

Ehab Mohamed Abdel Rahman

Ph.D. | Senior Radiochemist Researcher | Nuclear Safeguards & Radioanalytical Expert

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Nationality: Egyptian



Professional Summary

Motivated and accomplished radiochemist with a Ph.D. in Nuclear and Radiochemistry, with more than ten years of experience in radiochemical analysis, environmental monitoring, nuclear safety and nuclear safeguard, looking forward to an academic opportunity contributing to the advancement of research and education in the field of nuclear and radiochemical sciences. Dedicated to encouraging innovation, mentoring students, and participating in multidisciplinary research that shall enhance nuclear safety, environmental sustainability, and scientific excellence.

Education:

Ain Shams University, Cairo, Egypt.

- **PhD Degree** of Science in Chemistry (Nuclear and Radiochemistry) at the Department of Chemistry, Faculty of Science, University of Ain Shams. 2022

Alexandria University, Alexandria, Egypt.

- **Master's Degree** of Inorganic Chemistry from the Department of Inorganic Chemistry, Faculty of Science, University of Alexandria. 2015

Al-Azhar University, Cairo, Egypt.

- **Bachelor Degree** of Special Chemistry, Department of Chemistry, Faculty of Science, Al-Azhar University, Cairo. 2008
- Major: chemistry; "**special chemistry**".

Summary of Qualifications

- Over ten years of specialized experience in radiochemistry, with a strong focus on radiochemical separation, alpha and gamma spectrometry, and nuclear analytical techniques.
- Proven expertise in radioactive waste management, nuclear safeguards, radiation protection, and nuclear fuel cycle safety, supported by hands-on work in regulatory and research environments.

- Skilled in sample collection, preparation, and analysis for both destructive and non-destructive radioactivity measurements across various environmental matrices.
 - Well-versed in international standards and protocols, including ISO/IEC 17025, with experience in applying quality control and assurance in laboratory settings.
 - Skilled in radiation protection principles, emergency preparedness planning, and radiological incident response.
 - Demonstrated ability to operate, calibrate, and maintain laboratory instrumentation including HPGe detectors, alpha spectrometers, and other radiometric tools.
 - Contributed to international training efforts, including mentoring IAEA fellows, and participated in collaborative research and development programs.
 - Strong problem-solving and communication skills, with a proven ability to work effectively in multidisciplinary and cross-cultural teams.
 - Committed to ongoing professional development and advancing the safe and innovative use of nuclear science and technology.
 - Demonstrated leadership in scientific research, publication development, and collaborative project management.
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Honours and Competitive Selections

Université Côte d'Azur, Nice, France

Decomplex Executive Training Programme – University Master Level Diploma in Decommissioning Management and Leadership for Safety 2026–2027

- Selected through an international competitive process for the Decomplex Executive Training Programme.
 - Awarded a full European Commission (INSC) scholarship.
 - Executive programme focused on decommissioning management, leadership for safety, radioactive waste management, project management, and international best practices.
 - Programme delivered in English by Université Côte d'Azur, France.
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Training and Certifications

- Comprehensive Two-Week Blended Course on Nuclear Safeguards Part 2 Hands-on Training. Dessel/Mol, Belgium. 2-6 June 2025
- ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories training that is held in the central laboratory for environmental radiation measurements, intercomparison and training (CLERMIT) 1 July to 3 July 2024.
- INSC T&T Project MC3.01/20 Training in “MANAGEMENT OF SPENT FUEL AND RADIOACTIVE WASTE” held on 3-7 June 2024 in BUDAPEST, HUNGARY.
- Condensed One-Week Online Course on Nuclear Safeguards Basics// 22nd ESARDA Course on Nuclear Safeguards and Non-Proliferation by JRC–Joint Research Centre of

the European Commission and the ESARDA Training and Knowledge Management working group. 15- 19 April 2024

