

Dr. Shaikh Abdul Latif

Professor

School of Science and Engineering

EDUCATIONAL BACKGROUND

- D. Sc. (Doctor of Science) on March 25, 2000, Graduate School of Science, Tokyo Metropolitan University, Tokyo, Japan. Title of Thesis: Applicability of various nuclear techniques to the determination of meteorite compositions.
- M. Sc., 1989 in Nuclear Physics, Department of Physics, Jahangirnagar University, Savar, Dhaka, Bangladesh.
- B. Sc. (Honours), 1987 in Physics, Department of Physics, Jahangirnagar University, Savar, Dhaka, Bangladesh.

POSITIONS HELD

- Assistant Professor, Nuclear Engineering Department, Faculty of Engineering, King Abdul-Aziz University (KAU), Jeddah, Kingdom of Saudi Arabia (From January 2009 to June, 2018 on Lien from Bangladesh Atomic Energy Commission). 2009 – 2020.
- Chief Scientific Officer (Equivalent to Professor of the University), Bangladesh Atomic Energy Commission (BAEC), Dhaka, Bangladesh. 2015 – 2018.
- Principal Scientific Officer, Institute of Nuclear Science and Technology (INST), Atomic Energy Research Establishment (AERE), BAEC, Savar, Dhaka, Bangladesh. 2005 – 2015.
- Senior Scientific Officer, INST, AERE, BAEC, Savar, Dhaka, Bangladesh. 1998 – 2005.
- Scientific Officer, INST, AERE, BAEC, Savar, Dhaka, Bangladesh. 1993 – 1998.

RECENT PUBLICATIONS

1. Yarima Mudassir Hassan, Hasnah Muhd Zaid, Beh Hoe Guan, Mayeen Uddin Khandaker, D.A. Bradley, A. Sulieman and Sk. A. Latif, "Radioactivity in staple foodstuffs and concomitant dose to the population of Jigawa state, Nigeria", *Radiation Physics and Chemistry*, Available online 25 April 2020, 108945, <https://doi.org/10.1016/j.radphyschem.2020.108945>
2. Shaikh Abdul Latif, Shahrin Sharif, Syed Mohammad Hossain, Mohammad Amirul Islam, Ibrahim Mustafa Mehedi and Mahfusa Sharifa Sultana "Heavy metal contamination of surface soils in southern part of Bangladesh", *Soil and Environment*, 38(1): 112-118, 2019, Online ISSN: 2075-1141, Print ISSN: 2074-9546, DOI:10.25252/SE/19/61505.
3. Animesh Kumer Chakraborty, Md. Shuza Uddin, Md. Asad Shariff, Shaikh Abdul Latif, Md. Abdur Rashid and Mayeen Uddin Khandaker "Efficiency Calibration of γ -ray Detector for Extended Sources", *Pramana - Journal of Physics*, (2019) 92:67, ISSN (print): 0304-4289, ISSN (online): 0973-7111, DOI: <https://doi.org/10.1007/s12043-019-1735-1>, Online publications date: 26 February 2019.
4. M. A. Islam, S. Mahmud, S. M. Hossain, Sk. A. Latif, M. H. Ahsan "Elemental Analysis of Raw Materials of Nuclear Reactor Shielding to Develop Low Activation Concrete", *Journal of Nuclear Sciences*, 3(1), 7-14, 2016, p-ISSN: 2147-7736, e-ISSN: 2148-3981, DOI: 10.1501/nuclear_0000000015.

5. Md. Mashrur Zaman, Mohammad Rajib, Mohammad ZafrulKabir, Farah Deebea, Syed Masud Rana, Syed Mohammad Hossain, **Sk. Abdul Latif** and Md. Golam Rasul "Presence of uranium and thorium in zircon assemblages separated from beach sands of Cox's Bazar, Bangladesh", *Journal of Science, Technology & Environment Informatics*, 03(01), 161-169, 2016, e-ISSN: 2409-7632, www.journalbinet.com, DOI: <http://dx.doi.org/10.18801/jstei.030116.18>.

