

Dr. Abdulkadir Aksoy's CV

(Updated June 20, 2008)

I. CURRICULUM VITAE

A) PERSONAL

Name : **Dr. Abdulkadir AKSOY**

Rank : **Associate Professor**

Date of Birth : February 02, 1950

Place of Birth : Cizre, Turkey

Nationality : Turkish

Marital status : Married with five children

Working Address: Physics Dept., King Fahd University of Petroleum
& Minerals, KFUPM Box 416, Dhahran 31261,
Saudi Arabia

KFUPM Tel No :
(Office) : (966) 3 860 3558
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(Fax) : (966) 3 860 2293

E- mail : aaksoy@kfupm.edu.sa

B) EDUCATION

| <i>Degree</i> | <i>Institution</i> | <i>Date</i> |
|---------------|---|-------------|
| Ph.D. | Faculty of Science, Ghent State University, Belgium | June 1981 |
| B.Sc. | Faculty of Science, University of Istanbul, Turkey | Feb. 1973 |

C) HONORS

- * Received Belgian Ministry of Education Predoctoral Fellowship (1979)
- * Received Ghent State Univ. Predoctoral Fellowship (1980-1981)
- * Received the Ph.D. Degree with Distinction (1981)
- * Received NATO Postdoctoral Fellowship (summer 1983)
- * Received KFUPM 10 years Service Award, Saudi Arabia (1996)
- * Received KFUPM 20 years Service Award, Saudi Arabia (2006).

D) MEMBERSHIP IN PROFESSIONAL SOCIETIES

- * Member, American Physical Society (up to 2003)
- * Member, International Radiation Physics Society
- * Member, International Union of Radioecology
- * Member, Turkish Physics Society.

E) EMPLOYMENT HISTORY

- | | |
|--------------------|--|
| Sept 2004- Present | Assoc. Prof., Physics Dept., King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia |
| July 2003–Aug 2004 | Research Scientist - I, Center for Applied Physical Sciences, Research Institute, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia |
| 1994-June 2003 | Research Scientist - II, Center for Applied Physical Sciences, Research Institute, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia |
| 1985-1993 | Research Scientist - III, Center for Applied Physical Sciences, Research Institute, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia. |
| 1981-1985 | Asst. Professor, Faculty of Engineering of Sakarya, Istanbul Technical University, Adapazari, Turkey. |
| 1983-1985 | Chairman, Department of Electrical Engineering, Faculty of Engineering of Sakarya, Istanbul Technical University, Adapazari, Turkey. |

- 1983 Summer Post Doctorate Researcher, Ghent State University, Nuclear Physics Lab. Ghent, Belgium.
- 1978-1981 Researcher, Ghent State University, Nuclear Physics Lab., Ghent, Belgium.

(F) AREAS OF INTEREST

- PHOTONUCLEAR REACTIONS IN GIANT DIPOLE RESONANCE REGION
- RESPONSE FUNCTION AND EFFICIENCY CALIBRATION OF LIQUID SCINTILLATOR NEUTRON DETECTORS.
- EFFICIENCY CALIBRATION OF HPGe and NaI(Tl) GAMMA RAYS DETECTORS
- STUDY OF BULK ELEMENTAL ANALYSES OF SOLID AND LIQUID SAMPLES USING FAST AND SLOW NEUTRON ACTIVATION SPECTROMETRY
- STUDY OF NATURALLY OCCURRING RADIOACTIVE MATERIALS (NORM AND TENORM)
- NATURAL & ARTIFICIAL RADIOACTIVITY MEASUREMENTS FOR SYSTEM CALIBRATION
- GAMMA RAY SPECTROSCOPY ANALYSES OF ENVIRONMENTAL SAMPLES SUCH AS SCALES, SOIL, PHOSPHATE, FERTILIZERS, GAS MANTLES, GRANITES etc.,

II. (A) TEACHING ASSIGNMENTS AT KFUPM

- * **"Physics 102-Sections 17 and 18 LECTURE & RECITATION (General Physics II)"**
2007-2008 Spring Semester (072), at the Physics Dept., KFUPM
Student Evaluation (Section 17):
Student Evaluation (Section 18):
- * **"Physics 102-Lab-Sections 66 and 73 LABS (General Physics II)"**
2007-2008 Spring Semester (072), at the Physics Dept., KFUPM
Student Evaluation (Section 66):
Student Evaluation (Section 73):
- * **"Physics 101-Sections 04, 05 and 06 LECTURE & RECITATION (General Physics I)"**
2007-2008 Fall Semester (071), at the Physics Dept., KFUPM
Student Evaluation (Section 4): 6.55 out of 10.0
Student Evaluation (Section 5): 7.08 out of 10.0
Student Evaluation (Section 6): 7.82 out of 10.0
- * **"Physics 403 (Senior Physics Lab)"**
2007-2008 Fall Semester (071), at the Physics Dept., KFUPM

- * **"Physics 503 (Graduate Laboratory)"**
2007-2008 Fall Semester (071), at the Physics Dept., KFUPM
- * **"Physics 102-54 Lab (General Physics II)"**
"Physics 102-81 Lab (General Physics II)"
2006-2007 Spring Semester (062), at the Physics Dept., KFUPM
Student Evaluation (Section 54): 6.90 out of 10.0
Student Evaluation (Section 81): 6.88 out of 10.0
- * **"Physics 304 (Experimental Physics Lab)"**
2006-2007 Spring Semester (062), at the Physics Dept., KFUPM
- * **"Physics 101-Sections 22, 23 and 24 LECTURE & RECITATION (General Physics I)"**
2006-2007 Fall Semester (061), at the Physics Dept., KFUPM
Student Evaluation (Section 22): 6.80 out of 10.0
Student Evaluation (Section 23): 7.87 out of 10.0
Student Evaluation (Section 24): 6.64 out of 10.0
- * **"Physics 403 (Senior Physics Lab)"**
2006-2007 Fall Semester (061), at the Physics Dept., KFUPM
- * **"Physics 101-Sections 4, 5 and 6 LECTURE & RECITATION (General Physics I)"**
2005-2006 Spring Semester (052), at the Physics Dept., KFUPM
Student Evaluation (Section 4): 7.60 out of 10.0
Student Evaluation (Section 5): 7.22 out of 10.0
Student Evaluation (Section 6): 7.34 out of 10.0
- * **PYP-001-015 (Lecture)**
2005-2006 Spring Semester (051), at the PYP Dept., KFUPM
Student Evaluation (Section 15): 7.89 out of 10.0
- * **"Physics 101-Sections 1, 2 and 3 RECITATION (General Physics I)"**
2005-2006 Fall Semester (051), at the Physics Dept., KFUPM
Student Evaluation (Section 1): 8.32 out of 10.0
Student Evaluation (Section 2): 9.08 out of 10.0
Student Evaluation (Section 3): 9.08 out of 10.0
- * **"Physics 101-57 Lab (General Physics I)"**
2005-2006 Fall Semester (051), at the Physics Dept., KFUPM
Student Evaluation : 8.93 out of 10.0
- * **"Medical Physics MEPH-563 Lab "**
2005-2006 Fall Semester (051), at the Physics Dept., KFUPM
- * **"Physics 503 (Graduate Laboratory)"**
2005-2006 Fall Semester (051), at the Physics Dept., KFUPM
2006-2007 Fall Semester (061), at the Physics Dept., KFUPM
- * **"Physics 101-Sections 13-14 LECTURE&RECITATION (General Physics I)"**
2004-2005 Spring Semester (042), at the Physics Dept., KFUPM
Student Evaluation (Section 13): 8.32 out of 10.0
Student Evaluation (Section 14): 9.08 out of 10.0