- Using Environmental Isotopes to Identify Climate Changes, their Hydrological Impact, and means of Dealing with them. Organized by the Arab Atomic Energy Authority, Cairo, Egypt. 25-29 February 2024
- A Chief Scientific Investigator (CSI) for a research team as part of the International Atomic Energy Agency's (IAEA) Coordinated Research Project on 'Climate Change Challenges to Nuclear Installations,' J72007. 7 February 2024
- International Winter School on Radiochemistry 2023. Where organized by Lomonosov Moscow State University and the State Atomic Energy Corporation ROSATOM, Moscow, Russia. 11-21 December 2023
 - Topics covered:
 - Radioactive Waste Management
 - Types of Radioactive Waste
 - Classification of Radioactive Waste
 - Characterization of Radioactive Waste
 - Transportation and Storage of Radioactive Waste
 - Environmental Aspects
- EVT2204728 "2023 Training Workshop of IAEA's ALMERA Network on Advanced Topics in Radiochemistry Techniques: Lead-210 and Polonium-210", 9 to 12 October 2023
- Development of the Harmonized Operational Protocols for the Collection, Identification, and Counting of Microplastics in the Selected Matrices. RAF1010 (NUTEC Africa), under the International Atomic Energy Agency (IAEA). 6-10 August 2023
- INSC T&T Project MC3.01/20 Training in the field of EMERGENCY PREPAREDNESS AND RESPONSE "INSPECTING OF EMERGENCY PREPAREDNESS ", Location "Amman, Jordan". 22 – 26 May 2023
- ALMERA Training Workshop (virtual) on Advanced Topics in Radiochemistry Techniques: Quality Assurance (QA)/Quality Control (QC) and Integrated Quality Management for Environmental Radioanalytical Laboratories with ISO 17025 – EVT2104246. 27 June- 1 July 2022
- Trainee, Genie-2000 & Apex-Alpha Software Training Course by Canberra Packard. May 2022
- Trainee, Use of radioactive sources and radioactive materials and protection from the dangers of ionizing radiation. 9 August–10 Sept 2019

- 4-Day Dose-Response Assessment Course at Bibliotheca Alexandrina. 17–April 2017
- Trainee, In Quality education system from GOST General Organization for Surveillance Testing in January 2009.
- Trainee, Intensive training course in the concepts of occupational safety and health From GOST in January 2009.
- Trainee, In Quality Assurance from Mubarak city for scientific researches and KAIZEN Productivity and quality improvement in November 2009.

Professional Experience

Nuclear Fuel Cycle Safety Department – Egyptian Atomic Energy Authority. Nov 2021–present

- Member of the technical office for the chairman of the Egyptian Atomic Energy Authority from April 2025.
- Conduct safety assessments for nuclear fuel handling and radioactive waste disposal.
- Perform qualitative and quantitative radiochemical analyses using gamma and alpha spectrometry.
- Ensure compliance with international safety standards and protocols.
- Supervise laboratory operations related to radiochemical analysis and environmental monitoring.

Egyptian Nuclear and Radiological Regulatory Authority – Cairo, Egypt. May 2016 – Oct 2021

- Evaluated nuclear safety reports and provided regulatory oversight on radiological activities.
- Participated in emergency preparedness inspections and nuclear safeguards training.
- Conducted research on environmental impact assessment of nuclear facilities.

Kafr El Zayat Pesticides and Chemicals – Gharbia, Egypt. May 2012–May 2016

- Managed production operations, ensuring compliance with chemical safety protocols.
- Implemented quality control measures for chemical formulations

The Anglo-Egyptian Paints Company (COLORAMA) – Alexandria, Egypt

- Worked as a quality control manager, overseeing external projects and R&D laboratory activities. Dec 2008 – April 2012
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Technical Expertise

- Skilled in performing both qualitative and quantitative analyses of radiochemical samples using gamma and alpha spectrometry.

- Performed preparation and analysis of various samples for radioactivity measurements using non-destructive testing techniques
 - Proficient in the collection, preparation, and measurement of environmental samples for natural radioactivity assessment.
 - Hands-on expertise in radiochemical separation and source preparation techniques for various isotopic analyses (Uranium, Polonium and Radium Isotopes).
 - Measurement of natural radioactivity in different kinds of environmental samples using gamma and alpha detectors.
 - Applying quality control and quality assurance (QC/QA) procedures in gamma spectroscopy measurements and alpha spectrometry.
 - Demonstrated efficiency in performing radiochemical separations for a variety of sample types within radiochemistry laboratories.
 - Nuclear Fuel Cycle Safety and Regulations – Knowledge of regulatory frameworks and best practices for nuclear material handling and safety compliance.
 - Radioactive Waste Management – Skilled in classification, treatment, and safe disposal methods of radioactive waste.
 - Emergency Preparedness and Response – Familiar with radiological emergency protocols and incident response procedures.
 - Environmental Monitoring of Radioactive Materials – Performed field sampling and laboratory analysis for environmental radiation surveillance.
 - Good experience in dealing with α - spectrometry.
 - Contributed to international collaboration by training IAEA fellows in radiochemical methodologies.
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Computer and Language Skills

Computer

- Proficient in MS Office {Word, Excel, Power point, Access, outlook, MS project}
- Earned "ICDL" certificate from the UNESCO United Nation, Educational, scientific and Cultural Organization.
- Office, data base and (SQL)
- Good internet

Languages

- Arabic (Native)
 - English (Fluent)
 - German (Basic)
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Research and Publications

- **Ehab M. Abdel Rahman**, Eman A. Youssuf, Ahmed M. Shabasy, W.I. Zidan, Hanan M. Diab, Challenges of uranium determination in biological samples as a nuclear forensics tool, Applied Radiation and Isotopes, Volume 236, 2026, 112757, ISSN 0969-8043, <https://doi.org/10.1016/j.apradiso.2026.112757>.

