



**Hani Nasser Abdelhamid, PhD**

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**Publons:** <https://publons.com/researcher/1236689/hani-nasser-abdelhamid/>

**Tel:** 01029952642

## **Education**

**2020-present:** Postdoc at Department of Materials and Environmental Chemistry, Stockholm University, Sweden.

**2013-2017:** PhD from Department of Materials and Environmental Chemistry, Stockholm University, Sweden. Title "Lanthanide Metal-Organic Frameworks and Hierarchical Porous Zeolitic Imidazolate Frameworks: Synthesis, Properties, and Applications"

**2011-2013:** M.Sc. in Nanobiomedicine, National Sun-Yat Sen University, China (ROC).

**2009-2010:** Diploma in Physical Organic Chemistry-Assiut University, Egypt, Grade: 3.4 (87.71%).

**2003-2007:** B.Sc. Department of Chemistry-Assiut University- Egypt, Grade: 3.32 (84.059%)

## **Summary:**

- 12 years in chemistry research for academia.
- 6 years teaching experience in chemistry at honours/PG level.
- Co-authored >90 articles in peer-reviewed journals, 7 Book chapters, and filled 5 patents.
- Total Citation, 3884 (Jun 2021, Google Scholar).
- H-index and  $i_{10}$ -index are 39, and 97 (Google Scholar) and 35, and 88 (SCOPUS), March 2021.

## **Research Experience &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, biomedicine, biotechnology, catalysis, and laser-based analytical methods. The main thrusts are concentrated on the topics as 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.

## Work Experience

**2017-Present:** Assistant Professor, Department of Chemistry, Assiut University, Egypt

**2013-2017:** PhD, Department of Materials and Environmental Chemistry, Stockholm University, Sweden

**2013-2017:** Assistant Lecturer, Department of Chemistry, Assiut University, Egypt

**2011-2013:** Assistant research, NSYSU, ROC, China

**2009-2013:** Tutor at Department of Chemistry, Assiut University, Egypt

## Industrial Collaboration

- ❖ Camfil Group, Sweden, is a producer and developer of air filters and clean air products, Sweden: Cellulose-MOF membrane.
- ❖ ASORC - Assiut Oil Refining Company: Water purification.
- ❖ Evosmart, Egypt: Biosensors.
- ❖ Nanogat, Egypt: Nanoparticle production and Applications.

## Teaching Courses

- Inorganic Chemistry, 4 Hours per Week for 4 Months
- Phase Rule, 1 Hours per Week for 4 Months
- Molecular Orbital Theory, 2 Hours per Week for 4 Months
- Solid State Chemistry, 2 Hours per Week for 4 Months
- Coordination Chemistry, C320, 3 Hours per Week for 4 Months

## Supervision of Ph.D. students and post-doctoral fellows:

### ☒ Doctoral (PhD) Students

**2018-Present:** Ahmed Abdelrahman, Azhar University, Assiut, Egypt

**2021-Present:** Farghaly Mohamed, Azhar University, Assiut, Egypt

### ☒ Master (M.Sc) Students

**2018-Present:** Ahlam Azzam, Assiut University, Assiut, Egypt

**2018-Present:** Asmaa Mohamed, Assiut University, Assiut, Egypt

**2018-Present:** Moushiera Saleh, Assiut University, Assiut, Egypt

**2018-Present:** Safinaz Ahmed, Assiut University, Assiut, Egypt

### ☒ Bachelor (B.Sc) Students

**2018-2019:** Hesham Mohamed, Assiut University, Assiut, Egypt

**2018-2019:** Mai El-Sayed, Assiut University, Assiut, Egypt  
**2018-2019:** Marko Nabil, Assiut University, Assiut, Egypt  
**2018-2019:** Amina Mohamed, Assiut University, Assiut, Egypt

