CURRICULUM VITAE

PERSONAL DATA

Name	Hani Nasser Abdelhamid
Nationality	Egyptian
Position	Assistant Professor
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EDUCATION

Year	Academic Degree	Institution
2007	B.Sc. in Chemistry	Assiut University, Egypt
2013	M.Sc. in Nanobiomedicine	National Sun-Yat Sen University, China
2027	Ph.D in Inorganic Chemistry	Stockholms University, Sweden

WORK EXPERIENCE

Period	Position	Address
2023-2024	**Director of Central Lab, Egyptian Russian University, Egypt.**	**Badr City, Cairo, Egypt**
2023- Now	**Associate Professor, Department of Chemistry, Assiut University.**	**Assiut Universit, Assiut, Egypt**
2021-2023	**Assistant Professor, The British University in Egypt**	**Shroulk City, Cairo, Egypt**
2017-2023	**Assistant Perofesssor, Assiut University**	**Assiut Universit, Assiut, Egypt**

RESEARCH INTERESTS

The research interest of Hani Abdelhamid is focused broadly on science and technology at the nanoscale and material science to push scientific boundaries in diverse areas of materials science,

chemistry, energy, environmental science, biomedicine, biotechnology, catalysis, and laser-based analytical methods. The main thrusts are below:

1) Nanotechnology: Synthesis, characterization, and applications.
2) Material Chemistry, Synthesis, characterization, and applications.
3) Metal-organic frameworks (MOFs), Synthesis, characterization, and applications.
4) Inorganic and structural chemistry.

PUBLICATIONS

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Publications

I have **186** publications in refereed journals, **5** Patents, and **30** book chapters.

Patents

1. H.-F. Wu, Judy Gopal, **H.N. Abdelhamid**, Pei-Yang Hua, Chitosan nanomagnets for effective extraction and sensitive mass spectrometric detection of pathogenic bacterial endotoxin from human urine, Taiwan, ROC, Patent applied, 2013, Mar.
2. H.-F. Wu, **H.N. Abdelhamid**, Multifunctional graphene magnetic nanosheet decorated with chitosan for highly sensitive detection of pathogenic bacteria, Taiwan patent, approved certification book (School ID 102039TW), Taiwan invention patent, No.102138937 (102/10/28 applied-104/6/17 issued), PK13231.
3. H.-F. Wu, **H.N. Abdelhamid**, Furoic as a new matrix for matrix-assisted laser desorption/ionization mass spectrometry, Taiwan (ROC) Patent applied 2013, May. No: 102040TW.
4. H.-F. Wu, **H.N. Abdelhamid**, Mefenamic acids as a new matrix for matrix-assisted laser desorption/ionization mass spectrometry, Taiwan Patent, 2016, March issued.
5. H. Zheng, **H.N. Abdelhamid**, L. Liu, W. Wan, P. Guo, X. Zou, One-pot synthesis of metal-organic frameworks with encapsulated target-molecule and their use, SU Holding, 2015.

Books and Chapters

1. **H. N. Abdelhamid***, General Methods for Detection and Evaluation of Nanotoxicity, Elsevier Book titled "Nanotoxicity: Prevention, Fundamentals and Antibacterial Applications of Nanomaterials, **2020**, 195-214, ISBN 978-0-12-819943-5.
2. **H. N. Abdelhamid***, Self-decontaminating Antimicrobial Textiles, book "Antimicrobial Textiles from Natural Resources" Elsevier, **2020**.
3. **H. N. Abdelhamid*,** Metals Linked to Alzheimer's Disease, Frontiers in Clinical Drug Research-Alzheimer Disorders, **2020**, 9, 3-00, **DOI:** 10.2174/9789811410949119090l,

eISBN: 978-981-14-1094-9, 2019, **ISBN:** 978-981-14-1093-2, **ISSN:** 2451-8743 (Print), **ISSN:** 2214-5168 (Online).