OTHER PUBLICATIONS

Articles

1. **Shaikh Abdul Latif**, Abdulraheem Abdulrahman Kinsara, Nurul Islam Molla and Mohamed Hamed Nassef "Natural radioactivity measurements in agricultural soil, fertilizer and crops in some specific areas of Kingdom of Saudi Arabia", *Radiochimica Acta*, **102(6)**, 513-522, 2014, ISSN (print) 0033-8230, ISSN (online) 2193-3405, DOI: 10.1515/ract-2013-2116, Online publications date: 14 April 2014.
2. **Sk. A. Latif**, Y. Oura, M. Ebihara and H. Nakahara "Non-destructive elemental analysis of large meteorite samples by prompt gamma-ray neutron activation analysis with the internal mono-standard method", *Analytical and Bioanalytical Chemistry*, **405:27**, 8749-8759, 2013, ISSN: 1618-2642 print/ 1618-2650 online, DOI: 10.1007/s00216-013-7331-1, Online publications date: 14 September 2013.
3. **Sk. A. Latif**, N. Sultana, M. A. Islam, M. S. Uddin, S. M. Hossain and S. M. Azharul Islam, "Studies on the mineral elements of local fruits in Bangladesh using instrumental neutron activation analysis" *Bangladesh Journal of Physics*, **13(2013)**, 87-93.
4. A. A. Kinsara, I. Shabana, **Sk. A. Latif**, M. H. Nassef and N. I. Molla, "Determination of natural radioactivity in charcoal fly ash samples of Saudi Arabia", *Bangladesh Journal of Radiation Protection*, ISSN: 1810-6595, **5 (2012)** 7-12.
5. M. A. Islam, **Sk. A. Latif**, S. M. Hossain, M. S. Uddin, J. Podder, "The Concentration and Distribution of Trace Elements in Coals and Ashes of the Barapukuria Thermal Power Plant, Bangladesh", *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, **33:5**, 392-400, 2011, ISSN: 1556-7036 print/1556-7230 online, DOI: 10.1080/15567030903030708, Online publication date: 15 November 2010.
6. S. M. A. Abdullah, M. T. Islam, S. Z. Islam, Iqbal Hossain, M. Samsuzzoha, M. D. Hossain, **S. A. Latif**, F. M. A. Islam, "Analysis of Arsenic Concentrations and Correlation in Water, Soil and Aurum by Neutron Activation Analysis Technique: A Case Study in Bagerhat, Bangladesh", *Bulletin of Environmental Contamination and Toxicology*, **85 (2010)** 301-306, ISSN: 0007-4861, DOI 10.1007/s00128-010-0075-0, 24 July 2010.
7. M. H. Chowdhury, M. S. Uddin, S. M. Hossain, **Sk. A. Latif**, M. A. Hafiz, M. A. Islam, A. K. M. Zakaria and S. M. Azharul Islam, "Experimental cross section for the $^{139}\text{La}(n,\gamma)^{140}\text{La}$ reaction at 0.0536 eV", *Radiochimica Acta*, **98 (2010)** 1-6, ISSN: 2193-3405, DOI 10.1524/ract.2010.1686.

