well as highlights of its five year programme. Names and addresses of all Academy's Fellows will also be included.

IAS NEWSLETTER

The Newsletter is published by the Islamic Academy of Sciences, (IAS).

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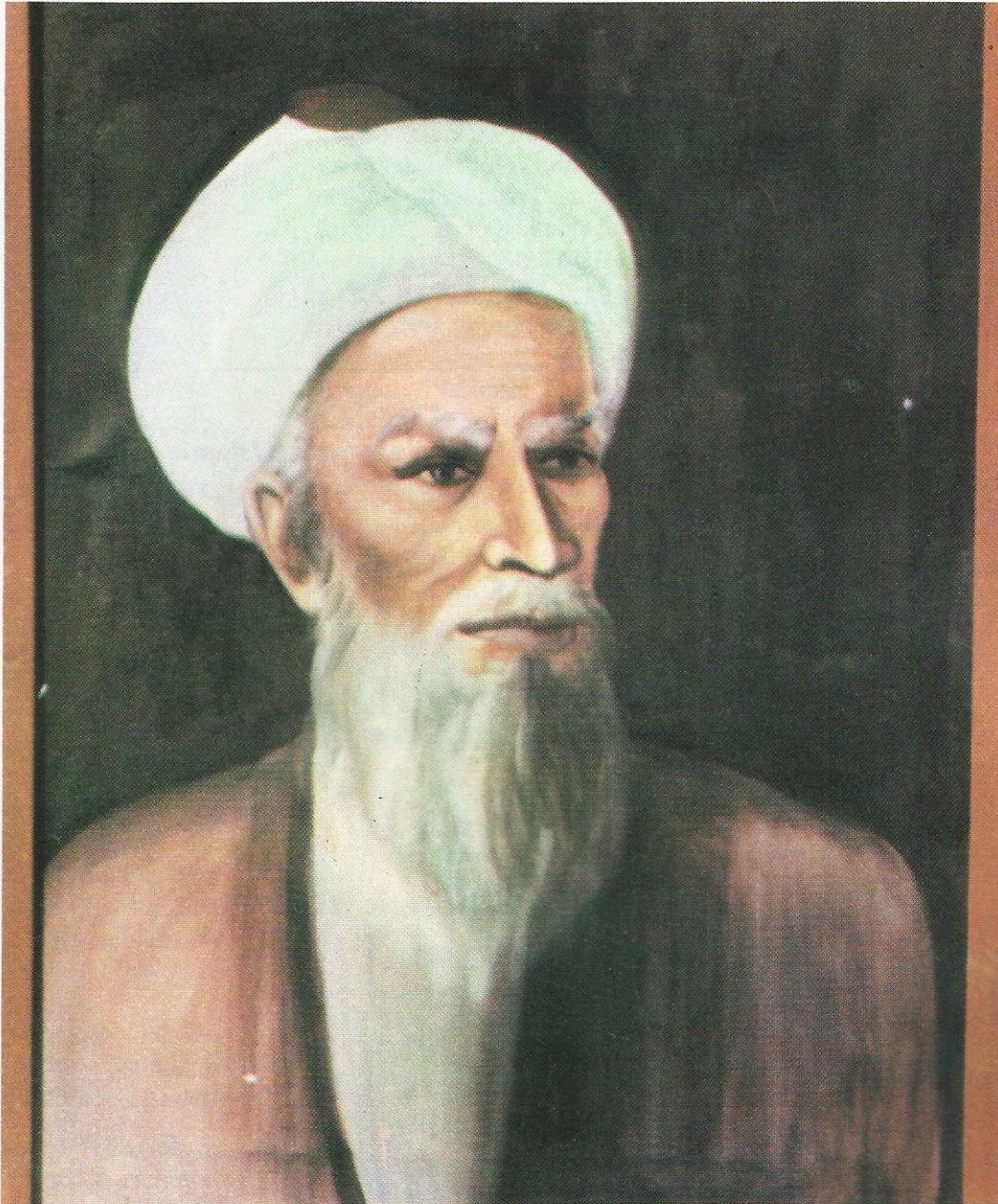
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MUSLIM SCHOLARS



MOHAMMAD IBN ZAKARIYA AL-RAZI

(864-930 A.D.)

Born at Ray, Iran, he was early on in his life interested in music, but later on turned to medicine, mathematics, astronomy, chemistry and philosophy. His contribution to medicine can be compared to that of *Ibn Sina* and his books *Al Hawi*, *Kitab al-Judari* and *Kitab al-Mansoori* are world famous.

(Taken from: Personalities Noble, National Science Council of Pakistan, edited by Hakim Mohammed Said).