



Mohamed Ashraf Abdelaziz Elbindary

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ABOUT ME

Associate professor and researcher in the field of chemistry, Inorganic Chemistry Department

h-index 28, citation 2501

<https://www.scopus.com/authid/detail.uri?authorId=57188536034>

WORK EXPERIENCE

POLYMER INSTITUTE SAS – BRATISLAVA, SLOVAKIA

Website <https://polymer.sav.sk/home/>

POSTDOCTORAL RESEARCHER – 01/10/2025 – 29/12/2025

Synthesis and Physicochemical Characterization of a Chitosan-Enhanced MOF for Environmental Sensing of Heavy and Toxic Metals

HIGHER INSTITUTE OF ENGINEERING AND TECHNOLOGY – NEW DAMIETTA, EGYPT

Business or Sector Professional, scientific and technical activities | **Department** Basic science and chemical engineering

ASSOCIATE PROFESSOR AND RESEARCHER – 30/08/2025 – CURRENT

Teaching lectures

Scientific research and publishing

Administrative work

HIGHER INSTITUTE OF ENGINEERING AND TECHNOLOGY – NEW DAMIETTA, EGYPT

Business or Sector Professional, scientific and technical activities | **Department** Basic science and chemical engineering |

Address Central District - Phase 2 - In front of the Fourth District, New Damietta, Egypt | **Email** ndeti.contact@gmail.com |

Website <https://www.ndeti.edu.eg/>

LECTURER AND RESEARCHER – 19/09/2020 – 2025

Teaching lectures

Scientific research and publishing

Administrative work

HIGHER INSTITUTE OF ENGINEERING AND TECHNOLOGY – NEW DAMIETTA, EGYPT

Department Basic science and chemical engineering

ASSISTANT LECTURER – 25/02/2018 – 18/09/2020

Teaching practical courses

Scientific research and publishing

Administrative work

HIGHER INSTITUTE OF ENGINEERING AND TECHNOLOGY – NEW DAMIETTA, EGYPT

Business or Sector Professional, scientific and technical activities | **Department** Basic science and chemical engineering

DEMONSTRATOR – 01/09/2014 – 25/02/2018

Teaching practical courses
Scientific research and publishing
Administrative work

FACULTY OF SCIENCE - PORT SAID UNIVERSITY – PORT SAID, EGYPT

Business or Sector Professional, scientific and technical activities | **Department** Chemistry | **Website** <http://sci.psu.edu.eg/>

DEMONSTRATOR (PART TIME) – 2015 – 2017

Teaching practical courses
Scientific research and publishing

● EDUCATION AND TRAINING

16/05/2019 Port Said, Egypt

PHD OF SCIENCE IN CHEMISTRY Faculty of Science - Port Said University

Website <http://sci.psu.edu.eg/> | **Field of study** Inorganic Chemistry

04/12/2016 Port Said, Egypt

MSC OF SCIENCE IN CHEMISTRY Faculty of Science - Port Said University

Website <http://sci.psu.edu.eg/> | **Field of study** Inorganic Chemistry

24/11/2015 Alexandria , Egypt

PROFESSIONAL DIPLOMA IN PETROCHEMICALS Faculty of Science - Alexandria University

Website <https://sci.alexu.edu.eg/index.php/en/> | **Field of study** Petrochemical Diploma | **Final grade** GPA 3.11

21/07/2014 New Damietta, Egypt

BSC OF SCIENCE (CHEMISTRY) - VERY GOOD(THE THIRD- 82.05%) Faculty of Science - Damietta University

Website <https://www.du.edu.eg/faculty/sci/en/> | **Field of study** Special Chemistry | **Final grade** 82.05%