8. A. A. Kinsara, **Sk. A. Latif**, N. I. Molla, I. Shabana, Ahmad A. Yahya and FuadNadwi, "Natural radioactivity measurement in some domestic and imported building materials in Saudi Arabia", *Bangladesh Journal of Radiation Protection* , ISSN: 1810-6595, **4** (2010) 1-10.
9. **Shaikh Abdul Latif**, D. Afroj, S. M. Hossain, M. S. Uddin, M. A. Islam, K. Begum, Y. Oura, M. Ebihara, and M. Katada, "Determination of toxic trace elements in foodstuffs, soils and sediments of Bangladesh using instrumental neutron activation analysis technique", *Bulletin of Environmental Contamination and Toxicology*, **82**(2009) 384-388, ISSN: 0007-4861, DOI 10.1007/s00128-008-9621-4, 22 November 2008.
10. M. A. Halim, R. K. Majumder, S. A. Nessa, K. Oda, Y. Hiroshiro, B. B. Saha, S. M. Hossain, **Sk. A. Latif**, M. A. Islam and K. Jinno, "Groundwater contamination with arsenic in Sherajdhikhan, Bangladesh: geochemical and hydrological implications", *Environmental Geology*, **58** (2009) 73-84, ISSN: 0943-0105, DOI-10.1007/s00254-008-1493-8, 5 August 2008.
11. A. M. M. Faisal, Rezaul Azim, Md. Mashiur Rahman, A. K. M. MoinulHaqueMeaze, S. M. Hossain, **Sk. A. Latif**, M. S. Uddin, "Elemental determination of fish samples using reactor based instrumental neutron activation analysis method", *The Chittagong University Journal of Science*, **32**(1), 113-130 (2009).
12. M. S. Uddin, M. Baba, M. Hagiwara, **Sk. A. Latif** and S. M. Qaim, "Excitation functions for the formation of some short-lived products in proton-induced reactions on silver" *RadiochimicaActa*, **96** (2008) 67-72, ISSN: 2193-3405.
13. M. S. Uddin, M. H. Chowdhury, S. M. Hossain, **Sk. A. Latif**, M. A. Hafiz, M. A. Islam, A. K. M. Zakaria, S. M. Azharul Islam, "Neutron capture cross section measurement for the $^{186}\text{W}(n,\gamma)^{187}\text{W}$ reaction at 0.0536 eV energy", *Applied Radiation and Isotopes*, **66** (2008) 1235-1239, ISSN: 0969-8043.
14. M. S. Uddin, M. H. Chowdhury, S. M. Hossain, **Sk. A. Latif**, M. A. Hafiz, M. A. Islam, A. K. M. Zakaria, S. M. Yunus, S. M. Azharul Islam, "Measurement of neutron capture cross section for the $^{71}\text{Ga}(n,\gamma)^{72}\text{Ga}$ reaction at 0.0536 eV energy", *Nuclear Instruments and Methods in Physics Research, B* **266** (2008) 3341-3345, ISSN: 0168-583X.
15. M. S. Uddin, M. H. Chowdhury, S. M. Hossain, **Sk. A. Latif**, M. A. Islam, M. A. Hafiz, S.H. Mubin, A. K. M. Zakaria S. M. Yunus, S. M. Azharul Islam "Thermal neutron capture cross-sections for the $^{152}\text{Sm}(n,\gamma)^{153}\text{Sm}$ and $^{154}\text{Sm}(n,\gamma)^{155}\text{Sm}$ reactions at 0.0536 eV energy", *Nuclear Instruments and Methods in Physics Research, B* **266** (2008) 4855-4861, ISSN: 0168-583X.
16. Mst. Khurshida Begum, M. Quamruzzaman, **Sk. A. Latif**, M. H. Ahsan, "Determination of arsenic in water samples of Sylhet region by the method of neutron activation analysis", *Shah Jalal University of Science and Technology Studies* ,**10**, No. **1**, (2008) 17-23.
17. A. K. M. Rezaul Rahman, S. M. Hossain, **Sk. A. Latif**, M. S. Uddin, M. A. Islam and M. M. Akramuzzaman, "Assesment of heavy metals in DEPZ effluent discharging area by neutron activation analysis", *Jahangirnagar Physics Studies*, **14** (2008) 37-46, ISSN: 1999-6632.

