

MOHAMED I. ZAKI
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EDUCATION

1979
1975
1971

Ph.D. Physical Chemistry - *Minia University/Egypt.*
M.Sc. Physical Chemistry - *Assiut University/Egypt.*
B.Sc. (Honos.) Chemistry - *Assiut University/Egypt.*

EMPLOYMENT

2001 to Date

PROFESSOR OF PHYSICAL CHEMISTRY
Minia University/Egypt

- Teaching **General** and **Physical Chemistry** courses both at undergraduate and graduate levels.
- Leading research in the area of **Surface Chemistry and Catalysis.**
- *Member*, the University Scientific Equipment and Laboratory Committee (2004-06)
- *Executive Director*, Higher Education Enhancement Project (HEEP) Management Unit, Minia University (2004-06)
- *Member*, Board of the University Center for Futuristic Research and Studies (2003-06)
- *Head*, Faculty Committee for adopting the Credit-Hour System in the Faculty of Science as of 2008/09.
- *Member*, Work task for Faculty Quality Assurance and Accreditation (2010-2013)
- *Member*, University Committee for Academic Petitions (2010-2013)

1998-2001

PROFESSOR & ASSISTANT VICE PRESIDENT FOR RESEARCH
Kuwait University/Kuwait

1995-1998

PROFESSOR & HEAD OF CHEMISTRY DEPARTMENT
Kuwait University/Kuwait

1993-1995

PROFESSOR OF PHYSICAL CHEMISTRY
Kuwait University/Kuwait

- Taught **General** and **Physical Chemistry** at both undergraduate and graduate levels.
- Established a laboratory and led two 3-year research projects in the areas of **Synthesis and Characterization of Combustion Catalysts, and IR Spectroscopy of Catalytic Gas/Solid Interfaces.**
- Supervised 3 M.Sc. students.
- *Head*, the Chemistry Department.
- *Member*, several departmental, faculty and university committees.

- *Member*, both the Implementation and Funding Committees of Kuwait University Research Administration.
- *Director*, Department of Research Planning and Analysis at Kuwait University Research Administration.

1977 - 1992

ASSOCIATE LECTURER, LECTURER, ASSOCIATE PROFESSOR, PROFESSOR & HEAD OF THE CHEMISTRY DEPARTMENT

Minia University/Egypt

- Taught **General** and Physical Chemistry both at undergraduate and graduate levels
- Supervised M.Sc. and Ph.D. Students.
- Developed research facilities in the areas of **Reactivity of Solids** and **Surface Vibrational Spectroscopy**.
- Contributed to the foundation of the **University Central Analytical Facilities**.
- *Head*, the Chemistry Department.
- Member, various departmental and faculty committees.

RESEARCH FELLOW

2007

National Chemical Laboratory (NCL)/Pune-India, *CSIR*.

2003

Munich University/Germany, *Alexander von Humboldt Foundation*.

1991-1992

Poitiers University/France, *C.N.R.S.*

1989-1990

Pittsburgh University/USA, *Fulbright Foundation*.

1984-1986

Munich University/Germany, *Alexander von Humboldt Foundation*.

1981-1982

East Anglia University/UK, *Egyptian Government*.

1977-1978

RESEARCH ASSOCIATE

Hannover University/Germany, *DAAD*.

1971-1975

DEMONSTRATOR

Assiut University/Egypt

- Taught **Experimental General** and **Physical Chemistry** at undergraduate level.
- Designed experiments and training programmes for Physical Chemistry courses.

**RESEARCH
ACTIVITY**

TYPE OF CHEMISTRY

Physical Chemistry.

FIELD OF CHEMISTRY

Surface Chemistry and Catalysis.

AREAS OF INTEREST & RESEARCH OBJECTIVES

- Synthesis, characterization and development of catalysts and catalytic Solids.
- Kinetics and mechanisms of solid-state formation reactions of catalytic and refractory solids in single and binary powder systems by TGA, DTA and DSC.

- Surface texture by gas sorptionometry and electron microscopy.
- Surface chemistry by XPS, AES, and *in-situ* IR and LRA of adsorbed probe molecules.
- Surface catalytic activity by gas chromatography and mass spectrometry of reaction streams.
- Bulk solid-state chemistry, phase composition and geometric structure by XRD, UV-Vis DRS, SAED, TEM/HRTEM, SEM/FASEM and EDX

PUBLICATIONS

170 SCIENTIFIC PAPERS IN INTERNATIONAL PERIODICALS

Ex., J. Phys. Chem, JCS Faraday Trans., JACS Langmuir, J. Mol. Catal., Appl. Catal., J. Catal., J. Mater. Chem., J. Mater. Sci., Spectrochim. Acta, Thermochem. Acta, Colloids and Surfaces, J. Colloid and Interface Science, Adsorption Sci. & Technol., Surf. Technol., New J. Chem., PCCP, ..etc.