- * **"Physics 102-62 Lab (General Physics II)"**
2004-2005 Fall Semester (041, 14 forms), at the Physics Dept., KFUPM
Student Evaluation : 8.93 out of 10.0
- * **"Physics 102-65 Lab (General Physics II)"**
2004-2005 Fall Semester (041), at the Physics Dept., KFUPM
Student Evaluation : 7.78 out of 10.0
- * **"Medical Physics 563 Lab (5 experiments out of 8)"**
2004-2005 Fall Semester (041), at the Physics Dept., KFUPM
- * **"Physics 503 (Graduate Laboratory)"**
2003-2004 Spring Semester (032), at the Physics Dept., KFUPM
- * **"Medical Physics 569 Lab (Health Physics Laboratory)"**
2003-2004 Spring Semester (032), at the Physics Dept., KFUPM
- * **"Physics 101-53 Lab (General Physics I)"**
2003-2004 Fall Semester (031), at the Physics Dept., KFUPM
Student Evaluation : 8.10 out of 10.0
- * **"Physics 102-65 Lab (General Physics II)"**
2003-2004 Fall Semester (031), at the Physics Dept., KFUPM
Student Evaluation : 7.78 out of 10.0
- * **"Medical Physics 563 Lab (4 experiments out of 8)"**
2003-2004 Fall Semester (031), at the Physics Dept., KFUPM
- * **"Physics 503 (Graduate Laboratory)"**
2002-2003 Spring Semester (022), at the Physics Dept., KFUPM
- * **"Physics 102-51 Lab (General Physics II)"**
2002-2003 Spring Semester (022), at the Physics Dept., KFUPM
Student Evaluation : 8.12 out of 10.0
- * **"Physics 102-64 Lab (General Physics II)"**
2002-2003 Fall Semester (021), at the Physics Dept., KFUPM
Student Evaluation : 8.79 out of 10.0
- * **"Medical Physics 563 Lab (4 experiments out of 8)"**
2002-2003 Fall Semester (021), at the Physics Dept., KFUPM
**Physics Dept. appreciated for the manual write-up and
successfully conducting the experiments**
- * **"Physics 503 (Graduate Laboratory)"**
2000-2001 Spring Semester (002), at the Physics Dept., KFUPM
- * **"Physics 101-86 Lab (General Physics I)"**
2000-2001 Fall Semester (001), at the Physics Dept., KFUPM
Student Evaluation : 8.42 out of 10.0
- * **"Physics 102-53 Lab (General Physics II)"**
1999-2000 Fall Semester (001), at the Physics Dept., KFUPM

Student Evaluation : 8.38 out of 10.0

- * **"Physics 503 (Graduate Laboratory)"**
1995-96 Fall Semester, at the Physics Dept, KFUPM
- * **"Physics 101-09 LECTURE&RECITATION (General Physics I)"**
1986-87 Fall Semester, at the Physics Dept., KFUPM
Student Evaluation : 8.46 out of 10.0

(B) TEACHING ASSIGNMENTS IN TURKEY

- * **"Physics 101 LECTURE (General Physics I)"**
1981-85 (For four years) at the Faculty of Engineering of Sakarya,
Istanbul Tech. Univ., Adapazari, Turkey
- * **"Physics 102 LECTURE (General Physics II)"**
1981-85 (For four years) at the Faculty of Engineering of Sakarya,
Istanbul Tech. Univ., Adapazari, Turkey
- * **"Introduction to Modern Physics" LECTURE**
1981-85 (For four years) at the Electrical Eng. Dept.
Faculty of Engineering of Sakarya,
Istanbul Tech. Univ., Adapazari, Turkey
- * **"Reactor Physics" LECTURE**
1982-83 Spring Semester at the Mechanical Eng. Dept.
Faculty of Engineering of Sakarya,
Istanbul Tech. Univ., Adapazari, Turkey

(C) PAPERS IN REFEREED JOURNALS (listed from the most recent)

1. *"Nondestructive elemental analysis of coins using accelerator-based thermal neutrons"*
F. Z. Khiari, **A. Aksoy**, and M. N. Al-Haddad
The Arabian Journal for Science and Engineering
Vol. 32, No. 1A (2007) 43-48
2. *"Total and spectral natural gamma-ray logs of core samples"*
A. Aksoy, M. M. Nagadi, F. Z. Khiari and A. A. Naqvi
The Arabian Journal for Science and Engineering
Vol. 31, No. 1A (2006) 15-22
3. *"Correlation between radon exhalation and radium content in granite samples used as construction materials in Saudi Arabia"*
M. Al-Jarallah, Fazal-ur-Rehman, M. S. Musazay and **A. Aksoy**
Radiation Measurements, Elsevier
Vol. 40 (2005) 625-629
4. *"Analysis of phosphate rock samples for vanadium using accelerator-based thermal neutrons"*
F. Z. Khiari, **A. Aksoy**, and A. Sahin

- J. Radioanal. & Nucl. Chem.**
Vol. 261, no. 3, September (2004) 507-511
5. “Sensitivities of 14 MeV neutron activation analysis using a drift-tube neutron generator at KFUPM”
A. Aksoy, F. Z. Khiari and M. N. Al-Haddad
The Arabian Journal for Science and Engineering
Vol. 28, No. 1A (2003) 61-72
 6. “14 MeV neutron activation analysis of Gold Jewelleries”
A. Aksoy and M. Ahmed
J. Radioanal. & Nucl. Chem.
Vol. 256, No. 2, (2003) 369-371
 7. “Gamma-ray spectroscopic and PIXE analysis of selected samples from the phosphorite deposits of Northwestern Saudi Arabia”
A. Aksoy, M. Ahmed, W. S. A. Matter and Z. R. El-Naggar
J. Radioanal. & Nucl. Chem.
Vol. 253, No. 3, (2002) 517-521
 8. “Natural Radioactivity in the Scale of water well pipes”
A. Aksoy, M. Al-Jarallah and M. N. Al-Haddad
Journal of Environmental Radioactivity, Elsevier
Vol. 61 (2002) 33-40
 9. “Alpha auto-radiography of gas lantern mantles”
M. I. Al-Jarallah, F. Abu-Jarad and A. Aksoy
Journal of King Abdulaziz University Engineering Sciences
Vol. 13, No.1 (2001) 185-192
 10. “Measurement of accelerator-based neutron distribution using nuclear track detectors”
M. I. Al-Jarallah, F. Abu-Jarad, Fazal-ur-Rehman, F. Z. Khiari, A. Aksoy and R. Nassar
Nucl. Instr. & Meth. in Physics Research B 171/4 (2000) 584-588
 11. “Back-Angle anomaly in scattering of alpha-particles from ^{28}Si at low energies”
A. Coban, F. Z. Khiari, M. S. Abdelmonem, A. Aksoy and A. A. Naqvi,
Nuclear Physics A 678/1-2 (2000) 3-10
 12. “Fabrication and tests of ^3He and ^2H targets for beam polarization measurement”
A. A. Naqvi, A. Aksoy, O. Fageeha, S. Kidwai, M. A. Al-Ohali,
and M. M. Nagadi,
Applied Radiation and Isotopes, Elsevier
Vol. 53, No. 3 (2000) 439-442
 13. “Calibration of natural gamma-ray spectrometer facility at the ERL”
A. Aksoy, and M. R. Khodja
The Arabian Journal for Science and Engineering
Vol. 24, No. 1A (1999) 73-79
 14. “Large angle scattering of α -particles from ^{32}S ”
A. Coban, M. S. Abdelmonem, F. Z. Khiari, A. A. Naqvi, A. Aksoy,
Nucl. Physics A 645 (1999) 3-12