4. **H. N. Abdelhamid***, H.-F. Wu*, Graphene and Its Derivatives as Platform for High-throughput Biosensing, **2019**, Tobias Stauber (Editor), Advanced Materials Series, ISBN: 978-1-119-46959-9
5. **H. N. Abdelhamid*,** H.-F. Wu*, Strategies of Nanotechnology in Drug Delivery, Apple Academic Press, **2019**, Nanoparticulate Drug Delivery Systems, ISNB 1351137255, 9781351137256, http://www.appleacademicpress.com/nanoparticulate-drug-delivery-systems-/9781771886956.
6. **H. N. Abdelhamid*,** Smart materials in Analytical Chemistry, **2019**, 729-755, DOI:10.1002/9781119422587.ch23, Handbook of Smart Materials in Analytical Chemistry, John Wiley & Sons, Ltd.
7. **HN Abdelhamid***, H.-F. Wu*, Frontiers in Clinical Drug Research - Alzheimer Disorders, Chapter 1, Biological Mass Spectrometry for Diagnosis of Alzheimer's Disease, **2017**, Vol.6, 3-22, Bentham ebooks, eBook Reference No: 9781681083391-16-1038.
8. **HN Abdelhamid*,** H.-F. Wu*****, Ionic Liquid Matrices for Mass Spectrometry: Design, Synthesis, and Applications. In: Reedijk, J. (Ed.) Elsevier Reference Module in Chemistry, Molecular Sciences, and Chemical Engineering. Waltham, MA: Elsevier. 29-Sep-**2014** doi: 10.1016/B978-0-12409547-2.11016-9.
9. **HN Abdelhamid*,** Self-decontaminating antimicrobial textiles, Antimicrobial Textiles from Natural Resources, 2021, 259, Antimicrobial Textiles from Natural Resources, Edited by Md. Ibrahim H. Mondal, Elsevier, ISBN: 978-0-12-821485-5 (print) ISBN: 978-0-12-821486-2 (online).
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11. **H. N. Abdelhamid*,** Book: Advanced Functional Porous Materials. DOI:10.1007/978-3-030-85397-6, Chapter 23, Title: Hierarchical Porous Zeolitic Imidazolate Frameworks: Microporous to Macroporous Regime, 431-447. In: Uthaman, A., Thomas, S., Li, T., Maria, H. (eds) Advanced Functional Porous Materials. Engineering Materials. Springer, Cham. https://doi.org/10.1007/978-3-030-85397-6_14
12. **H.N. Abdelhamid*,** Quantum dots hybrid systems for Drug delivery, CH003, Hybrid Nanomaterials for Drug Delivery. 2022 Elsevier Ltd. DOI: https://doi.org/10.1016/B978-0-323-85754-3.00013-7.
13. **H.N. Abdelhamid***, Chapter 9- Functionalized Materials for Miniaturized Analytical Devices, Wiley, 2022, DOI: 10.1002/9783527827213.ch9. Miniaturized Analytical Devices: Materials and Technology; Editor(s): Suresh Kumar Kailasa, Chaudhery Mustansar Hussain.
14. M. Dowaidar, **H. N. Abdelhamid**, and Ü. Langel, Improvement of Transfection with PepFects Using Organic and Inorganic Materials, Ü. Langel (ed.), Cell-Penetrating Peptides: Methods and Protocols, Methods in Molecular Biology, vol. 2383, https://doi.org/10.1007/978-1-0716-1752-6_35, Springer Nature 2022.
15. **H.N. Abdelhamid***, Chapter 24, Polysaccharides for biomedical implants, Elsevier, 2022, Plant Polysaccharides as Pharmaceutical Excipients, 1st Edition - November 20, 2022, Editors: Amit Nayak, Md Saquib Hasnain, Dilipkumar Pal, Paperback ISBN: 9780323907804, eBook ISBN: 9780323907811
16. **H.N. Abdelhamid***, Covalent Organic Frameworks-Based Nanomaterials as Electrode Materials for Supercapacitors, Book Covalent Organic Frameworks, Edited ByTuan Anh Nguyen, Ram K. Gupta, Edition 1st Edition, 2022, CRC Press, eBook ISBN9781003206507.
17. **H.N. Abdelhamid***, Chapter 7, Carbon dots for electrochemical analytical methods, Book: Carbon Dots in Analytical Chemistry Detection and Imaging, Edited by Suresh Kumar Kailasa, Chaudhery Mustansar Hussain, Elsevier, ISBN: 978-0-323-98350-1.