18. A. K. M. Rezaur Rahman, S. M. Hossain, **Sk. A. Latif**, M. S. Uddin, M. A. Islam, M. M. Rahman and M. M. Akramuzzaman, "A study of environmental pollution by industrial effluents using neutron activation analysis technique", *Jahangirnagar Physics Studies*, **14** (2008) 1-10, ISSN: 1999-6632.
19. M. T. Islam, S. A. Islam and **S. A. Latif**, "Detection of arsenic in water, herbal and soil samples by neutron activation analysis technique", *Bulletin of Environmental Contamination and Toxicology*, **79** (2007) 327-330, ISSN: 0007-4861, DOI 10.1007/s00128-007-9209-4, 18 July 2007.
20. **Sk. A. Latif**, M. H. K. Khan, S. M. Hossain, M. S. Uddin, K. Naher, M. A. Islam, M. A. Hafiz, M. A. Ali, S. M. Azharul Islam and M. Habibul Ahsan, "Mineral elements concentrations in formula milk powders consumed in Bangladesh", *Jahangirnagar University Journal of Science*, **30**, No. 2, (2007) 53-59, ISSN: 1022-8594.
21. S. Aktar, **Sk. A. Latif**, S. M. Hossain, M. A. Hafiz, M. S. Uddin, M. A. Islam and S. M. Azharul Islam, "A study of chromium contamination in soils of tannery area by neutron activation analysis technique", *Jahangirnagar University Journal of Science*, **30**, No. 2, (2007) 81-87, ISSN: 1022-8594.
22. M. M. Rahman, S. M. Hossain, M. A. Hafiz, **Sk. A. Latif**, K. Nahar, M. S. H. Mubin, M. A. Awal, M. N. Zaman and M. D. Hossain, "Estimation of arsenic toxicity in human hair and water by NAA method", *Bangladesh Journal of Nuclear Medicine*, **10**, No. 1 (2007) 58-62.
23. A. K. M. Harun-Ar-Rashid, M. U. Khandaker, M. N. Islam, A. K. M. M. H Meaze, **Sk. A. Latif**, M. A. Halim, K. Naher, M. N. Chowdhury, M. S. Uddin, M. A. Hafiz and M. M. Rahman, "Measurement of cross sections for the reactions $^{65}\text{Cu}(n,\alpha)^{62}\text{gCo}$, $^{65}\text{Cu}(n,p)^{65}\text{Ni}$, $^{65}\text{Cu}(n,2n)^{64}\text{Cu}$, $^{58}\text{Ni}(n,2n)^{57}\text{Ni}$ and $^{58}\text{Ni}(n,p)^{58\text{m}+g}\text{Co}$ at 14.8 MeV neutron energy", *Indian Journal of Physics* **80**(7), (2006) 737-743, ISSN: 02529262.
24. Budrunnahar, Jahirul Islam Khandaker, **Sk. A. Latif**, S. M. Hossain, M. A. Halim, Kamrunnahar and S. M. Azharul Islam, "A study of arsenic contamination in food samples by neutron activation analysis technique", *Jahangirnagar University Journal of Science*, **28** (2005) 153-159, ISSN: 1022-8594.
25. M. A. Islam, R. Ahmed, Y. S. A. Khan, **Sk. A. Latif**, S. M. Hossain and S. M. Azharul Islam, "Seasonal variation of some toxic trace metals in sediments of the Bankkhali River Estuary, Cox's Bazar", *Jahangirnagar University Journal of Science*, **28** (2005) 167-175, ISSN: 1022-8594.
26. **Sk. A. Latif**, M. A. Halim, M. S. Uddin, K. Naher, M. N. Islam, F. U. Ahmed, M. A. Islam, D. Afroj, Y. Oura, M. Ebihara and M. Katada, "Determination of toxic elements in soils and sediments of Bangladesh using instrumental neutron activation analysis (INAA)", *Journal of Nuclear and Radiochemical Sciences*, **4** (2003) 51, ISSN: 1345-2762.
27. **Sk. A. Latif**, M. A. Halim, M. N. Chowdhury, K. Naher, M. A. Hafiz, R. U. Miah, F. U. Ahmed, M. A. Islam, M. I. Hossain and M. Katada, "Determination of arsenic in groundwater and foodstuffs using instrumental neutron activation analysis (INAA)", *Journal of Nuclear and Radiochemical Sciences*, **3** (2002) 35, ISSN: 1345-2762.
28. M. S. Uddin, **Sk. A. Latif**, M. A. Halim, M. N. Islam, R. U. Miah, N. I. Molla and M. R. Zaman, "Measurement of (n,2n) reaction cross-sections on isotopes of zinc, germanium and scandium in