- Sahar Ali Okasha; Abeer A. Faheim; Aida A. Salma; **Ehab M. Abdel Rahman**; Mohamed El Feky; Neveen Abed; Mahmoud R Khattab. "Radiochemical Determination of Uranium Isotopic Ratios in Abu Rushied Pegmatites, Southeastern Desert of Egypt", Egyptian Journal of Chemistry, 2026. <https://doi.org/10.21608/ejchem.2026.481325.13235>
 - **M. Abdel Rahman, E.**, Kamel, A.H., El-Subruiti, G.M. et al. Removal of thorium-232 and potassium-40 radionuclides from oil-well water using fly ash. J Radioanal Nucl Chem (2026). <https://doi.org/10.1007/s10967-026-10883-3>
 - Amani Aridi, Sajida Rmeid, Malak Yasser El Sayed, Khulud Habanjar, Gehan M. El-Subruiti, **Ehab M. Abdel Rahman**, Waleed F. Khalil, Ramadan Awad, Nourhan Mohamed Gaber. Tailoring Bi, Sn co-doped CoZnFe2O4 for Ni (II) and Cs (I) removal: Insights into characterization, adsorption activity, kinetics, thermodynamics, and non-linear isotherms. Materials Science and Engineering: B, Volume 323, Part B, 2026, 118820, ISSN 0921-5107, <https://doi.org/10.1016/j.mseb.2025.118820>.
 - **Abdel Rahman, Ehab M.**, Gehan M. El-Subruiti, Ezzat R. Atta, and Amira HE Moustafa. Removal of Copper and Nickel Ions from Aqueous Solution by Adsorption on Nanobentonite: Equilibrium, Kinetics, and Thermodynamics. ACS Omega (2025). <https://doi.org/10.1021/acsomega.4c08067>
 - **Ehab M. Abdel Rahman**; Ahmed Mohammed Elshabasy; Eman Youssuf; Ahmed R. Agha. Assessment of U-separation Using U-TEVA Column, Case Study: Reuse of U-TEVA Column., Arab Journal of Nuclear Sciences and Applications, 58, 3, 2025, 17-27. <https://doi.org/10.21608/ajnsa.2025.367577.1879>
 - Rmeid, Sajida, Amani Aridi, Khulud Habanjar, **Ehab M. Abdel Rahman**, Waleed F. Khalil, Gehan M. El-Subruiti, and Ramadan Awad. Removal of Radioactive Co (II) and Sr (II) using (Co0. 5Zn0. 5) Fe2O4 Nanoparticles Co-doped with Barium and Antimony. Ceramics International (2024). <https://doi.org/10.1016/j.ceramint.2024.11.433>
 - **Abdel Rahman, E. M.**, Hassan, S. S. M., Kamel, A. H., El-Subruiti, G. M., & Diab, H. M. (2021). Removal of Uranium-238 Ions from Contaminated Ground Water Containing NORM by Adsorption on Fly Ash Carbon: Equilibrium, Kinetic and Thermodynamic Studies. Arab Journal of Nuclear Sciences and Applications (Online), 54(2), 92-103. <https://doi.org/10.21608/ajnsa.2021.42885.1401>
 - **Rahman, EM Abdel**, G. M. El-Subruiti, A. H. Kamel, H. M. Diab, and S. S. M. Hassan. Copper and Lead Ions Removal from Aqueous Solutions Case Study: Fly Ash Carbon as Low-Cost Effective Sorbent. Egyptian Journal of Chemistry 65, no. 9 (2022): 389-404. <https://doi.org/10.21608/ejchem.2022.100256.4657>
 - Hassan, Saad SM, **Ehab M. Abdel Rahman**, Gehan M. El-Subruiti, Ayman H. Kamel, and Hanan M. Diab. Removal of Uranium-238, Thorium-232, and Potassium-40 from Wastewater via Adsorption on Multiwalled Carbon Nanotubes. ACS omega 7, no. 14 (2022): 12342-12353. <https://doi.org/10.1021/acsomega.2c00819>
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References

Prof. Dr. Hanan Mohamed Diab

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Egyptian Atomic Energy Authority (EAEA).

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Prof. Dr. Saad S M Hassan

Professor of analytical chemistry. University of Ain Shams.

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References Furnished upon request.