https://doi.org/10.1016/B978-0-323-98350-1.00023-2

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20. **H.N. Abdelhamid*,** 3D printed Supercapacitor, Book: Handbook of Energy Materials, Springer Nature, 2022, Springer Nature Singapore Pte Ltd. 2023, R. Gupta, (ed.), Handbook of Energy Materials, https://doi.org/10.1007/978-981-16-4480-1_77-1
21. **H.N. Abdelhamid***, Alginate in Gene and Vaccine Delivery, Book: Alginate Biomaterial, Sougata Jana and Subrata Jana (Eds): 978-981-19-6936-2, 523837_1_En, (Chapter 14), Springer Nature, 2023. https://link.springer.com/chapter/10.1007/978-981-19-6937-9_14
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25. **H.N. Abdelhamid***, Characterization and modeling of drug release encapsulation materials, Book; Reference Module in Materials Science and Materials Engineering, Comprehensive Materials Processing, 2e, Elsevier, 2024, https://doi.org/10.1016/B978-0-323-96020-5.00198-9
26. **H.N. Abdelhamid***, Smart Materials for Bioimplant, Book: Surface Engineering of Biomaterials, 1st Edition, CRC Press, 2024, eBook ISBN 9781003429920.
27. **H.N. Abdelhamid*,** Chapter 7- Natural and synthetic fiber-reinforced polymer composites and their impact on aging under environmental conditions, Aging and Durability of FRP Composites and Nanocomposites, Woodhead Publishing Series in Composites Science and Engineering, 2024, Pages 171-188, https://doi.org/10.1016/B978-0-443-15545-1.00006-8.
28. **H.N. Abdelhamid*,** Advances in magnetic nanoparticle for biomedical applications, Magnetic Nanoparticles and Polymer Nanocomposites Fundamentals and Biological, Environmental and Energy Applications, Woodhead Publishing Series in Composites Science and Engineering, Elsevier, 2024, ISBN: 978-0-323-85748-2.
29. **H.N. Abdelhamid***, Book: Graphene-Based Photocatalysts, Chapter Title: Graphene-Based Photocatalysts for Solar Desalination, DOI:10.1007/978-3-031-66260-7, 2024 Springer Nature.
30. **H.N. Abdelhamid***, Environmental Impact of Nanoparticles, Book Nanobiotechnology for Sustainable Food Management, Edition 1st Edition, Imprint CRC Press, 2024, eBook ISBN 9781003514039

Publication Lists: (*Corresponding author, §Co-first authors)

2024

1. M. Sayed, A. Soliman, **H. N. Abdelhamid***, Metal-organic framework (ZIF-8) for Knoevenagel condensation and multi-components Biginelli Reaction, **Journal of Solid State Chemistry** 2024, 332, 124534.
2. **H.N. Abdelhamid***, Characterization and modeling of drug release encapsulation materials, Book; Reference Module in Materials Science and Materials Engineering, Comprehensive Materials Processing, 2e, Elsevier, 2024, https://doi.org/10.1016/B978-0-323-96020-5.00198-