- neutron energy range 13.82-14.71 MeV”, *Indian Journal of Pure & Applied Physics*, **40** (2002) 533-538, ISSN: 0019-5596.
29. M. S. Rahman, Taiman Bin Kadni, **Sk. A. Latif**, A. Kuddos, A. S. Mollah, G. U. Ahmad and M. M. Hossain, “Dosimetry of high energy photon beams applying IAEA dosimetry protocol TRS-277 and HPA code of practice”, *Jahangirnagar University Journal of Science*, **25** (2002) 195-201, ISSN: 1022-8594.
30. M. S. Uddin, R. U. Miah, **Sk. A. Latif**, M. N. Islam, M. R. Zaman, M. A. Zaman and N. I. Molla, “Excitation functions of (n,p) and (n, α) reactions on the isotopes of vanadium and cobalt in neutron energy range 13.57-14.71 MeV”, *Indian Journal of Pure & Applied Physics*, **39** (2001) 487-490, ISSN: 0019-5596.
31. M. S. Uddin, **Sk. A. Latif**, M. Hossain, R. U. Miah, N. I. Molla, M. R. Zaman and M. D. Hossain, “Excitation function measurement of the $^{70}\text{Ge}(n,2n)^{69}\text{Ge}$ reaction over the neutron energy range 13.9-14.7 MeV”, *Jahangirnagar University Journal of Science*, **24** (2001) 151-157, ISSN: 1022-8594.
32. H. Nakahara, Y. Oura, K. Sueki, M. Ebihara, W. Sato, **Sk. A. Latif**, T. Tomizawa, S. Enomoto, C. Yonezawa, Y. Ito, “Some basic studies on non-destructive elemental analysis of bulky samples by PGAA”, *Journal of Radioanalytical and Nuclear Chemistry*, **244**, No. 2 (2000) 405-411, ISSN: 0236-5731.
33. T. Nakamoto, **Sk. A. Latif**, Y. Oura, M. Ebihara, “Photon activation analysis of halogens in meteorites”, *Journal of Nuclear and Radiochemical Sciences*, **1**, *Suppliment 2* (2000) 55, ISSN: 1345-2762.
34. M. S. Uddin, R. U. Miah, **Sk. A. Latif**, S. M. Hossain, N. I. Molla, M. R. Zaman and R. A. Banu, “Excitation function of neutron induced reaction $^{64}\text{Zn}(n,p)^{64}\text{Cu}$ in the energy range 13.82-14.71 MeV”, *Journal of Nuclear Science and Applications*, **9**, No. 1, 2 (2000) 27-31, ISSN: 1016-197X.
35. **Sk. A. Latif**, Y. Oura, M. Ebihara, G. W. Kallemeyn, H. Nakahara, C. Yonezawa, T. Matsue, H. Sawahata, “Prompt gamma-ray analysis (PGA) of meteorite samples, with emphasis on the determination of Si”, *Journal of Radioanalytical and Nuclear Chemistry*, **239**, No. 3 (1999) 577-580, ISSN: 0236-5731.
36. **Sk. A. Latif**, Y. Oura, M. Ebihara, H. Nakahara, and T. Ohtsuki, “Determination of halogens in meteorite and geological samples by radiochemical photon activation analysis”, *Journal of Nuclear and Radiochemical Sciences*, **1** (1999) 87, ISSN: 1345-2762.
37. G. W. Kallemeyn, M. Ebihara, and **Sk. A. Latif**, “Prompt-gamma analysis and instrumental neutron activation analysis studies of a new reduced L chondrite”, *Meteoritics and Planetary Sciences*, **33**, No. 4 (1998) A81, Online ISSN: 1945-5100.
38. **Sk. A. Latif**, R. U. Miah, S. Basunia, S. M. Hossain, A. K. Banerjee, R. C. Sinha, D. Hossain, M. Rahman and N. I. Molla, “Excitation function measurement of $^{65}\text{Cu}(n,2n)^{64}\text{Cu}$ reaction in the energy range 13.870-14.655 MeV”, *Jahangirnagar University Journal of Science*, **20** (1996) 231-238, ISSN: 1022-8594.

Conference Proceedings

1. **Sk. A. Latif**, S. M. Hossain, M. S. Uddin, M. A. Hafiz, M.A. Islam and M. S. H. Mubin, “Studies on Environmental Pollution in Bangladesh using Reactor based Neutron Activation Analysis Technique”, Proceedings of an International Conference on Research Reactors: Safe Management and Effective Utilization organized by the International Atomic Energy Agency, 5-9 November 2007, Sydney, Australia, *IAEA-CN-156, U-55/PO: Proceedings CD Series, 2008*.
2. M. A. Hafiz, Y Arafat, S. M. Hossain, **Sk. A. Latif**, K. Naher, M. A. Halim, M. S. Uddin, F. U. Ahmed, Nazma Zaman and Z. H. Zaidi “Study of Arsenic Contents in Human Hair of Contrast Sites in Bangladesh”, Proceedings of the FNCA 2006 Workshop on the Utilization of Research Reactors, 28 August–1 September 2006, Manila, Philippines, *IAEA-Conf 2007-008, September 2007, pp. 55-66*.