15. "Study of Pt-Re/alumina Reforming Catalysts by neutron activation analysis"
A. Aksoy, F. Z. Khiari and A. Rahman,
J. Radioanal. & Nucl. Chem., Articles,
Vol. 230, Nos. 1-2 (1998) 75-78

16. "Studies of elemental analysis and natural radioactivity of some commonly-used fertilizers in Saudi Arabia"
A. Aksoy, F. Z. Khiari and M. N. Al-Haddad,
The Arabian Journal for Science and Engineering
Vol. 23, No. 2A (1998) 147-158

17. "Chemical analysis of thorium content in gas mantles"
M. Al-Jarallah, A.R. Al-Arfaj, A. Aksoy, and F. Abu-Jarad
The Arabian Journal for Science and Engineering
Vol. 23, No. 1A (1998) 17-21

18. "Determination of the neutron detector efficiency of an NE213 scintillator for $E_n=2.5$ to 16 MeV using $^2\text{H}(d,n)^3\text{He}$ reaction"
M. A. Al-Ohali, A. Aksoy, A. Coban, J.M. Hanly, P. D. Felsher,
C. R. Howell, W. Tornow, F. Salinas and R. L. Walter,
Nucl. Instr. & Meth. in Physics Research A 396 (1997) 388-393

19. "Measurements of thorium content and radioactivity in gas mantles"
A. Aksoy, M. Jarallah and F. Abu-Jarad
The Arabian Journal for Science and Engineering,
Vol. 22, No. 1A (1997) 25-35

20. "Elemental analysis using gamma rays spectroscopy"
A. Aksoy, A. A. Naqvi, F. Z. Khiari, F. Abu-Jarad, M. Al-Ohali, M. Sumani
Nucl. Instr. & Meth. in Physics Research A 353 (1994) 558-561

21. "Response-function measurement of an NE213 scintillator using the $^2\text{H}(d,n)^3\text{He}$ reaction"
A. Aksoy, A. Coban, A. A. Naqvi and F. Z. Khiari (KFUPM)
J. M. Hanly, C. R. Howell, W. Tornow, P. D. Felsher, M. A. Al-Ohali, and
R. L. Walter (TUNL)
Nucl. Instr. & Meth. in Physics Research A 337 (1994) 486-491

22. "Response function measurements of an NE102A organic scintillator using an $^{241}\text{Am-Be}$ source"
A. A. Naqvi, A. Aksoy, F. Z. Khiari and M. A. Al-Jalal
Nucl. Instr. & Meth. in Physics Research A 345 (1994) 514-519

23. "An $^{241}\text{Am-Be}$ source based thermal neutron activation analysis facility at KFUPM"
A. Aksoy, M. N. Al-Haddad, A. A. Naqvi and K. Al-Nahdi
J. Radioanal. & Nucl. Chem., Articles, Vol. 181, No. 1, (1994) 131-140

24. "Efficiency calibration of HPGe detector in far and close geometries"
A. Aksoy (King Fahd University of Petroleum and Minerals)
J. Radioanal. & Nucl. Chem., Articles, Vol. 169, No. 2 (1993) 463-469

25. "KFUPM fast neutron activation analysis facility"

A. Aksoy, A. A. Naqvi, F. Z. Khiari, M. Raashid, A. Coban, R. E. Abdel-Aal, and H. Al-Juwair

Nucl. Instr. & Meth. in Phys. Research A 332 (1993) 506-510

26. *"Light yield measurement of a NE213 detector for 2.8-14.8 MeV neutrons"*

A. A. Naqvi, F. Z. Khiari, A. Aksoy, A. Coban and M. A. Al-Jalal

Nucl. Instr. & Meth. in Phys. Research A 325 (1993) 574-577

27. *"Photoproton decay of the ^{31}P giant-resonance"*

E. Kerkhove, H. Ferdinande, P. Van Otten, D. Ryckbosch, R. Van de Vyer, P. Berkvens, E. Van Camp (*Ghent State University, Belgium*)

A. Aksoy (*Istanbul Technical University, Adapazari, Turkey*)

Phys. Rev. C, Vol. 31, No. 4 (1985) 1071-1082

(D) CONFERENCE PRESENTATIONS (listed from the most recent)

1. *"Enhancement of sensitivities of 14 MeV neutron activation analysis at KFUPM"*

A. Aksoy and M. Raashid

3rd International IMS Conference On: Applications of Traditional and High Performance Materials in Harsh Environments"

January 23-24 (2008) 69-72, American University of Sharjah, UAE

2. *"Sensitivities of short- lived Radioisotopes of $T < 10$ min by Neutron activation analysis technique at KFUPM"*

A, Aksoy

3rd Saudi Science Conference, New Horizons in Science and their Applications, March 10-13 (2007) p. 7, KSU, Riyadh, Saudi Arabia

3. *"A Nondestructive Testing: Natural Gamma-Rays Spectroscopy"*

A. Aksoy

2nd International IMS Conference On: Applications of Traditional and High Performance Materials in Harsh Environments"

March 20-21 (2006), American University of Sharjah, UAE

4. *"Neutron activation analysis facility at KFUPM"*

A, Aksoy

2nd Scientific Meeting of Saudi Physical Society

"Physics between theory and practice in Kingdom of Saudi Arabia",

November 22-24 (2005), Umm Al-Qura Univ., Makkah, Saudi Arabia

5. *"Gamma ray peak detection algorithms using embedded DSP"*

M. W. Raad, J. M. Noras, M. Shafiq and A. Aksoy

Proceedings of First UK Embedded Forum, A. Koelmans, A. Bystrov, M. Pont (Editors), National Exhibition Centre,

13th/14th October, 2004, Birmingham, UK

6. *“Correlation of Radon Exhalation from Granites and Radium Content”*
M.I.Al-Jarallah , **A. Aksoy**, Fazal-ur-Rehman and M.S. Musazay
2nd Saudi Science Conference, Session 3, King Abdulaziz Univ., Jeddah, 15-17 March 2004.
7. *“Measurements of Natural Radioactivity in the Scale Samples”*
A. Aksoy and M. Al-Jarallah
Fourth Speciality Conference on Environmental Progress in the Petroleum & Petrochemical Industries, Session 3C, Manama, Bahrain, 23-25 February 2004.
8. *“Determination of vanadium contamination in catalysts by thermal neutron activation analysis at KFUPM”*
A. Aksoy, F. Z. Khiari and R. M. Nassar
Petrotech 2001, The 3rd Middle East Refining and Petrochemicals Conference Proceeding, PN-71, Manama, Bahrain, 29-31 October 2001
9. *“Study of elemental analysis of catalysts by neutron activation spectrometry”*
A. Aksoy, F. Z. Khiari, M. Al-Ohali and J. A. Anabtawi
1st Saudi Science Conference Proceedings, Physics, Vol. 2, 167-178,
King Fahd University of Petroleum & Minerals, Dhahran, April 9-11, 2001
10. *“Backangle anomaly in the scattering of alpha particles from ²⁸Si and ³²S”*
A. Coban, F. Z. Khiari, M. S. Abdulmonem, **A. Aksoy** and A. A. Naqvi
1st Saudi Science Conference Proceedings, Physics, Vol. 2, 81-91,
King Fahd University of Petroleum & Minerals, Dhahran, April 9-11, 2001
11. *“Sensitivities of 14 MeV neutron activation analysis at KFUPM”*
A. Aksoy (Invited Speaker), F. Z. Khiari and M. N. Al-Haddad,
16th International Conference on the Application of Accelerators in Research & Industry,
Univ. of North Texas, Denton, Texas, U.S.A., Nov. 1-4, 2000, FB4
12. *“Trace analysis of Vanadium using Accelerator-Based Slow Neutrons”*
F. Z. Khiari, **A. Aksoy**, R. Nassar, and M. N. Nagadi
16th International Conference on the Application of Accelerators in Research & Industry,
Univ. of North Texas, Denton, Texas, U.S.A., Nov. 1-4, 2000, PD12
13. *“Non-destructive elemental analysis of Ni/W/Mo based catalyst samples by accelerator based fast and slow neutrons”*
A. Aksoy, M. Al-Ohali and J. A. Anabtawi,
10th International Conference on Modern Trends in Neutron Activation Analysis, MTAA-10, Log No. 77, p.171,
NIST, Gaithersburg, Maryland, U.S.A., April 19-23, 1999
14. *“Industrial Applications using 14 MeV neutrons at KFUPM”*
A. Aksoy (Invited Speaker), F. Z. Khiari and M. N. Al-Haddad
The Proceedings of the 15th International Conference on Application of Accelerators in Research and Industry, The American Institute of Physics (AIP) Conference Proceedings 475 (1999) 710-713, Woodbury, New York, U.S.A.
15. *“Vanadium determination in phosphorite samples using accelerator-based slow neutrons”*

