

CV of Abdul Kaium

Contract:

Associate Professor, Department of Agricultural Chemistry, Sher-e-Bangla Agricultural University, Dhaka-1207, Bangladesh.

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Summary:

I am a multidisciplinary researcher with expertise in analytical chemistry, environmental toxicology, and food safety. I currently serve as an associate professor at Sher-e-Bangla Agricultural University in Bangladesh. I recently completed my postdoctoral research fellowship at Umeå University in Sweden, focusing on the ecological and bioaccumulative risks posed by micropollutants in river and marine aquatic water systems. My academic journey includes a PhD and MSc in pesticide residue and environmental toxicology from the Chinese Academy of Agricultural Sciences, as well as a BSc in agriculture. My research focuses on the detection, risk assessment, and mitigation of micropollutants, including pesticides, pharmaceuticals, PFAS, and metals, in food-water ecosystems.

Education:

<i>September 2018 – June 2022</i>	Ph.D. in Pesticide Science (Major in Pesticide residue and Environmental Toxicology), Chinese Academy of Agricultural Sciences, Beijing, China. Supervisor: Dr Zheng Youngquan & Dr Xingang Liu Thesis Title: Residue Behavior of Imidacloprid in Potato and Peanut Cultivation System and Its Dietary Risk Assessment.
<i>Sep 2015 – Jan 2018</i>	Master of Science in Pesticide Science (Major in Pesticide residue and Environmental Toxicology), Chinese Academy of Agricultural Sciences, Beijing, China. Supervisor: Dr Zheng Youngquan & Dr Xingang Liu Thesis Title: Determination of Quinoid Niclosamide (LDS) in Water, Soil, and Rice Samples by QuEChERS Extraction with UPLC-MS/MS.
<i>Jun 2012 – Jun 2015</i>	Master of Science in Agricultural Botany,

	Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
Jan 2007 – Dec 2010	Bachelor of Science in Agriculture, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

Job & Research Experience:

May 2022 – present	Associate Professor, Department of Agricultural Chemistry Sher-e-Bangla Agricultural University, Dhaka, Bangladesh	Duties and Responsibilities: Involved in academic and research supervision of master's students. I am also actively involved in various national and international research projects on environmental pollution and food safety. I have made significant contributions to various national policies and crisis management initiatives.
October 2023- September 2025	Postdoctoral research fellow, Department of Chemistry, Umeå University, Umeå, Sweden Supervisor: Dr. Jerker Fick	Duties and Responsibilities: Screening micropollutants (pesticides, pharmaceuticals, PFAS) from water and biological samples collected from South Africa and Bangladesh to evaluate their bioaccumulation and ecological risk, and remediation studies using activated carbon and other eco-friendly approaches.
May 2015 – May 2022	Assistant Professor Sher-e-Bangla Agricultural University, Department of Agricultural Chemistry Dhaka, Bangladesh	Duties and Responsibilities: Involved in academic and research supervision of Master's students. I am also actively involved in various national and international research projects on environmental pollution and food safety. I have made significant contributions to various national policies and crisis management initiatives.
May 2013 – May 2015	Lecturer Sher-e-Bangla Agricultural University, Agricultural Chemistry Dhaka, Bangladesh	Duties and Responsibilities: Involved in academic and research supervision of Master's students.

Fellowship, Scholarship & Awards:

September 2023 – August 2025	Carl Kempe Foundation Postdoctoral Fellowship Host: Department of Chemistry, Umea University, Sweden
Sep 2018 – July 2022	Bangabandhu Science & Technology PhD Fellowship Supported by the Ministry of Science & Technology of the people's republic of Bangladesh.

	Host: Institute of Plant Protection – Chinese Academy of Agricultural Sciences; Beijing, China
Sep 2015–May 2018	Chinese Government Scholarship (Master's degree scholarship) is supported by the China Scholarship Council. Host: Institute of Plant Protection – Chinese Academy of Agricultural Sciences; Beijing, China
October, 2019	Dean's Award: Sher-e-Bangla Agricultural University awarded Abdul Kaium the prestigious Dean's Award for his outstanding academic achievement during levels 3 and 4 in pursuit of a B.Sc. Ag. (Hons) degree program.

Training, course, seminar & workshop:

<i>Seminar</i>	SELAMAT & GDPPRI, China 4-7 th November, 2015	International Seminar of Food Safety and Pesticide Risk Assessment
<i>Certificate Course</i>	WCDI, WUR, The Netherlands 01/02/2021	Food Hazards
<i>Certificate Course</i>	WCDI, WUR, The Netherlands 01/02/2021	Food Sampling and Monitoring
<i>Certificate Course</i>	WCDI, WUR, The Netherlands 01/02/2021	Application of HACCP
<i>Certificate Course</i>	Precon, The Netherlands 32/12/2020	Distance Learning on Principles of Food Hygiene
<i>Certificate Course</i>	FAO/WHO; 2021	Food Safety
<i>Training Workshop</i>	IPP-CASS, Beijing, China 14/07/2021 to 28/07/2021	International Training Workshop on Advanced Methods in Green Control of Major Plant Pests
<i>Training Course</i>	WFSR, WUR, The Netherlands September 2022	Instrumental Residue Analysis of Tetracyclines in Animal Products
<i>Training Course</i>	Wageningen University & Research, June 2023	Validation of Chemical Methods for Residue Analysis
<i>Workshop Training</i>	SETAC North America 45th Annual Meeting in Fort Worth, TX, USA October, 2024	Environmental risk assessment methods for new chemical submissions: Tools and approaches under TSCA
<i>Poster Presentation</i>	SETAC North America 45th Annual Meeting in Fort Worth, TX, USA October 2024	Challenges in Water Reuse: Pharmaceutical Removal Efficiency in Durban's Wastewater Treatment Plants

Projects:

Role	Title of Projects	Sponsor /Funder
Member	Enhancing food safety, TVET, and higher education in Bangladesh	Ministry of Foreign Affairs of the Netherlands
Researcher	Do pollutants pose a risk for water reuse?	Umeå University: Umeå, SE & The Kempe Foundation
Researcher	Screening of micropollutants in the river and marine water system of Bangladesh	Umeå University: Umeå, SE & The Kempe Foundation

Thesis Supervision

Role	Title of Thesis	Degree/Year	University/Location
Co-Supervisor	Facing the forever chemicals: LC-MS analysis of PFAS from water and fish in Bangladesh	MSc-2025	Umeå University, Sweden
Co-Supervisor	Purity analysis of imidacloprid insecticide collected from Jessore district by ultra-high-performance liquid chromatography (UHPLC) with photodiode array detector	MS-2022	Sher-e-Bangla Agri Univ. Bangladesh
Co-Supervisor	Assessment of metal pollution in the crop fields adjacent to industrial areas of Kushtia and Jhenidah districts of Bangladesh	MS-2022	Sher-e-Bangla Agri Univ. Bangladesh
Co-Supervisor	Assessment of heavy metal contamination in vegetable field of Bogura district: an overview of pollution indices and risk assessment	MS-2021	Sher-e-Bangla Agri Univ. Bangladesh

Academic Contributions:

Role	Journal Name	Quantity	Publisher
Reviewer	ACS Agricultural Science & Technology	1	American Chemical Society
Reviewer	Journal of Environmental Science and Health, Part B	1	Taylor & Francis
Reviewer	Antibiotics	4	MDPI
Reviewer	Agronomy	1	MDPI
Reviewer	International Journal of Molecular Sciences		MDPI
Reviewer	International journal of environmental analytical chemistry	4	Taylor & Francis
Reviewer	Journal of plant interactions	2	Taylor & Francis
Reviewer	International journal of environmental research and public health	1	MDPI

Reviewer	Journal of environmental science and health	1	Taylor & Francis
Reviewer	Sustainability	1	MDPI

Journal Publications: (Citations: 335+, H-index: 11)