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3. **H.N. Abdelhamid***, Smart Materials for Bioimplant, Book: Surface Engineering of Biomaterials, 1st Edition, CRC Press, 2024, eBook ISBN 9781003429920.
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6. Sammy Onajah, Rajib Sarkar, Md. Shafiul Islam, Marja Lalley, Kishwar Khan, Muslum Demir, **H.N. Abdelhamid*** and Ahmed A. Farghaly, Silica-Derived Nanostructured Electrode Materials for ORR, OER, HER, CO2RR Electrocatalysis, and Energy Storage Applications: A Review, *Chem. Rec.* **2024**, e202300234, DOI: 10.1002/tcr.202300234
7. Z. H. Hashem, Laila H. Abdel-Rahman, Santiago Gomez-Ruiz, **H.N. Abdelhamid***, Cerium-Organic Framework (CeOF) for hydrogen generation via the hydrolysis of $NaBH_4$, **Results in Chemistry**, 2024, 7, 101412.
8. Faisal K. Algethami, **H.N. Abdelhamid***; Heteroatoms-doped carbon dots as dual probes for heavy metal detection, Talanta 273 (2024) 125893.
9. **H.N. Abdelhamid***, Magnetic-based nanocomposites for hydrogen generation for renewable energy" from your book "Magnetic Nanoparticles and Polymer Nanocomposites", Elsevier, 2024.
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11. M. Zanaty, AH Zaki, SI El-Dek, **H.N. Abdelhamid***, Zeolitic imidazolate framework@hydrogen titanate nanotubes for efficient adsorption and catalytic oxidation of organic dyes and microplastics, **Journal of Environmental Chemical Engineering 2024**, 12, 3, 112547.
12. Zhenqiu Gao, Shaokuan Wu, Yihan Wei, Mervat Ibrahim, **H.N. Abdelhamid**, Guyu Jiang, Xuhui Sun, and Zhen Wen, Holistic to localized fabrication methods for triboelectric sensors: state -of-the -art and perspectives, **International Journal of Extreme Manufacturing**, **2024**, Accepted.
13. SM Thabet, **H.N. Abdelhamid***, SA Ibrahim, HM El-Bery*, Boosting photocatalytic water splitting of TiO_2 using metal (Ru, Co, or Ni) co-catalysts for hydrogen generation, **Scientific Reports** 2024, 14 (1), 10115.
14. Fatma El-Zahraa A. Abd El-Aziz*, **H.N. Abdelhamid***, Cerium-based metal–organic frameworks (MOFs) as a sustainable approach to mitigating environmental stress-induced intestinal ulcers in earthworms, **Applied Organometallic Chemistry**, 2024, DOI: 10.1002/aoc.7520.
15. **H.N. Abdelhamid***, Book: Graphene-Based Photocatalysts, Chapter Title: Graphene-Based Photocatalysts for Solar Desalination, DOI:10.1007/978-3-031-66260-7, 2024 Springer Nature.
16. S. Daia, H. Caoa, W. Sharmoukh, Y. Qiang, L. Zhao, Y. Chen, Y. Li, **H.N. Abdelhamid**, N. Taghaviniad*, Z. Yu*, Pure-phase two-dimensional perovskite capping layer enables high-performance and durable carbon-based photovoltaics, **Chemical Engineering Journal**, 2024.
17. **H.N. Abdelhamid***, Nanocellulose-Based Materials for Water Pollutant Removal: A Review. **Int. J. Mol. Sci**. 2024, 25, 8529.
18. **H.N. Abdelhamid***, Environmental Impact of Nanoparticles, Book Nanobiotechnology for Sustainable Food Management, Edition 1st Edition, Imprint CRC Press, 2024, eBook ISBN 9781003514039.
19. K. I Aly*, S. Mostafa Ebrahium, **H.N. Abdelhamid***, Haitham M El-Bery, Ahmed AK

Mohammed, Cheng-Wei Huang, Mohamed Gamal Mohamed*, Efficient synthesis of main chain thermosetting polybenzoxazine resin containing tert-butylcyclohexanone and diphenylmethane units for supercapacitor energy storage, European Polymer Journal, 2024, 113519.