- F. Z. Khiari, **A. Aksoy**, W. S. Matter and Z. R. El-Naggar
15th International Conference on the Application of Accelerators in Research & Industry,
 Univ. of North Texas, Denton, Texas, U.S.A., Nov. 4-7, 1998, PB31
16. *"Setup for the elemental analysis of coins using accelerator-based slow neutrons"*
 F. Z. Khiari, **A. Aksoy**, M. N. Al-Haddad
15th International Conference on the Application of Accelerators in Research & Industry,
 Univ. of North Texas, Denton, Texas, U.S.A., Nov. 4-7, 1998, PB32
17. *"Analysis of soil samples from Saudi Arabia using neutron activation spectrometry"*
A. Aksoy, F. Z. Khiari and N. A. Al-Shayea
8th Congress of International Association of Engineering Geology and the Environment,
 Vancouver, British Columbia, Canada, September 21-25, 1998
18. *"Non-destructive elemental analyses using neutron activation analysis technique"*
A. Aksoy, F. Z. Khiari and M. N. Al-Haddad,
 Saudi-French Workshop on Recent Developments in Materials and Modeling, KFUPM, November 11-13, 1997
19. *"Elemental analysis of fertilizers by accelerator based slow neutrons"*
A. Aksoy, F. Z. Khiari and M. Al-Haddad,
14th International Conference on the Application of Accelerators in Research & Industry,
 Univ. of North Texas, Denton, Texas, U.S.A., Nov. 6-9, 1996, PB28
20. *"Measurement of energy distribution of 14 MeV neutrons using foil activation method"*
A. Aksoy, A. A. Naqvi, F. Z. Khiari, H. Al-Juwair and A. Coban,
14th International Conference on the Application of Accelerators in Research & Industry,
 Univ. of North Texas, Denton, Texas, U.S.A., Nov. 6-9, 1996, PB45
21. *"Flux normalization issues in accelerator-based neutron activation analysis"*
 F. Z. Khiari and **A. Aksoy**,
14th International Conference on the Application of Accelerators in Research & Industry, Univ. of North Texas, Denton, Texas, U.S.A., Nov. 6-9, 1996, PB48
22. *"Accelerator-based slow-neutrons at KFUPM"*
 F. Z. Khiari, **A. Aksoy** and M. N. Al-Haddad,
14th International Conference on the Application of Accelerators in Research & Industry,
 Univ. of North Texas, Denton, Texas, U.S.A., Nov. 6-9, 1996, PC12
23. *"³He and ²H targets for nuclear reaction studies"*
 A. A. Naqvi, **A. Aksoy**, M. A. Al-Ohali, O. Fageeha, S. Kidwai, M. M. Nagadi and M. Raashid,
14th International Conference on the Application of Accelerators in Research & Industry,

Univ. of North Texas, Denton, Texas, U.S.A., Nov. 6-9, 1996, PC29

24. *"Determination of the neutron detection efficiency of an NE213 scintillator from 2.5 to 16 MeV using $^2\text{H}(d,n)^3\text{He}$ reaction"*
M. A. Al-Ohali, **A. Aksoy** and A. Coban,
(Energy Research Lab., KFUPM, Dhahran, Saudi Arabia)
J. M. Hanly, P.D. Felsher, C. R. Howell, L. Lowie, W. Tornow, P. Salinas, and
R. L. Walter, (Duke Univ. Triangle Universities Nucl. Lab.,
Durham, North Carolina, U.S.A.)
**14th International Conference on the Application of Accelerators in
Research & Industry**, Univ. of North Texas, Denton, Texas, U.S.A., Nov. 6-9, 1996, PC38
25. *"Risk assessments of natural gamma rays in building materials"*
M.N. Al-Haddad, **A. Aksoy** and F.Z. Khiari,
3rd Safety and Occupational Health Conference Proceedings,
25-30 May 1996, Chamber of Commerce & Industry, Dammam, Saudi Arabia
26. *"Transformation Function for the efficiencies of HPGe detector from far
to close geometries"*
A. Aksoy (Invited Speaker)
**13th International Conference on the Application of Accelerators in
Research & Industry**, UNT, Denton, Texas, U.S.A., Nov. 7-10, 1994, BC4
27. *"Elemental Analysis using Natural Gamma Ray Spectrometry"*
Symposium on Radiation Measurements and Applications (8th in series),
A. Aksoy, A. A. Naqvi, F. Z. Khiari, F. Abu-Jarad, M. Al-Ohali and
M. Sumani
University of Michigan, Ann Arbor, U.S.A., May 16-19, 1994, 3J16
28. *"Efficiency measurements of HPGe, GMX and NaI(Tl) detectors in
various geometries"*
A. Aksoy (Invited Speaker)
**12th International Conference on the Application of Accelerators in
Research & Industry**,
Univ. of North Texas, Denton, Texas, U.S.A., Nov. 2-5, 1992, FB6
29. *"KFUPM Fast Neutron Activation Facility"*
A. Aksoy, A. A. Naqvi, F. Z. Khiari, R. E. Abdel-Aal, M. Raashid, A. Coban and
H. A. Al-Juwair
**12th International Conference on the Application of Accelerators in
Research & Industry**,
Univ. of North Texas, Denton, Texas, U.S.A., Nov. 2-5, 1992, PC64
30. *"A technique to measure the response function of an organic scintillator"*
A. A. Naqvi, F. Z. Khiari, **A. Aksoy**, A. Coban, M. A. Al-Jalal and M. Raashid
**12th International Conference on the Application of Accelerators in
Research & Industry**,
Univ. of North Texas, Denton, Texas, U.S.A., Nov. 2-5, 1992, PE49
31. *"Pulse height of organic scintillators for monoenergetic gamma rays"*
A. A. Naqvi, F. Z. Khiari, A. Coban, **A. Aksoy** and M. A. Al-Jalal
IEEE 1992 Nuclear Science Symposium,
Orlando, Florida, U.S.A., Oct. 25-31, 1992, Vol. 1., p.1