- Kaium, A.**, Jubayer, M. F., Liu, X., Zheng, Y., Islam, M. N., Begum, N., Choudhury, S., & Meftaul, I. M. (2025). Enhancing Food Safety: Processing Techniques to Remediate Pesticide Residues. In D. Mondal & M. M. Rahman (Eds.), *Food Toxicity and Safety* (pp. 37–58). Springer Nature Singapore. https://doi.org/10.1007/978-981-96-4128-4_2
- Kaium, A.**, Chi, W., Yanli, M., Liu, X., Dong, F., & Zheng, Y. (2025). Residue behaviour of imidacloprid FS formulation in peanut cultivation system in China and its dietary and ecological risk assessment. *Environ Geochem Health* 47, 35. <https://doi.org/10.1007/s10653-024-02340-5>
- Kaium, A.**, Wu, C., Man, Y., Liu, X., Dong, F., & Zheng, Y. (2024). Evaluating the Safety of Imidacloprid FS Seed Treatment Use in Potato Production : A Case Study from China. *Molecules*, 29(14), 3362. <https://doi.org/10.3390/molecules29143362>
- Kaium, A.**, Cao, J., Liu, X., Dong, F., Xu, J., Wu, X., & Zheng, Y. (2018). Validation of QuEChERS-based UPLC-MS/MS method for determination of quinoid niclosamide (LDS) residue in water, soil and rice samples. *International Journal of Environmental Analytical Chemistry*, 98(7), 644–654. <https://doi.org/10.1080/03067319.2018.1487062>
- Kaium, A.**, Cao, J., Liu, X., Dong, F., Xu, J., Wu, X., & Zheng, Y. (2019). Method Validation and Dissipation Behaviour of Dimethyl Disulphide (DMDS) in Cucumber and Soil by Gas Chromatography-Tandem Mass Spectrometry. *International Journal of Environmental Research and Public Health*, 16(22), 4493. <https://doi.org/10.3390/ijerph16224493>
- Samma S, Khan MdSI, Chowdhury MdTI, Islam MA, Fick J, **Kaium A***. Evaluating Soil-Vegetable Contamination with Heavy Metals in Bogura, Bangladesh: A Risk Assessment Approach. *Environmental Health Insights*. 2024;18. <https://doi.org/10.1177/11786302241282601>
- Kabir, S., **Kaium***, A., Chowdhury, M. T. I., Islam, M. A., Bhuiya, S. A., Ahmed, M. W., Kadir, M. N., Moniruzzaman, M., & Khan, M. S. I. (2022). Environmental pollution, ecological and human health risk assessment of heavy metals in rice farming system near the Buriganga River in Dhaka, Bangladesh. *International Journal of Environmental Analytical Chemistry*, 00(00), 1–20. <https://doi.org/10.1080/03067319.2022.2064752>
- Cao, J., Zheng, Y., **Kaium, A.**, Liu, X., Xu, J., Dong, F., Wu, X., & Zheng, Y. (2019). A comparative study of biochar, multiwalled carbon nanotubes and graphitised carbon black as QuEChERS absorbents for the rapid determination of six triazole fungicides by UPLC-MS/MS. *International Journal of Environmental Analytical Chemistry*, 99(3), 209–223. <https://doi.org/10.1080/03067319.2019.1586892>
- Wang, W., Huang, W., Mao, J., Zhang, X., Wang, H., **Kaium, A.**, & Zhang, Y. (2023). Dissipation and dietary risk assessment of cyflumetofen, bifentazate and their metabolites in citrus in China. *Cogent Food & Agriculture*, 9(1), 0–14. <https://doi.org/10.1080/23311932.2022.2157091>
- Zhang, Y., Zhou, Y., Duan, T., **Kaium, A.**, & Li, X. (2022). Dissipation and dietary risk assessment of carbendazim and epoxiconazole in citrus fruits in China. *Journal of the Science of Food and Agriculture*, 102(4), 1415–1421. <https://doi.org/10.1002/jsfa.11474>
- Habib, M., **Kaium, A.**, Khan, M. S. I., Prodhan, M. D. H., Begum, N., Chowdhury, M. T. I., & Islam, M. A. (2021). Residue level and health risk assessment of organophosphorus pesticides in eggplant and cauliflower collected from Dhaka city, Bangladesh. *Food Research*, 5(3), 369–377. [https://doi.org/10.26656/fr.2017.5\(3\).624](https://doi.org/10.26656/fr.2017.5(3).624)
- Rahman, A., **Kaium, A.**, Khan, M. S. I., Islam, M. A., Begum, N., Prodhan, M. D. H., Hossain, A., Mustafiz, S. S. B., & Chowdhury, M. T. I. (2021). Residue level and health risk assessment of organophosphorus pesticides in country bean and bitter melon collected from Cumilla, Bangladesh.

- Food Research*, 5(6), 238–246. [https://doi.org/10.26656/fr.2017.5\(6\).041](https://doi.org/10.26656/fr.2017.5(6).041)
- Hossain, A., Ahmed, M. W., Rabin, M. H., **Kaium**, A., Razzaque, A., & Zamil, S. S. (2023). Heavy metal quantification in chicken meat and egg: An emerging food safety concern. *Journal of Food Composition and Analysis*, 105876. <https://doi.org/10.1016/j.jfca.2023.105876>
- Laboni, F. A., Ahmed, M. W., **Kaium**, A., Alam, M. K., Parven, A., Jubayer, M. F., Rahman, M. A., Meftaul, I. M., & Khan, M. S. I. (2022). Heavy Metals in Widely Consumed Vegetables Grown in Industrial Areas of Bangladesh: A Potential Human Health Hazard. *Biological Trace Element Research*, 0123456789. <https://doi.org/10.1007/s12011-022-03179-6>
- Islam, M. A., Ullah, A., Habib, M., Chowdhury, T. I., Khan, S. I., **Kaium**, A., Prodhan, M., Chowdhury, T. I., Khan, S. I., Kaium, A., & Prodhan, M. (2019). Determination of major organophosphate insecticide residues in cabbage samples from different markets of Dhaka. *Asia Pacific Environmental and Occupational Health Journal*, 5(2), 30–35.

References:

<p>Dr. Jerker Fick Associate Professor, Department of Chemistry, Umea University, Umea, Sweden. Email: jerker.fick@umu.se Cell: +46702616556</p>	<p>Prof. Dr Xingang Liu Department of Pesticide Science, Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing- 100193, China Email: xgliu@ippcaas.cn, xingangl@126.com Cell: ++8613426276156</p>	<p>Prof. Dr. Mohammed Ariful Islam Department of Agricultural Chemistry, Sher-e-Bangla Agricultural University, Dhaka-1207, Bangladesh Email: arif.sau.agch@gmail.com Cell: +88 01718189343</p>
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