**Curriculum vitae**

**Hassanien Gomaa Abdien Gomaa (H. Gomaa)**



**Personal Details:**

**Name:** Hassanien Gomaa Abdien Gomaa

**E-mail:** [gomaa.h1989@gmail.com](mailto:gomaa.h1989@gmail.com), h.gomaa@azhar.edu.eg,

**Work Address:** Chemistry Department, Faculty of Science,

Al-Azhar University, Assiut, Egypt

**Telephone:** 002 01119234583

**Fax:** 002 088 2325436

**Citizenship:** Egyptian

**Gender:** Male

**Date of Birth:** August 19, 1989

**Social Status:** Married and 1 child

**Educational Qualifications:**

1. **May 2010: B.Sc. in Special Chemistry (Excellent with Honor Degree)**

Chemistry Department, Faculty of Science, Al-Azhar University, Assiut, Egypt.

1. **May 2011: Pre-Master of Chemistry, Inorganic Chemistry**

Chemistry Department, Faculty of Science, Al-Azhar University, Cairo, Egypt.

* Chemistry 521 (Electrochemical methods of analysis, Advanced molecular and atomic spectroscopy, and Selected topics of separation techniques)
* Chemistry 522(Chemical application of group theory, Coordination chemistry and determination of stability constants, and Advanced organometallic chemistry)
* Chemistry 523 (Organic synthesis, Heterocyclic chemistry, and Reaction mechanism)
* Chemistry 524 (Advanced chemical kinetics, Thermodynamic of solutions (Macromolecules), and Heterogeneous catalysis)
* Chemistry 525 (Advanced environmental chemistry, Theories and applications of thermal analysis, and Bioinorganic chemistry)
* Chemistry 526 (Inorganic reaction mechanism, Quantum chemistry, and Metallurgy)

1. **April 2012: Registered for Master of Chemical Science (Research)**

Entitled: “Chemical Studies on Preconcentration and Separation of Uranium Ions using Selective Extractants Modified Adsorbed Materials”

Awarded from Chemistry Department, Faculty of Science, Al-Azhar University, Assiut, EGYPT

1. **December 2013: Master of Science**

Chemistry Department, Faculty of Science, Al-Azhar University, Assiut, EGYPT

1. **July 2018: PH.D. of Inorganic and Analytical Chemistry**

As a joint supervision between Al-Azhar University, Assiut, EGYPT and National institute of Material Science NIMS, Tsukuba, JAPAN.

**Employment History:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **University/Institution** | **From** | **To** | **Job Title** | **Inclusive duties** | **Type of Job** |
| Al-Azhar Univ., Faculty of Science, Egypt | 2018 | Now | Lecturer | Teaching, research | Full time |
| **National institute of Material Science NIMS, Tsukuba, Japan** | **2016** | **2018** | **Researcher** | **Research** | **Full time** |
| Al-Azhar Univ., Faculty of Science, Egypt | 2013 | 2016 | Assistant Lecturer | Teaching, research | Full time |
| Al-Azhar Univ., Faculty of Science, Egypt | 2012 | 2013 | Lector | Teaching, research | Full time |

**The scientific courses that I teach from 2018 till now:**

1. Basics of Physical Chemistry
2. Principles of Analytical and Inorganic Chemistry
3. Experimental Analytical Chemistry
4. Instrumental Analysis
5. Radiation and Nuclear Chemistry
6. Basics of Nanotechnology and its chemical applications