20. AA Saddik*, **H.N. Abdelhamid***, Conjugated Tetraphenylethene-based Polymers for Supercapacitor, Polymer, 2024, 315, 127778.
21. W Sharmoukh, ZM Hassan, SG Mohamed, **H.N. Abdelhamid***, Metal-organic frameworks (UiO66-NH_2)/PEDOT-derived ZrO_2/N, S-doped carbon for supercapacitors, Journal of Energy Storage 2024, 102, 114071.

2023

22. W. Sharmoukh, **H. N. Abdelhamid***, Fenton-like Cerium Metal–Organic Frameworks (Ce-MOFs) for Catalytic Oxidation of Olefins, Alcohol, and Dyes Degradation, **Journal of Cluster Science**, 2023, https://doi.org/10.1007/s10876-022-02402-7
23. M. R. Saleh, H. M. El-Bery, **H. N. Abdelhamid***, Co@ZIF-8/TiO_2 heterojunction for green hydrogen generation, **Applied Organometallic Chemistry**, 2023, e6995.
24. **H. N. Abdelhamid***, G. A. Mahmoud*, Antifungal and Nanozyme Activities ofMetal–Organic Framework-derived CuO@C, **Applied Organometallic Chemistry**, 2023, e7011.
25. **H. N. Abdelhamid***, Dye encapsulation and one-pot synthesis of microporous–mesoporous zeolitic imidazolate frameworks for CO_2 sorption and adenosine triphosphate biosensing, **Dalton Transactions**, 2023, **52**, 2506 - 2517.
26. **H.N. Abdelhamid***, S. Sultan, Aji Mathew*, 3D Printing of Cellulose/Leaf-like Zeolitic Imidazolate Frameworks (CelloZIF-L) for Adsorption of Carbon dioxide (CO_2) and Heavy Metal Ions, **Dalton Transactions**, 2023, 52, 2988 – 2998. It was enrolled into Dalton Transactions HOT Articles 2023. Please, press to open the hyperlink.
27. A. Abdelrahiem Sadek, M. Abd-Elkareem, **H.N. Abdelhamid**, S. Moustafa, K. Hussein*, Repair of critical-sized bone defects in rabbit femurs using graphitic carbon nitride (g-C_3N_4) and graphene oxide (GO) Nanomaterials, **Scientific Reports**, 2023, 13:5404.
28. **H.N. Abdelhamid***, Alginate in Gene and Vaccine Delivery, Book: Alginate Biomaterial, Sougata Jana and Subrata Jana (Eds): 978-981-19-6936-2, 523837_1_En, (Chapter 14), Springer Nature, 2023. https://link.springer.com/chapter/10.1007/978-981-19-6937-9_14
29. **H.N. Abdelhamid***, Two-dimensional Metal-Organic Frameworks for Biosensing Applications, Book title: Inorganic Nanosystems, Theranostic Nanosystems, 2023, 2, 323-350, 2023. 10.1016/B978-0-323-85784-0.00006-6
30. **H.N. Abdelhamid***, MOFTextile: Metal-Organic Frameworks Nanosheets Incorporated Cotton Textile for Selective Vapochromic Sensing and Capture of Pyridine, **Applied Organometallic Chemistry**, 2023, 37, 5, e7078, 10.1002/aoc.7078.
31. N.A., Taha, T.A., Azab, A.A., **H.N. Abdelhamid***. ZnO-based nanocomposites for hydrogen generation via hydrolysis of Borohydride. **J Sol-Gel Sci Technol** (2023). https://doi.org/10.1007/s10971-023-06099-6
32. **H.N. Abdelhamid***, Three-dimensional (3D) Printed Supercapacitor, Handbook of Energy Materials., 10.1007/978-981-16-4480-1_77-1.
33. **H.N. Abdelhamid***, Sahar Sultan, Aji P. Mathew, Binder-free Three-dimensional (3D) printing of Cellulose-ZIF8 (CelloZIF-8) for water treatment and carbon dioxide (CO_2) adsorption, **Chemical Engineering Journal** 2023, 468, 143567.
34. M. Hamed, C. J. Martyniuk, R. E.M. Said, H. A.M. Soliman, A.E.A. Badrey, E. A. Hassan, **Hani N. Abdelhamid**, Alaa G.M. Osman, A. El-Din H. Sayed, Exposure to pyrogallol impacts the hemato-biochemical endpoints in catfish (Clarias gariepinus), Environmental Pollution, 2023, 333, 122074.