32. *"Measurement of light output of NE213 and NE102A detectors for 2.7-14.5 MeV neutrons"*
 A. A. Naqvi, F. Z. Khiari, A. Coban, **A. Aksoy**, M. Abdulaziz Al-Jalal and M. Raashid
IEEE 1992 Nuclear Science Symposium,
 Orlando, Florida, U.S.A., Oct. 25-31, 1992, Vol. 1., p.4
33. *"Efficiency calibration of HPGe detector in far and close geometries"*
A. Aksoy
8th International Conference on Modern Trends in Neutron Activation Analysis, MTAA-8,
 Technical University, Vienna, Austria, Sept. 16-20, 1991, p. 165
34. *"Measurement of the absolute detection efficiency for a large volume neutron detector"*
 J. M. Hanly, C. R. Howell, W. Tornow, P. D. Felsher, G. Weisel, M.A. Al-Ohali and R. L. Walter (*TUNL, Duke Univ. Durham, North Carolina, U.S.A.*)
A. Aksoy and A. Coban (*ERL, KFUPM, Dhahran, Saudi Arabia*)
American Physical Society 1988 Annual Meeting,
 Santa Fe, New Mexico, U.S.A., Oct. 13-15, 1988,
 The APS Bulletin Vol. 33, No. 8, p. 1577
35. *"The $^{31}\text{P}(\gamma, p)^{30}\text{Si}$ reaction in the GDR region"*
A. Aksoy, E. Kerkhove, E. Van Camp, D. Ryckbosch, R. Van de Vyer, P. Van Otten, P. Berkvens, and H. Ferdinande (*Ghent State Univ., Gent, Belgium*)
General Scientific Congress of Belgium Physics Society,
 K.U.L. Leuven, Belgium, Jun. 4-5, 1981, N.P.-5
36. *"Photonuclear research activities"*
 P. Berkvens, H. Ferdinande, E. Kerkhove, D. Ryckbosch, E. Van Camp, R. Van de Vyer, P. Van Otten, and **A. Aksoy** (*Ghent State Univ., Gent, Belgium*)
Gordon Research Conference on Photonuclear Reactions,
 Tilton school, Tilton, New Hampshire, U.S.A., Aug. 18-22, 1980, p.2.

(E) **RESEARCH PROJECTS ONGOING AT KFUPM/RI**

1. *"Enhancement of Technical Capability of the 14 MeV FNAA Facility at KFUPM"*
KFUPM Deanship of Scientific Research Project No. IN070358
A. Aksoy and M. Raashid
[As Principal Investigator]
 24 months development project (01 April 2007- 31 March 2009)
Total Project Cost (SR): 99,200/-

(F) **RESEARCH PROJECTS COMPLETED AT KFUPM/RI**

1. *External Gamma Radiation Survey for Oil Wellheads in the Southern Producing Area, Research Institute, Center for Applied Physical Sciences Project*
Funded by Saudi Aramco. Project # CAPS2223
(January 2003-July 2005) R. M. Nassar et al.
[As Co-Investigator]
Total Project Cost (SR): 2,076,689/-.

2. *"Study of Petrochemical Catalysts using Neutron Activation Analysis"*
KFUPM Deanship of Scientific Research SABIC Project No. SABIC/2000-5
A. Aksoy, M. A. Al-Ohali and F. Z. Khiari
[As Principal Investigator]
 15 months development project (01 October 2000- 31 March 2002)
Total Project Cost (SR): 72,500/-

3. *"Data base for technical capability of the KFUPM 14 MeV neutron activation analysis facility for industrial applications"*
Research Institute, Center for Applied Physical Sciences Project
Funded by King Abdulaziz City for Science & Engineering under KACST
Project No. AR-16-73 (1997-1999)
A. Aksoy, F. Z. Khiari and M. N. Al-Haddad
[As Principal Investigator].
 34 months development project (10 March 1997- 7 Dec 1999)
Total Project Cost (SR): 652,580/-

4. *Natural Gamma Rays Measurements in core samples,*
Research Institute Div. I ELPAR III Externally funded Project # 21110
 (Jan.-1993-Sept.-1994) sponsored by Saudi-Aramco
A. Aksoy et al.
[As Task Leader for Radiometric Analyses]
Total Task Cost (SR): 80,500/-

5. *Gamma Spectroscopy Analyses,*
Research Institute Div. II Project # 22044 (1994) Saudi-Aramco
Service Orders # 52, 55, 57 & 61/94 for total 62 limestone samples
A. Aksoy et al.
[As Principal Investigator]
Total Project Cost (SR): 72,135/-

6. *Total Gamma Rays Measurements of core samples from Bahrain National Oil Company (BANOCO),*
Research Institute Div. I Project # 21128 (1994) for total 265
measurements of the core samples of total 120 ft length from BANOCO
A. Aksoy et al.
[As Principal Investigator]
Total Project Cost (SR): 8,000/-

7. *A study of Anomalous Large Angle Scattering in $^{28}\text{Si}(\alpha, \alpha)$ and $^{32}\text{S}(\alpha, \alpha)$,*
Research Institute Div. II Internal Project # 12046
 (1992-1995) A. Coban et al.
[As Co-Investigator]

(G) TECHNICAL MEMORANDUM & DISCUSSION PAPERS

1. *"Survey and Management of Technologically Enhanced Naturally Occurring Radioactive Materials (NORM) for Saudi Aramco"*
R. M. Nassar, F. Abu-Jarad and A. Aksoy
 Technical Memorandum for submittal to SAUDI-ARAMCO, Dhahran
 April 2001

2. *"Study of degradation of lubricant oils in compressors/turbines by monitoring total oxygen content variations using Neutron Activation Spectrometry"*
A. Aksoy, F. Z. Khiari and R. M. Nassar
Technical Memorandum # CAPS0100 submitted to SAUDI-ARAMCO, Dhahran
February 2001
3. *"Non-destructive bulk analyses of catalysts and other industrial samples by Neutron Activation Spectrometry"*
A. Aksoy and F. Z. Khiari
Discussion Paper prepared for SAUDI-ARAMCO, Dhahran, March 1997
4. *"Non-destructive bulk analyses of total oxygen content in oxidized turbine oils by Neutron Activation Spectrometry"*
A. Aksoy and F. Z. Khiari
Discussion Paper prepared for SAUDI-ARAMCO, Dhahran, March 1997
5. *"Natural gamma ray spectroscopy of various industrial samples"*
A. Aksoy and F. Z. Khiari
Discussion Paper prepared for SABIC, Riyadh, December 1996
Discussion Paper prepared for SAUDI ARAMCO, Dhahran, March 1997
6. *"Non-destructive elemental analyses of industrial samples using the KFUPM Neutron Activation Analysis Facility"*
A. Aksoy and F. Z. Khiari, Discussion Paper prepared for SABIC, Riyadh, December 1996
7. *"Oxygen determination in crude oil samples using 14 MeV neutron activation analysis technique"*
A. Aksoy, A. A. Naqvi, F. Z. Khiari, M. Nagadi and A. Coban
Discussion Paper prepared for SAUDI-ARAMCO, Dhahran, October 1992.