**Published Papers:**

1. A novel fluorescent sensor for fast and highly selective turn-off detection of Fe3+ in water and pharmaceutical samples using azopyrazole-benzenesulfonamide derivative,Journal of Molecular Structure, 1225, 2021, 129175, **(Impact Factor = 2.463).**
2. Three-dimensional, Vertical Platelets of ZnO Carriers for Selective Extraction of Cobalt Ions from Waste Printed Circuit Boards, ACS Sustainable Chem. Eng., 6, 13813–13825, **2018. (Impact Factor = 7.632)**
3. Highly-efficient removal of AsV, Pb2+, Fe3+, and Al3+ pollutants from water using hierarchical, microscopic TiO2 and TiOF2 adsorbents through batch and fixed-bed columnar techniques, Journal of Cleaner Production, 182, **2018**, 910-925. **(Impact Factor =** **7.246)**
4. Extraction and recovery of Co2+ ions from spent lithium-ion batteries using hierarchical mesosponge γ-Al2O3 monolith extractors, RSC. Green Chemistry, 20, **2018**, 1841-1857. **(Impact Factor = 9.405)**
5. Ultrasensitive in-vitro monitoring of monoamine neurotransmitters from dopaminergic cells, Sensors and Actuators B: Chemical, 259, **2018**, 114-124. **(Impact Factor = 7.100)**
6. Selective, Photoenhanced Trapping/Detrapping of Arsenate Anions Using Mesoporous Blobfish Head TiO2 Monoliths, ACS Sustainable Chemistry & Engineering, 5, **2017**, 10826-10839. **(Impact Factor = 7.632)**
7. Hierarchical CN doped NiO with dual-head echinop flowers for ultrasensitive monitoring of epinephrine in human blood serum, Microchimica Acta, 184, **2017**, 4553-4562. **(Impact Factor = 6.232)**
8. Removal of Uranium from Acidic Solution Using Activated Carbon Impregnated with Tri Butyl Phosphate, Biological and Chemical Research, 3, **2016**, 313-340. (ISSN 2312-0088).
9. Extraction and Pre-concentration of Uranium Using Activated Carbon Impregnated Trioctyl Phosphine Oxide, Elixir Appl. Chem., 100, **2016**, 43462-43469. ISSN 2229-712X.
10. Book chapter under title (Recycling of nano-silica from agricultural, electronic, and industrial waste for wastewater treatment). Book title (Waste Recycling Technologies for Nanomaterials Manufacturing), 2020, Springer Nature, **under consideration**
11. Book chapter under title (Rice Husk Derived Nanomaterials for Potential Applications). Book title (Waste Recycling Technologies for Nanomaterials Manufacturing), 2020, Springer Nature, **under consideration**
12. Date seed as an efficient, eco-friendly, and cost-effective bio-adsorbent for removal of thorium ions from acidic solutions, Accepted on Aswan University Journal of Environmental Studies (AUJES), 1, 104-124, 2020. (ISSN 2735-4229).
13. Mesoscopic engineering materials for visual detection and selective removal of copper ions from drinking and wastewater sources, Journal of Hazardous Materials (**Minor revision, Impact Factor = 9.038).**
14. Mesoporous γ-Al2O3 leafy sheet segregators for selective and sensitive Gold extraction from computer motherboards, Chemical Engineering Journal, (**Major revision, Impact Factor = 10.652).**
15. 2D sulfur-doped carbon wheel like structure for selective screening of adrenaline in human fluids and pharmaceutical products, Journal of Pharmaceutical and Biomedical Analysis (**under consideration, Impact Factor = 3.209).**
16. Experimental and theoretical studies of a novel synthesized azopyrazole-benzenesulfonamide derivative as efficient abrasion resistant for Mild steel, Journal of the Iranian Chemical Society (JICS) (**under consideration, Impact Factor = 1.552).**

**Conferences:**

The Fourth International Conference on New Horizons in Basic and Applied Science (ICNHBAS, 2019) Hurghada, Egypt. Session III: New Trends in Chemistry and Its Impact on Life. (As a poster entitled “Selective extraction of ultra-trace gold from computer’s motherboard using mesoporous modified alumina γ-Al2O3”)

**Workshops:**

1. “The general course on intellectual property and patents for Egypt” 2020, through the World Intellectual Property Organization (WIPO), National Intellectual Property Academy (NIPA) and the Academy of Scientific Research in Egypt.
2. International Workshop on “Emergent Materials & Water-Energy Nexus: Concepts, Methodologies and Future Applications” through Center for Environmental and Smart Technology (ESTG), Fayoum University. Funded by Arab-German Young Academy of Sciences and Humanities (AGYA), 2019, venue: Academy of Scientific Research and Technology (ASRT).
3. “Web of Science: Confident Research Begins Here” through Clarivate Analytics Company and Al-Azhar University, 2019. The workshop topics were about web of science, journal citation reports, Endnote online and incites.
4. “Teaching Strategies and effective learning: Faculties and Institutes of Higher Education” through the National Authority for Quality Assurance and Accreditation of Education, Egypt, 2019.
5. “Characterization of Programs and Courses and Evaluation of Learning Outcomes for Faculties and Institutes of Higher Education” through the National Authority for Quality Assurance and Accreditation of Education, Egypt, 2019.
6. “External review of colleges and institutes of higher education” through the National Authority for Quality Assurance and Accreditation of Education, Egypt, 2019.
7. “Strategic planning for colleges and institutes of higher education” through the National Authority for Quality Assurance and Accreditation of Education, Egypt, 2019.
8. “Effective Presentation Skills” through Quality Assurance & Training Center, Al-Azhar University, Assiut, 2019.
9. “Student Evaluation and Exams Systems” through Quality Assurance & Training Center, Al-Azhar University, Assiut, 2019.
10. “Self-Institution Assessment” through Quality Assurance & Training Center, Al-Azhar University, Assiut, 2019.
11. “Curriculum Mapping and Course Description” through Quality Assurance & Training Center, Al-Azhar University, Assiut, 2019.
12. “Research Design Skills” through Quality Assurance & Training Center, Al-Azhar University, Assiut, 2019.
13. “Training of Trainer TOT” through STC Academy for Specialized Studies, 2014.