Presentations

1. **Sk. A. Latif**, M. A. Halim, M. S. Uddin, K. Naher, M. N. Islam, F. U. Ahmed, M. A. Islam, D. Afroj, Y. Oura, M. Ebihara and M. Katada (2003). Determination of toxic elements in soils and sediments of Bangladesh using instrumental neutron activation analysis (INAA). Presentation. The 47th symposium on radiochemistry, Osaka, Japan.
2. **Sk. A. Latif**, M. A. Halim, M. N. Chowdhury, K. Naher, M. A. Hafiz, R. U. Miah, F. U. Ahmed, M. A. Islam, M. I. Hossain and M. Katada (2002). Determination of arsenic in groundwater and foodstuffs using instrumental neutron activation analysis (INAA). Presentation. The 46th symposium on radiochemistry, Hokkaido, Japan.
3. **Sk. A. Latif**, Y. Oura, M. Ebihara, H. Nakahara, and T. Ohtsuki (1999). Determination of halogens in meteorite and geological samples by radiochemical photon activation analysis. Presentation. The 43rd symposium on radiochemistry at Tsukuba International Convention Center, Ibaraki, Japan.

HONORS AND AWARDS

- Post-Doctoral Research Fellow, Laboratory of Radioisotope Research Center, Graduate School of Science, Tokyo Metropolitan University, Japan, June 2002 to May 2004.
- Japan Government Scholarship (October 1996 - March 2000): Ministry of Education, Science, Sports and Culture (MONBUSHO) was received for Doctor of Science (D. Sc.) study.
- International Atomic Energy Agency’s (IAEA) four months fellowship was received for Radioactive Waste Management training program. The training program was successfully completed within two and half months at the Radioactive Waste Processing Facility, Center for Research of Atomic Energy in Serpong, BATAN, Jakarta, Indonesia (1st July- 15th September 1996).
- Principal Investigator of Project “Natural radioactivity measurement in agricultural soil, fertilizer and crops in some agricultural land of KSA” Grant No. (4-014/430), Deanship of Scientific Research, KAU, KSA.

Service

Involved as a Part time Teacher of the Department of Chemistry, Jahangirnagar University, Savar, Dhaka. Taught Physics course named “Electronics” in the department from April 2005 until 3rd November 2008.

TEACHING INTERESTS

Nuclear Physics, Nuclear Reactor Physics, Modern Physics, Medical and Health Physics, Radiation Protection, Radioactive Waste Management, Nuclear Radiation Detection and Measurements, Electronics, Nuclear Analytical Techniques and Basic Computer Science.

RESEARCH INTERESTS

Elemental analysis of environmental samples using reactor based instrumental neutron activation analysis, radiochemical neutron activation analysis, prompt gamma neutron activation analysis and radiochemical photon activation analysis (using 300 MeV Linear Accelerator) is the prime research interests.

Nuclear data measurements using fast neutrons (J-25 Neutron generator) and thermal neutrons based on research reactors is another field of research interest.

Assessment of environmental radioactivity using high resolution High purity germanium detector is very important due to natural and anthropogenic radioactivity. Radioactivity monitoring in food items using gamma-ray spectroscopy is special research interest. The data to be obtained from the research work will be used for calculating different health hazard indices. It is very essential to create national data base and public awareness.

PUBLICATIONS WEB LINK

[Sk. A. Latif - Google Scholar Citations](https://scholar.google.com/citations?user=ZysHMfMAAAAJ&hl=en)

scholar.google.com/citations?user=ZysHMfMAAAAJ&hl=en

[Shaikh Abdul Latif - Publications - ResearchGate](https://www.researchgate.net/profile/Shaiikh_Latif/publications)

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