(H) INTERNATIONAL SCIENTIFIC REPORTS

1. *"Neutron detector efficiency calibration"*
A. Aksoy¹, M. A. Al-Ohali, A. Coban¹, P. D. Felsher, J. M. Hanly, C. R. Howell, L. Lowie, W. Tornow, R. L. Walter and G. Weisel (*TUNL, Duke Univ., Durham, North Carolina, U.S.A.*)
¹(*ERL, KFUPM, Dhahran, Saudi Arabia*)
Annual Report - TUNL XXVIII 1988-1989, p. 132
2. *"Neutron detector efficiency calibration"*
J. M. Hanly, A. Aksoy¹, M. A. Al-Ohali, Z. P. Chen, A. Coban¹, G. Dietze², R. Engelhardt, P. D. Felsher, C. R. Howell, R. Setze, W. Tornow, R. L. Walter and G. Weisel (*TUNL, Duke Univ., Durham, North Carolina, U.S.A.*)
¹(*ERL, KFUPM, Dhahran, Saudi Arabia*)
²(*Physikalisch-Technische Bundesanstalt, Braunschweig, FRG*)
Annual Report - TUNL XXVII 1987-1988, pp. 127-128
3. *"The $^{31}\text{P}(\gamma, p)^{30}\text{Si}$ reaction cross section"*
H. Ferdinande, E. Kerkhove, P. Van Otten, P. Berkvens, A. Aksoy, D. Ryckbosch, E. Van Camp, and R. Van de Vyer (*Ghent State Univ., Gent, Belgium*) **Nuclear Physics Lab. Annual Report 1983**, pp. 61-64

4. *"The $^{31}\text{P}(\gamma, p)^{30}\text{Si}$ reaction in the GDR region"*
A. Aksoy, E. Kerkhove, E. Van Camp, D. Ryckbosch, R. Van de Vyer, P. Van Otten, P. Berkvens, and H. Ferdinande (*Ghent State Univ., Gent, Belgium*)
Nuclear Physics Lab. Annual Report 1980, pp. 22-25
5. *"Photoproton cross sections and angular distributions for ^{31}P in the G.D.R. region"*
A. Aksoy, E. Kerkhove, R. Van de Vyer, H. Ferdinande, E. Van Camp, P. Van Otten, D. Ryckbosch, and P. Berkvens (*Ghent State Univ., Gent, Belgium*)
Nuclear Physics Lab. Annual Report 1979, pp. 26-30.

(I) **TECHNICAL REPORTS**
KFUPM, RI, CENTER FOR APPLIED PHYSICAL SCIENCES

1. *"Experimental setup for the production of accelerator-based slow neutrons at the Energy Research Laboratory"*
F. Z. Khiari, A. Aksoy and M. N. Al-Haddad
RI-II-BAP-46-1997
2. *"Measurements and risk assessments of natural gamma rays from granite rocks in building materials"*
M. N. Al-Haddad, A. Aksoy and F. Z. Khiari
RI-II-BAP-40-1995
3. *"The shielding design of a fast neutron detection system with a 7-meter flight path"*
A. Aksoy, A. A. Naqvi, A. Coban and H. Al-Juwair
RI-II-BAP-28-1993
4. *"KFUPM fast neutron activation and analysis facility"*
A. Aksoy, A. A. Naqvi, F. Z. Khiari, M. Raashid, A. Coban, R. E. Abdel-Aal, and H. Al-Juwair
RI-II-BAP-23-1992
5. *"Efficiency calibration of NE213 neutron detector at TUNL"*
A. Aksoy, A. Coban, A. A. Naqvi and F. Z. Khiari (*KFUPM*)
J. M. Hanly, C. R. Howell, W. Tornow, P. D. Felsner, M. A. Al-Ohali, and R. L. Walter (*TUNL*)
RI-II-BAP-27-1992
6. *"Response function measurements of NE213 and NE102A organic scintillators using an $^{241}\text{Am-Be}$ source"*
A. A. Naqvi, F. Z. Khiari, A. Aksoy, A. Coban and M. Abdulaziz Al-Jalal
RI-II-BAP-04-1992
7. *"The temporary neutron time-of-flight detection system at ERL"*
A. Coban, A. A. Naqvi, A. Aksoy, F. Z. Khiari and H. Al-Juwair
RI-II-BAP-07-1992
8. *"Measurements of light output of NE213, NE102A and NE230 organic scintillators for electrons"*
A. A. Naqvi, F. Z. Khiari, K. Gul, A. Coban, A. Aksoy, H. Al-Juwair and M. A. Al-Jalal

(J) **SEMINARS PRESENTED**

1. *"Enhancement of technical capability of the 14 MeV FNAA Facility at KFUPM"*
Physics Dept., KFUPM, February 27, 2007
2. *"Elemental analysis of Petrochemical Catalysts by Neutron Activation Spectrometry"*,
Physics Dept., KFUPM, October 2, 2005
3. *"Selected Industrial Applications using Neutron Activation Technique (NAA) & Natural γ -Rays Spectroscopy"*
Physics Dept., KFUPM, March 6, 2005
4. *"Elemental analysis of petrochemical samples using Neutron Activation Spectrometry"*
RI Technical Seminar, KFUPM, May 13, 2002
5. *"Applications of Neutron Activation Analysis (NAA) for Catalyst Analysis"*
Chemistry Dept., KFUPM, January 29, 2002
6. *"Study of elemental analysis of petrochemical catalysts by Neutron Activation Spectrometry"*
CAPS, RI, KFUPM, January 2, 2002
7. *"Study of Petrochemical Catalysts using Neutron Activation Technique (NAA)"*
Physics Dept., KFUPM, December 3, 2000
8. *"Study of degradation of Lubricant oils by monitoring total oxygen content using 14 MeV Neutron Activation Spectrometry"*
Center for Applied Physical Sciences, RI, KFUPM, October 4, 2000
9. *"Study of Lubricant oil degradation using total oxygen analysis by 14 MeV NAA and by R-BOT techniques"*
Joint study between Center for Applied Physical Sciences, RI, KFUPM and Saudi Aramco, Lab R&D Center
(Presentation in Saudi Aramco), **June 27, 2000**
10. *"Experience gained from the KACST Project for an FNAA data base"*
Center for Applied Physical Sciences, RI, KFUPM, April 2000
11. *"Study of Petrochemical Catalysts using Neutron Activation Analysis"*
Center for Applied Physical Sciences, RI, KFUPM, April 2000
12. *"Sensitivities of 14 MeV Neutron Activation Analysis"*
Physics Dept., KFUPM, March 2000
13. *"Non-destructive elemental analysis of Geological samples"*
Earth Sciences Dept., KFUPM, 1999
14. *"Industrial Applications of Neutron Activation Spectrometry"*
Physics Dept., KFUPM, 1999
15. *"Gamma-Ray Spectrometric and Instrumental Neutron Activation Analysis (INAA) for Geological Materials"*
Earth Sciences Dept., KFUPM, 1997
16. *"The KFUPM Neutron Activation Analysis Facility for Geological and Mining Applications"*
Mahd Ad'Dahab Mine Site, Petromin, Jeddah, 13 June, 1997
17. *"Natural Gamma-Ray Spectroscopy for Industrial Applications"*
Physics Dept., KFUPM, 1997
18. *"Fast Neutron Activation Analysis for Industrial Applications"*,
Physics Dept., KFUPM, 1995
19. *"Industrial Research Using KFUPM Neutron Generator Facilities"*,
Research Institute, KFUPM, Technical Seminar, 1995
20. *"Elemental Analysis using Natural Gamma Ray Spectrometry"*,

- Research Institute, KFUPM, Technical Seminar, 1994**
21. *"Fast Neutron Activation Analysis"*,
Chemistry Dept., KFUPM, 1993
 22. *"ERL Gamma Rays Spectrometry and Neutron Activation Analysis Facilities"*,
Saudi Aramco Technical Seminar, 6 October, 1993
 23. *"Determination of Thorium, Uranium and Potassium in Core Samples using Natural Gamma Ray Measurements"*,
Energy Resources Division Seminar, RI, KFUPM, 1993
 24. *"Fast Neutron Activation Analysis"*,
Research Institute, KFUPM, Technical Seminar, 1992
 25. *"A technique to determine oxygen contents in the crude oil using Fast Neutron Activation Analysis"*,
Energy Resources Division Seminar, RI, KFUPM, 1991
 26. *"Activation Analysis with 3 MeV and 14 MeV Neutron at ERL"*, **Energy Resources Division Seminar, RI, KFUPM, 1990**
 27. *"Efficiency Measurements of 5" Bicron Detector at TUNL"*,
Energy Resources Division Seminar, RI, KFUPM, 1988.