**Volunteer Work:**

1. **Founder and manager** of a Youtube channel, called Science Academy for Chemistry Basics, to learn chemistry basics in Arabic, please check the following links: <https://www.youtube.com/channel/UC34XzZYcnrWFy_HzyYA79kw?pbjreload=101>

<https://www.youtube.com/watch?v=XL4b1YqlUsA&list=PLqdIs61bsNqvv4DDM064g4d9zNp3M6_EU>

1. **Reviewer at** Colloid and Interface Science Communications, Elsevier (Impact Factor: 2.831)

**Awards:**

1. Master degree, entitled: “Chemical Studies on Preconcentration and Separation of Uranium Ions using Selective Extractants Modified Adsorbed Materials”, Al-Azhar University, 2013.
2. Egyptian emission as a joint supervision between Al-Azhar University, Assiut, EGYPT and National institute of Material Science NIMS, Tsukuba, JAPAN for 2 years, from April 2016 to March 2018.
3. PH.D. entitled: “Controlled Nano-Scale Designs with Hierarchal Structures for Green Environment Applications”, Al-Azhar University, 2018.

**Research Interests:**

* Water treatment from toxic and radioactive metals to produce healthy and safe water.
* Recycling of the electronic urban waste to extract the rare and precious metals using highly efficient and low-cost materials.
* Selective extraction/recovery of radioactive and rare earth elements from their sources.
* Controlling the fabrication and improvement of metallic or non-metallic nanomaterials based on their size and pores.

**Areas of expertise**

* Green chemistry
* Mining and secondary mining
* Environmental treatments: air, soil, and water
* Manufacturing of nanomaterials
* Nanotechnology and nanoscience
* Functional materials
* Materials synthesis and processing

**Language Ability**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Reading** | **Writing** | **Listening** | **Speaking** |
| **Japanese** | Non | Non | Beginner | Beginner |
| **English** | Excellent | Excellent | Very Good | Very Good |

**Personal Attributes:**

* Enjoy working in a team environment, taking on new challenges and learning new skills.
* Excellent communication and teaching skills, teaching many courses in chemistry.
* High levels of self motivation and time management skills, able to complete objectives and goals expediently, and publish new results in a timely manner.

**Computer Skills:** Office 365, Origin 9, Crystal Maker, Mendeley, Endnote X7, Photoshop CS6, Prezi, Plagiarism checker (iThenticate, and Turnitin), Chem-draw Ultra 12, Material Studio, Gaussian 09.

**My Academic Goals and Career Prospects**

1. **Personal goals such as:** 
   1. Develop my personal skills regarding to contact other people in the science and social fields.
   2. Looking at the culture of other peoples, especially the historic and advanced countries like Japan.
2. **Academic and research goals include the following:**
3. Helping mankind to find effective methods for pollution monitoring and safe environment for human health.
4. Increasing my publication rate to increase my scientific background to create new scientists from my students in the future.
5. Improve my scientific skills to provide effective leadership within my college and university.
6. The publications and outcomes of my work in Japan during a JSPS fellowship will increase my University ranking.
7. Published papers and patents will undoubtedly contribute to the development of my country, Egypt.
8. Achieve an appropriate balance between research and teaching for my students in the future.

**My supervisor:**

**Prof. Sherif El-Safty**

1. Professor of Nanoscience and Nanoengineering and Research Manager of the Center for Functional Materials at the National Institute for Materials Science (NIMS), Tsukuba-Japan.
2. Visiting professors at Faculty of Engineering and Advanced Manufacturing, University of Sunderland, UK.

**For more details and information, please check the following links:**

<https://samurai.nims.go.jp/profiles/sherif_elsafty?locale=en>

<https://www.sunderland.ac.uk/about/staff/engineering/sherif-a_el-safty>

E-mail: [sherif.elsafty@nims.go.jp](mailto:sherif.elsafty@nims.go.jp)

**Co-papers professors during my work:**

1. **Prof. Hitoshi Yamaguchi (NIMS, Japan)**
2. **Prof. Satoshi Kawada (NIMS, Japan)**
3. **Prof. Ahmad S. Alamoudi (DTRI, Saudi Arabia)**
4. **Prof. Mohamed Shenashen (NIMS, Japan)**
5. **Prof. Mohamed A. Abdelreheem (Al-Azhar University, Assiut, Egypt).**
6. **Prof. Mohamed F. Cheira (Nuclear Materials Authority of Egypt)**

**For more details about my research concern please see the following links:**

<https://www.researchgate.net/profile/Hassanien_Gomaa>

<https://scholar.google.com/citations?user=efOqh0oAAAAJ&hl=en>

<https://www.scopus.com/authid/detail.uri?authorId=57195603849>

ORCID ID: <https://orcid.org/0000-0002-7470-7741>