35. **H.N. Abdelhamid***, An introductory review on advanced multifunctional materials, Helyion, 2023, 9, e18060.
36. Zeinab Hussein Hashem, Laila H. Abdel-Rahman, Santiago Gómez-Ruiz, **H.N. Abdelhamid**, $NaBH_4$ Hydrolysis for Hydrogen Generation over Metal-Organic Frameworks (Cu-BTC); Sohag Journal of Science, **2023**, 8, 3, 377-383.
37. Moushira Saleh, **H. N. Abdelhamid***, Dina M. Fouad, Haitham M. El-Bery*, Enhancing photocatalytic water splitting: Comparative study of TiO2 decorated nanocrystals (Pt and Cu) using different synthesis methods, Fuel 2023, 354, 129248.
38. **H.N. Abdelhamid***, Islam M.A. Mekhemer, Abdel-Aal M. Gaber*; Metal-organic frameworks (MOFs)-derived $ZrOSO_4$@C for photocatalytic synthesis of benzimidazole derivatives, Molecular Catalysis, 2023, 548, 113418. Editor Choice Paper.

2022

39. **H. N. Abdelhamid***, A.P. Mathew*, Cellulose–metal-organic frameworks (CelloMOFs) hybrid materials and their multifaceted Applications A review, Coordination Chemistry Reviews 2022, 451, 214263. Highly Cited Papers, Web of Science, https://www.webofscience.com/wos/woscc/summary/42697b4c-c409-45a4-881e-117496376c63-0b29dc10/relevance/1
40. **H.N. Abdelhamid***; A.P. Mathew. A Review on Cellulose-based Materials for Biomedicine. Preprints 2022, 2022010035. doi: 10.20944/preprints202201.0035.v1.
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44. Ahmed I. A. Soliman, AboelMagd A. Abdel-Wahab, **H.N. Abdelhamid***, Hierarchical Porous Zeolitic Imidazolate Frameworks (ZIF-8) and ZnO@N-doped Carbon for Selective Adsorption and Photocatalytic Degradation of Organic Pollutants, *RSC Advances*, 2022, **12**, 7075 – 7084. Highly Cited Papers, Web of Science, https://www.webofscience.com/wos/woscc/summary/42697b4c-c409-45a4-881e-117496376c63-0b29dc10/relevance/1
45. **H. N. Abdelhamid***, S. A. Al Kiey, W. Sharmoukh, A high-performance hybrid supercapacitor electrode based on ZnO/nitrogen-doped carbon nanohybrid. **Appl Organomet Chem** 2022, 36 (1), e6486.
46. Ahmed F Abdel-Magied*, **H. N. Abdelhamid***, Radwa M Ashour, Le Fu, Moataz Dowaidar, Wei Xia, Kerstin Forsberg*, Magnetic Metal-Organic Frameworks for Efficient Removal of Cadmium (II), and Lead (II) from Aqueous Solution**, Journal of Environmental Chemical Engineering**, 2022, 107467. Highly Cited Papers, Web of Science, https://www.webofscience.com/wos/woscc/summary/42697b4c-c409-45a4-881e-117496376c63-0b29dc10/relevance/1
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