K) REFEREEING

1. Referee for Evaluation of an experimental proposal for a two years project to be sponsored by the KFUPM Research and Graduate Deanship (1999)
2. Referee for Evaluation of an experimental proposal for a summer training in England within the British Council Grants Program (1996)
3. Referee for a paper titled "*Measurement of neutron flux at the NSCL, USA, K1200 Cyclotron for 80 MeV/u $^{18}O^{6+}$ beam on a 9Be target*" for publication in Journal of King Abdulaziz University "SCIENCE" (1999)
4. Referee for a paper titled "*Reduced shielding mass for the VISTA Spacecraft*" for publication in AJSE, KFUPM (2001)
5. Referee for two physics papers for presentation to 1st Saudi Science Conference King Fahd University of Petroleum & Minerals, Dhahran, April 9-11, 2001
6. Referee for two Science related papers for presentation to 6th Saudi Engineering Conference King Fahd University of Petroleum & Minerals, Dhahran, Oct. 21-23, 2002.

L) BOOK WRITING FOR TEACHING

- 1) **Physics I Solved Problems , Abdulkadir Aksoy, Mehmet Sabih Aksoy, ITU Sakarya 50, QC32 A47 1984 (in Turkish)**
- 2) **Physics II Solved Problems , Abdulkadir Aksoy, ITU Sakarya 47, QC32 A47f 1984 (in Turkish)**

III. KFUPM PROFESSIONAL AND COMMUNITY SERVICES

(A) COMMITTEE WORK

In Physics Dept:

- * **Member Research Committee (061-062) (2006-2007)**
- * **Member PHYS-101 Course Standing Committee (042), (051) and (061) (2004-2005, 2005-2006 and 2006-2007)**
- * **Member Ad-hoc Teaching Lab Committee (042) for MEPH- 563, 569, PHYS-304, 353 (2004-2005)**
- * **Physics Dept Representative to the Library (041-042), (051-052) and (061-062) (2004-2005, 2005-2006 and (2006-2007)**
- * **Safety Liaison of Physics Dept to College of Science Safety Committee (041-042) and (051-052) (2004-2005 and 2005-2006)**
- * **Member Physics Dept. Standing Safety Committee (041-042) and (051-052) (2004-2005 and 2005-2006)**
- * **Member Ad-hoc Committee (042) for Career Day (2004)**

In CAPS, RI:

- * **Member, MS Thesis Committee for Mr. Wael Saied Ali Matter, ID# 930396 (Part of the Thesis was on the measurements of "Natural Gamma-Ray Spectroscopy of Phosphorite Deposits of Northwestern Saudi Arabia) 1995-1996, Earth Sciences Dept., KFUPM**
- * **Member, Promotion Committee For the rank of Associate Professor (1999)**
- * **Member, Promotion Committee For the rank of Research Scientist-III (1997)**
- * **Member, Promotion Committees For the rank of Engineer I (1994 and 1996)**
- * **Member for the Accelerators Operations Committee formed by the Director of the CAPS to schedule beam time, and follow-up maintenance of the accelerators (2002-2003)**
- * **Member for the Committee formed by the Director of the CAPS to assess the need for an α Radiation Spectrometry Laboratory (2001)**
- * **Member for the Committee formed by the Director of the CAPS to identify the most important areas in Radiation Technology and Radiation Protection (2001)**
- * **Member, Ad-hoc Committee for CAPS presentation to Saudi Aramco, (2001)**
- * **Member for the Committee formed by the Director of the CAPS to evaluate the present Neutron Generator and its alternatives (2000)**

(B) TRAINING ACTIVITIES

- * **PHYS-353 (Introduction to Radiation and Health Physics)**
Gamma Spectroscopy, KFUPM
April-May 2004 (2 students)
- * **PHYS-353 (Introduction to Radiation and Health Physics)**
Gamma Spectroscopy & NAA, KFUPM
0March 2003 (2 students)
- * **PHYS-353 (Introduction to Radiation and Health Physics)**
Gamma Spectroscopy, KFUPM
02 April 2001 (3 students)
- * **Summer Training (4 weeks) (August, 1998) on**
"Efficiency Measurements of 5"x5" NaI(Tl) detector in various geometries"
"Natural Radioactivity measurements of thorium in gas mantles"
for **Mr. Hatim Ahmed Zahrani**, ID # 9006212,
Undergraduate student from Nuclear Engineering Dept., King AbdulAziz Univ.,
Jeddah.
- * **Summer Training (Eight-weeks) (16 July-7 September 1994) on**
"Gamma Spectroscopy Analyses" for **Mr. Ahmed Fathy Salem**, ID # 898129,
Undergraduate student from Physics Dept., KFUPM.

(C) SHORT COURSE CONTRIBUTED

- * **Course: Principle of Radiation Protection**
Subject of Radiation Shielding
KFUPM
07-12 April 2007 (10 Participants)
Instructor Evaluation: 3.54 out of 4
- * **Course: Principle of Radiation Protection**
Subject of Counting Statistics & Radiation Shielding
KFUPM
15-20 April 2006 (9 participants)
Instructor Evaluation: 2.95 out of 5
- * **Course: Principle of Radiation Protection**
Subject of Counting Statistics
KFUPM
25-29 Sept, 2005 (12 participants)
Instructor Evaluation: 3.41 out of 5
- * **Course: Principle of Radiation Protection**
Subject of Counting Statistics & Radiation Shielding
KFUPM
February 5-10,2005 (8 participants)
Instructor Evaluation: 3.58 out of 5

- * **Course: Principle of Radiation Protection**
Subject of Counting Statistics & Radiation Shielding
KFUPM
November 20-25, 2004 (17 participants)
Instructor Evaluation: 3.02 out of 5
- * **Course: Principle of Radiation Protection**
Subject of Counting Statistics & Radiation Shielding
KFUPM
December 6-11, 2003 (10 participants)
Instructor Evaluation: 3.49 out of 5
- * **Radiation Safety Officers Training Course**
Gamma Spectrometry Lab. KFUPM
17 March-19, 2001 (11 participants)
Instructor Evaluation: 4.45 out of 5

(D) SHORT COURSE ATTENDED

"Trace Analysis"

Short Course for the period of 17 - 21 December 1994
Chemistry Dept. KFUPM

“Workshop on Medical Physics”
March 16, 2002, KFUPM

“Radiation Detection Technology & Systems”
4th January 2004, Holliday Inn, Khobar, Saudi Arabia

Workshop on:

1. Active learning to foster critical thinking
2. Using groups of student teams to promote learning

September 6 and 7, 2004, KFUPM

“e-Learning: Experience Sharing in Developing Online Courses”
Workshop Sunday May 01, 2005, KFUPM

"The First Environmental Design Workshop in Saudi Arabia: Fire Safety in Building Design and Operation"
Sunday, 9 April 2006, College of Environmental Design, KFUPM

(E) SUPERVISION

- * **Co-Supervisor for Senior Project (two-semesters, 411 & 412) for Mr. Anwar Al-Sulaimani, ID # 953780, and Mr. Adel Ali Al-Attas, ID#953521 on “Thermodynamic function of beam stopper assembly at the zero-degree beam line of Neutron Generator”, 1999-2000, Mechanical Engineering Dept., KFUPM.**
- * **Co-Supervisor for Senior Project (two-semesters, 411 and 412) for Mr. Bander Al-Hazmi, ID # 936395, and Mr. Mamdouh-Al-Sharif, ID#932496 on “A New Design of Target Water Cooling System” and Subtitles of “The effect of Thermodynamics on the Cooling System” and “The effect of the Radiation Heat**

Transfer on the Cooling System", 1998-99, Mechanical Engineering Dept., KFUPM.