01/07/2012 – 31/07/2012 Damietta, Egypt

SUMMER TRAINING The Egyptian Methanex Methanol Co. SAE

Website <https://www.methanex.com/about-us/global-locations/egypt/>

14/07/2013 – 01/08/2013 Damietta, Egypt

SUMMER TRAINING The Egyptian Methanex Methanol Co. SAE

Website <https://www.methanex.com/about-us/global-locations/egypt/>

02/09/2013 – 12/09/2013 Damietta, Egypt

SUMMER TRAINING Misr Fertilizers Production Company (MOPCO)

Website <https://www.mopco-eg.com/en>

● LANGUAGE SKILLS

Mother tongue(s): **ARABIC**

Other language(s): **ENGLISH**

● SKILLS

Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access | MestReNova, MarvinSketch and ChemDraw | Origin software (data processing and analysis) | Google (Google Meet, Google Docs, Google Classroom, Google Forms, Google Drive, Google Slide); | Zoom (Meeting) | SEM, TEM, BET, XPS, XRD, FT-IR, XPS, UV-VIS, TGA, HPLC, ¹HNMR, ¹³CNMR

● PUBLICATIONS

2025

Sustainable cobalt (II) removal from wastewater using an electrospun Ag-MOF/polycaprolactone-chitosan nanofiber membrane: Optimization and regeneration performance

2025

Sustainable removal of Cd(II) using β -Cyclodextrin/Polyethylenimine hydrogel beads embedded with silver-MOFs: Synthesis, characterization, mechanism, and process optimization

2025

Efficient removal of tetracycline by VCo-layered double hydroxide encapsulated with chitosan: Optimization via Box-Behnken design, and thermodynamics

2025

Box-Behnken optimization of stimuli-responsive DOX@Ag-MOF/chitosan — Polycaprolactone nanofiber membranes for smart controlled drug delivery and multifunctional therapeutic applications

2024

Azo naringenin-based copper (II) complex as DNA binder: Synthesis, spectroscopic characterization, and diverse biological potentials

2024

Synthesis, spectroscopic characterization studies of chelating complexes and their applications as antimicrobial agents, DNA binding, molecular docking, and electrochemical studies

Write here the description...

2023

Superior adsorption and removal of industrial dye from aqueous solution via magnetic silver metal-organic framework nanocomposite

2023

Synthesis, structural characterization, antioxidant, cytotoxic activities and docking studies of schiff base Cu(II) complexes

2023

Adsorption and effective removal of organophosphorus pesticides from aqueous solution via novel metal-organic framework: Adsorption isotherms, kinetics, and optimization via Box-Behnken design

2023

Spectrophotometric and fluorometric methods for effective monitoring of rust state in boiler systems and Fe²⁺ ion in pharmaceutical samples

2023

Photocatalytic degradation of Rhodamine B dye using low-cost pyrofabricated titanium dioxide quantum dots-kaolinite nanocomposite

2023

Synthesis of novel fluorescent sensor based on a modified amino Al-MOF for rapid, sensitive, and selective detection of arsenic in aqueous solution

2023
[Highly efficient adsorption and removal bio-staining dye from industrial wastewater onto mesoporous Ag-MOFs](#)

2023
[Synthesis and application of a novel self-smart sensor based on a modified amino-functionalized Zr-metal-organic framework for rapid and selective detection of some toxic metals in wastewater](#)

2023
[A novel strategy for preparing metal-organic framework as a smart material for selective detection and efficient extraction of Pd\(II\) and Au\(III\) ions from E-wastes](#)

2023
[Experimental and statistical investigation of adsorption mechanism of toxic chromium on Al-Fe-Zn oxide nanocomposite and successful application on industrial wastewater](#)

2022
[Effective methods for removing different types of dyes - modelling analysis statistical physics treatment and DFT calculations: a review](#)

2022
[Efficiency of Fe₃O₄@ZIF-8 for the removal of Doxorubicin from aqueous solutions: equilibrium, kinetics and thermodynamic studies](#)

2022
[Low-temperature adsorption study of carbon dioxide on porous magnetite nanospheres iron oxide](#)

2022
[Highly efficient metal-organic frameworks for removal of industrial dyes from aqueous solutions](#)

