Mohammed Ayad Al-Seady

محمد اياد السعدي

Lecturer

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EDUCATION

(22-07-2015) بكلوريوس

General Physics

University of Babylon

(14-02-2020) ماجستير

Molecular Physics

University of Babylon

RESEARCH METRICS

h-index (Scopus)	8
h-index (GS)	10
Citations (Scopus)	161
Citations (GS)	196
Documents (Scopus)	18
Documents (GS)	22

ACADEMIC TITLES

2021-12-07 — **Lecturer**

ADMINISTRATIVE POSITIONS

2021-10-15 - 2022-09-15 — **Scientific Affairs Division at the Center for Environmental Research and Studies/University of Babylon**

2020-06-01 - Present — **Member of the editorial board of Mesopotamia Environment Journal/ University of Babylon/Environmental Research and Studies Center**

PUBLICATIONS (22)

1. **Tuning the Optoelectronic and Photovoltaic Properties of Natural Chlorophyll Dye Molecules via Solvent Interaction: A Computational Insight**
   Nanomaterials 16 (6), 365, 2026 | 2026
2. **Design High Light Harvesting Device from Two-Dimension Materials: A DFT Investigation Principle**
   2025
3. **Defect and solvent engineering of optoelectronic response in 2D materials: A DFT study on graphene, silicon carbide, and boron nitride for solar cell sensitizers**
   Results in Physics, 108319, 2025 | 2025 | Cited: 4
4. **Improved light harvesting with graphene/boron nitride nano-heteroislands: a high-efficiency photosensitizer design**
   Structural Chemistry 36 (3), 1067-1080, 2025 | 2025 | Cited: 5
5. **Synergy between adsorption and bio-degradation of real wastewater polycyclic aromatic hydrocarbons (PAHs) by laccase immobilized on pineapples waste activated carbon ...**
   Journal of Water Process Engineering 76, 108124, 2025 | 2025 | Cited: 8
6. **Unveiling the potential of graphene and S-doped graphene nanostructures for toxic gas sensing and solar sensitizer cell devices: insights from DFT calculations**
   Journal of Molecular Modeling 30 (6), 191, 2024 | 2024 | Cited: 27
7. **Ethanol properties effects on its reaction with Mo-doped SnO2 clusters: a gas sensor model**
   Results in Surfaces and Interfaces 17, 100291, 2024 | 2024 | Cited: 17
8. **Temperature and humidity effects on the acetone gas sensing of pristine and Pd-doped WO3 clusters: A transition state theory study**
   Journal of Molecular Modeling 30 (7), 215, 2024 | 2024 | Cited: 12
9. **Prospective utilization of boron nitride and beryllium oxide nanotubes for Na, Li, and K-ion batteries: a DFT-based analysis**
   Journal of Molecular Modeling 29 (11), 1-20, 2023 | 2023 | Cited: 15
10. **Degradation of Indigo Dye Using Quantum Mechanical Calculations**
    Baghdad Science Journal 20 (4), 1352-1352, 2023 | 2023 | Cited: 5
11. **A Review on the Potential Applications for Cadmium Selenide and Graphene Materials**
    Journal of Sustainable Materials Processing and Management 3 (2), 50-60, 2023 | 2023 | Cited: 1

12. **Investigation the ability of pure and Al-doped graphene nano materials to detect toxic gases using first principle study**
IOP Conference Series: Earth and Environmental Science 1088 (1), 012013, 2022 | 2022 | Cited: 4

13. **Effect of metal ad-atoms on the structural, electrical, and optical properties of boron-nitride nanostructures towards optoelectronics: a DFT based study**
Egyptian Journal of Chemistry 65 (131), 745-752, 2022 | 2022 | Cited: 9

14. **Comparative Adsorption Calculations for Carbon Mono-Oxide and Hydro Cyanide Gas Molecules Interaction with Graphene Material Using Density Function Theory**
Egyptian Journal of Chemistry 65 (131), 385-391, 2022 | 2022 | Cited: 8

15. **Theoretical study on dye-sensitized solar cells using graphene quantum dot and curcumin, pahthalocyanine dyes**
IOP Conference Series: Earth and Environmental Science 1088 (1), 012012, 2022 | 2022 | Cited: 11

16. **Investigation Ability of Single Walled Carbon Nanotubes to Detection Toxic Gases Utilizing DFT Calculations**
Egyptian Journal of Chemistry 65 (6), 89-98, 2022 | 2022 | Cited: 14

17. **Study adsorption ability of pure single walled carbon nano tube to detection some toxic gases using DFT calculation**
AIP Conference Proceedings 2398 (1), 2022 | 2022 | Cited: 10

18. **Studying the adsorption energy of CO gas molecule in different nano-systems using density function theory**
Egyptian Journal of Chemistry 64 (5), 2607-2612, 2021 | 2021 | Cited: 18

19. **DFT Study of Chemical Adsorption of NO2 Gas on Graphene Nano Material**
Materials Science Forum 1039, 391-397, 2021 | 2021 | Cited: 12

20. **Investigation Ability of Two-Dimensional Nano Materials for Detection Toxic Gases**
International Journal of Emerging Trends in Engineering Research 8 (9), 1170 ..., 2021 | 2021

21. **Study Adsorption Energy of CO Gas Molecule on the Surface of Pure Graphene Nano-Ribbon using DFT Calculation**
International Journal of Innovative Science and Research Technology 6 (11 ..., 2021 | 2021

22. **Investigation adsorption mechanism of methane gas in graphene and copper doped nano-ribbon using density function theory**
Journal of Physics: Conference Series 1879 (3), 032099, 2021 | 2021 | Cited: 16