- * **Co-Supervisor for Senior Project (two-semesters, 411 and 412) for Mr. Hashem M. Almaei, ID # 936025, on "Design and Modification of the target water cooling system of the zero-degree beam line of Neutron Generator at ERL" 1997-98, Mechanical Engineering Dept., KFUPM.**
- * **Partial Supervision for MS Thesis for Mr. Wael Saied Ali Matter, Graduate Student ID # 930396 as part of the Thesis for measurements of "Natural Gamma-Ray Spectroscopy of Phosphorite Deposits of Northwestern Saudi Arabia" 1995-1996, Earth Sciences Dept., KFUPM.**
- * **Supervisor for Seminar PHYS 409 as a part of BS degree in Physics for Mr. Ahmed Fathy Salem ID # 898129, Undergraduate student from Physics Dept., KFUPM. Seminar title : "Natural Gamma Ray Spectroscopy in Petroleum Industry" Date: 1994-95 Fall Semester.**

(F) THE IMPACT OF OUR FOLLOWING STUDIES:

One of the most prominent contributions we made to the Radiation Protection as well as Environmental Protection was the two studies we completed for thorium radioactivity measurements of gas mantles imported to the Kingdom. This study was the first of this type conducted in the Kingdom. The title and authors of the two papers are:

"Measurements of thorium content and radioactivity in gas mantles"

A. Aksoy, M. Jarallah and F. Abu-Jarad
The Arabian Journal for Science and Engineering,
Vol. 22, No. 1A (1997) 25-35

AND

"Chemical analysis of thorium content in gas mantles"

M. Al-Jarallah, A.R. Al-Arfaj, A. Aksoy, and F. Abu-Jarad
The Arabian Journal for Science and Engineering
Vol. 23, No. 1A (1998) 17-21

The impact of the study was very important and fruitful: The study results in setting a **standard limit of radioactivity for the gas mantles to be imported to the Kingdom.** The work was emphasized by the Custodian of the two holy mosques, **His Royal Highness King Abdullah Bin Abdulaziz** and was also mentioned and praised by the **H.E. the Ministry of High Education** as well as **The Vice Rector for Applied Research, KFUPM.** The work has been published in a local journal and magazine.

(COPIES OF THE RELATED PAPERS ARE AVAILABLE UPON REQUEST)

(G) CONSULTING WORK AND COLLABORATION IN THE KINGDOM

- * **Consulter**

Visit (on Nov. 1996 and Jan. 1998) as Consulter in *the field of Natural Radioactivity Measurements* to the **Quality Control Lab., Dammam Sea Port**, Eastern Province, Dammam, Saudi Arabia.

Helping **Saudi Aramco Radiation Protection Unit** of Environmental Compliance Dept., Dhahran in installation and testing of Gamma Spectroscopy Facility for field measurements (2005).

Training of two staff from Environmental Compliance Division, Saudi Aramco for in-situ Gamma Spectroscopy. (An appreciation letter was received from ECD, General Supervisor, Saudi Aramco)

* Successful calibration of NaI Gamma Rays Detector of Nuclear treatment Lab of Saudi Aramco Hospital in measuring B12 deficiency in the urine.

* **Academic Collaboration**

* Collaboration work with **Dr. Salem Ali Shaheen** from **Physics Dept. King Abdulaziz Univ., Jeddah**, on "*The efficiency measurements of HPGe detector in close geometry*" (1999).

* Helping in the Experimental Part of an MS Thesis on Natural Radioactivity of House utensils, supervised by Dr. Mohammad Al-Ohali of Physics Dept. for a graduate student from **Jubail, Faculty of Education, Females**.

* Helping in Experimental Part of Pulse Processing of Electronic Devices, a Ph.D thesis of **Mr. Wasim Raad of Computer Engineering Dept., KFUPM** who is doing his Ph.D. in England.

* Helping to two faculty colleagues from **Physics Dept., KFUPM**, in establishment for a PC based Gamma Spectroscopy Setup (2002).

* Presentation at the **Hossaini High School English Section Al-Khobar**, Title of the Presentation: "Atoms and Radioactivity", May 16, 2007

* **Industrial Collaboration**

"Analysis of Vanadium contamination in catalysts samples by Thermal Neutron Activation Analysis"

Al-Bilad Catalyst Co. Ltd. Jubail Industrial City 31961, Saudi Arabia (2000).

H) LIST OF CITATIONS TO OUR JOURNAL PAPERS

Paper:

"Photoproton decay of the ^{31}P giant-resonance"

E. Kerkhove, H. Ferdinande, P. Van Otten, D. Ryckbosch, R. Van de Vyer, P. Berkvens, E. Van Camp (*Ghent State University, Belgium*)

A. Aksoy (*Istanbul Technical University, Adapazari, Turkey*)

Phys. Rev. C 31 (4) (1985) 1071-1082.

Cited by:

1) Ishkhanov BS, Kapitonov IM, Neudatchin VG, Yudin NP. *Formation of giant-resonances in light nuclei*. Physics of Particles and Nuclei 31 (6) (2000) 674-705.

- 2) Endt PM. *Energy Levels of A=21-44 nuclei (VII)*. Nucl. Phys. A 521 (1990) 1-803.
- 3) Arzibekov UR, Gabelko AS, Ishkhanov BS, Kapitonov IM, Piskarev M. *Partial photonucleon cross-sections and a semidirect mechanism for the ^{31}P dipole-resonance decay*. Sov. J. Nucl. Phys. 47 (4) (1988) 575-580
(Referred to with many compliments, Copy of the paper is available upon request)
- 4) Miyase H, Tsubota H, Kawazaoe Y, Tsukamoto T. *$^{89}\text{Y}(\gamma, p_0)$ cross section deduced from the $^{89}\text{Y}(e, p_0)$ reaction*. Phys. Rev. C 36 (5) (1987) 1792-1795
- 5) Kerkhove E, Berkvens P, Vandevyver R, Ferdinande H, Vanotten P, Ryckbosch D, Vancamp E. *Charged-Particle decay of ^{28}Si induced by quasi-monochromatic annihilation photons in the GDR*. Nucl. Phys. A 474 (2) (1987) 397-411
- 6) Miyase H, Tsubota H, Kawazoe Y, Tsukamoto T. *The $^{63,65}\text{Cu}(e, p_0)$ reactions in the giant-resonance region*. Nucl. Phys. A 457 (1) (1986) 109-124.

Paper:

"Efficiency calibration of HPGe detector in far and close geometries"

A. Aksoy,

J. Radioanal. & Nucl. Chem., Articles 169 (2) (1993) 463-469.

Cited by:

- 7) John H. Hubbell. Editor-in-Chief, Journal of Radiation Physics and Chemistry (1993)
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