2022
[Synthesis and characterization of NH₂-MIL-88\(Fe\) for efficient adsorption of dyes](#)

2022
[Adsorption of doxorubicin hydrochloride onto thermally treated green adsorbent: Equilibrium, kinetic and thermodynamic studies](#)

2022
[Efficient adsorptive removal of industrial dye from aqueous solution by synthesized zeolitic imidazolate framework-8 loaded date seed activated carbon and statistical physics modeling](#)

2022
[Metal-organic frameworks encapsulated with an anticancer compound as drug delivery system: Synthesis, characterization, antioxidant, anticancer, antibacterial, and molecular docking investigation](#)

2022
[Synthesis, characterization, DNA binding, and biological action of dimedone arylhydrazone chelates](#)

2022
[Adsorption studies of carbon dioxide and anionic dye on green adsorbent](#)

2022

Description, kinetic and equilibrium studies of the adsorption of carbon dioxide in mesoporous iron oxide nanospheres

2022

Synthesis, characterization, design, molecular docking, anti COVID-19 activity, DFT calculations of novel Schiff base with some transition metal complexes

2022

Adsorption of industrial dye from aqueous solutions onto thermally treated green adsorbent: A complete batch system evaluation

2022

Fabricating of Fe₃O₄@Ag-MOF nanocomposite and evaluating its adsorption activity for removal of doxorubicin

2022

Adsorption of industrial dye onto a zirconium metal-organic framework: synthesis, characterization, kinetics, thermodynamics, and DFT calculations

2021

Synthesis, identification and application of metal organic framework for removal of industrial cationic dyes

2021

Effective Removal of Methylene Blue From Aqueous Solution Using Metal-Organic Framework; Modelling Analysis, Statistical Physics Treatment and DFT Calculations

2021

Mesopores silica nanotubes-based sensors for the highly selective and rapid detection of Fe²⁺ ions in wastewater, boiler system units and biological samples

2021

Synthesis, characterization, DFT calculation, DNA binding and antimicrobial activities of metal complexes of dimedone arylhydrazone

2021

Effective adsorptive removal of anionic dyes from aqueous solution

2019

Synthesis, characterization and biological properties of oxovanadium(IV) complexes

2018

Synthesis, structural characterization, molecular docking and DNA binding studies of copper complexes

2016

Molecular docking, potentiometric and thermodynamic studies of azo rhodanines

2016

Adsorption of Hazardous Azorhodanine Dye from an Aqueous Solution Using Rice Straw Fly Ash

● CONFERENCES AND SEMINARS

20/11/2025 – 21/11/2025 Vienna-Austria

International Conference on Nanochemistry and Nanomaterial Synthesis (ICNNSY-25)

03/04/2021 – 06/04/2021 Egypt

The Fourth International Conference on Applied Chemistry

● RECOMMENDATIONS

Prof. Dr. Adel Zaki MSc-Supervisor

Professor of Inorganic Chemistry, Damietta University, Egypt

Email elsonbatsch@yahoo.com | **Phone** (+20) 01060081581**Prof. Dr. Abdel Ghany Shoair** PhD-Cosupervisor

Professor of Inorganic Chemistry, Damietta University, Egypt

Email Abdel_shoair@yahoo.com | **Phone** (+966) 583519716**Prof. Dr. Khaled Samir** Deputy of Higher Institute of Engineering and Technology, New Damietta, Egypt

Professor of Organic Chemistry, Higher Institute of Engineering and Technology, New Damietta, Egypt

Email khaled_samirm@yahoo.com | **Phone** (+20) 01222878456**● MANAGEMENT AND LEADERSHIP SKILLS**

Good management and leadership skills

By attending training courses in this field, such as:
course on managing centers and units of a special nature
preparing leaders
Preparation of University teacher

● COMMUNICATION AND INTERPERSONAL SKILLS

Good communication skills

The skills gained through my experience as a teaching assistant and lecturer and my interactions with my professors and colleagues.