22 PAPERS IN REFEREED INTERNATIONAL MEETINGS

Ex., Intern. Symp., ChemControl-81, 1981-Wien; World Conf. Thermal Anal., 1984-Amsterdam, 1985-Bad Hofgastein; Eurp. Conf. Appl. Surf. Interface Anal., 1985-Veldhoven, 1987-Stuttgart; Intern. Symp. Sci. Bases for the Preparation of Heterog. Catal., 1990-Louvain-la-Neuve, 1994-ditto; EUROPCAT-1, 1993-Montpellier; Intern. Conf. on Catalysis in Petroleum Refining & Petrochemicals, 1995-Kuwait; Intern. Symp. on Silica from Synthesis to Applications 1998-France; Adsorption to Interfaces, 2000-UK; 2nd Taylor Conf., 2000-UK; 3rd Intern. Hydrogen Peroxide Propulsion Conf., 2000-USA ; 9th Intern. Hydrogen Peroxide Propulsion Conf., 2006-France ; Conf. & Exhibition on Catalysis in the GCC Countries, 2006-Kuwait, etc.

U.S. PATENT No. 5,492,880, 20 Feb 1996

Processes for the Inorganic Chemical Modification of Rhodium Alumina Catalysts and Associated Automotive Catalysts

EGY. PATENT No. 020901, 28 Jun 2000

A Novel Preparation Method for Boehmite by Reaction between Sodium Aluminite and Hydrogen Peroxide.

ACADEMIC RECOGNITION

INVITED SPEAKER

- 2nd Intern. Chem. React. Eng. Conf., 1987-Pune/India.
- Conference on Catalysis in the Gulf Cooperation Council Countries (GCCat), 2006-Kuwait.
- A Two-Session Workshop on Electron Microscopy of Catalysts, 2006-Kuwait.

REVIEWER

J. Solid State Chem., Appl. Catal., J. Thermal Anal., J. Mol. Catal., Thermochem. Acta, J. Appl. & Anal. Pyrolysis, J. Powder Technol., JACS Langmuir, J. Thermal Anal. and Calorimetry, J. Catalysis, Material Res. Bull., ..etc.

GRADUATES SUPERVISOR

17 M.Sc Dissertations

15 Ph.D. Dissertations

RESEARCH LEADERSHIP

P.I., 2 3-year Funded Research Projects: **SC076** (KD. 32,000.000) & **SC095** (KD. 42,960.000), RA/Kuwait University.

P.I., 5 Annual General Facility Projects: **SLC056** (KD. 6,400.000), **SLC481** (KD. 33.900.000), **SLC482** (KD. 32.100.000), **SLC483** (KD. 39,420.000) & **SLC484** (KD. 89,990.000), RA/Kuwait University.

Consultant, a 3-year Funded Research Project; **SC02/01** (KD. 34,000.000), RA/Kuwait University; a 2-year Funded Research Project: Kuwait Petroleum Corporation (KD 50, 000.000).

PUBLICATION CITATION INDEX

ISI Citation Index, 1981-July 2003, total citations = 1653; total articles cited = 116; impact factor = 14.3.

SCOPUS Citation Index, 1981- September 2006, total citation = 782; total articles cited = 97; impact factor = 8.1; h-index = 30.3 (2012).

AWARDEE

- The 1987 State Encouraging Prize in Chemical Sciences, Acad. Sci. Technol./Egypt.
- The 1st Class Ribbon of Excellency in Sciences and Arts, 1996, The President of the Arab Republic of Egypt.
- The 2011 University Award for Publishing in High-impact International Periodicals.
- Equipment Award, Euro 3,000.000, 2004, Alexander von Humboldt-Stiftung, Bonn, Germany.
- Equipment Award, DM. 40,000.000, 1988, Alexander von Humboldt-Stiftung, Bonn, Germany.
- Equipment Award, DM. 50,000,000, 1989, GTZ, Germany.
- Equipment Donation, DM. 10,000.000, 1991, Munich University, Munich, Germany.
- Periodicals Donation, USD. 10,000.000, 1989, Prof. N. Sheppard, University of East Anglia, Norwich, U.K.

ASSOCIATION to PROFESSIONAL and SCIENTIFIC SOCIETIES

- **Fellow**, *The Royal Society of Chemistry, London, U.K., 1995-till now.*
- **Fellow**, *The Alexander von Humboldt-Stiftung, Bonn, FRG, 1984-till now.*
- **Alumni**, *The Fulbright Foundation, Pittsburgh, U.S.A., 1990-1991.*
- **Associate**, *The National Research Center, Poitiers, France, 1991-1992.*
- **Associate**, *The Council of Scientific and Industrial Research, India, 2007.*
- **Member**, *The Egyptian Chemical Society, Cairo, Egypt, 1981-till now.*

VISITING PROFESSORSHIP

- LACCO, *Poitiers University, France, 15 June-15 August, 2002.*
- LACCO, *Poitiers University, France, 1-31 July, 2009*

ELECTED ACADEMIC EXPERT

- Joint European-MEDA Projects (**JEP/TEMPUS III**), European Commission, Brussels, 2003-2006.
- Higher Education Enhancement Project Fund (**HEEPF**), Ministry of Higher Education/IBRD, Cairo, 2003-2007.

LANGUAGES

ARABIC, ENGLISH and GERMAN

PERSONAL

BIRTH, *4 May 1950, El-Minia, Egypt.*

NATIONALITY, *Egyptian*

MARITAL STATUS, *Married with no children.*