### **Membership in professional societies**

**2021-Present:** Editor of Current Chinese Science, Bentham, UAE.  
**2020-Present:** Editorial Board of Current Chinese Science, Bentham, UAE.  
**2020-Present:** Associate Editor with the Journal of Electronic Materials in Bio-inspired and bio-coupled materials, Springer Nature Switzerland.  
**2020-Present:** Editor of Recent Patents on Nanotechnology (Nanotec), Bentham, UAE.  
**2020-Present:** Associate Editor of Journal of Materials New Horizons, Universal Wisser Publisher, Singapore.  
**2020-Present:** Editorial Board of Bioengineering International  
**2020-Present:** Editorial Board of in Biointerface Research Applied Chemistry  
**2019-Present:** Reviewer at Science and Technology Development Fund, Egypt.  
**2019-Present:** Editorial Board of the New American Journal of Medicine, USA.  
**2019-Present:** Associated Editor of Current Nano-Toxicity and Prevention, Bentham, UAE.  
**2019-Present:** Editorial Board Member of SCIREA Journal of Chemistry, USA.  
**2019-Present:** Editorial Board of Current Nanomaterials, Bentham, UAE.  
**2019-Present:** Editorial Board of Current Medicinal Chemistry, Bentham, UAE.  
**2019-Present:** Scientific Committee Member in Journal of Biomedical Science.  
**2019-Present:** Associated Editor, PeerJ Inorganic Chemistry  
**2018-Present:** Associated Editor, MedCrave Group, USA.  
**2017-Present:** Editorial Board of Portico Science, Karachi, Pakistan.  
**2017-Present:** Editorial Board of Nanoscience& Nanotechnology-Asia, Bentham, UAE.  
**2017-Present:** Editorial Board of Journal of Cancer Research Forecast, Ohio, USA.  
**2017-Present:** Editorial Board of Peer Reviewed Academia Sciences (PRAS), UK.  
**2013-2016:** Berzelii Center "EXSELENT" on Porous Materials and Department of Materials and Environmental Chemistry, Stockholm University, Stockholm, Sweden.  
**2016-present:** Editor of International Journal of Global Advanced Materials & Nanotechnology, Scientific Future Group.  
**2016-present:** Editor of Open Access Journal of Pharmaceutical Research (OAJPR), MedWin Publishers.  
**2016-present:** Editorial Board of Mathews Journal of Pharmaceutical Science, Mathews International Publishers LLC, Newark, New Jersey USA.  
**2016-present:** Editorial Board of Gavin journal of Nanomedicine and Nanotechnology, Gavin Publishers, 5911 Oak Ridge Way, Lisle, IL 60532, USA.  
**2015-present:** Member of World Directory of Crystallographers and other IUCr (IUCr ID: IUCr23903)  
**2015-present:** Editor of AshEse Journal of Engineering, AshEse Visionary, UK.  
**2015-Present:** Editor of Research Ideas and Outcomes (RIO) journal, Pensoft Publishers, USA.  
**2014-Present:** Member in Swedish Chemical Society.  
**2009-Present:** Member of the Egyptian Chemical Society (ECS).  
**2009-Present:** Member in the Egyptian syndicate of scientific professions (ESSP).

## Funding

- Reintegration, Project ID 35969, Metal-Organic Frameworks for Advanced Energy-based Technologies, Science & Technology Development Fund, Egypt, 2 Million EGP, 2019.
- Pollution, Project ID 41623, Science & Technology Development Fund, Egypt, 3 Million EGP, 2020.
- CBG, Project ID 42886, Nano-Biomedical Diagnostics Laboratory, Science & Technology Development Fund, Egypt, 4.6 Million EGP, 2021.
- Imam Mohammad Ibn Saud Islamic University (IMSIU)- The Research Group Program (RGP) - Deanship of Scientific Research based in Riyadh, RG-21-09-69, Kingdom of Saudi Arabia.

## Scholarships and Awards

- **2021:** Outstanding Recognition as Reviewer in Journals such as Journals of Nanobiotechnology, Journal of Colloid and Interface Science,
- **2020:** Enrolled in 2% most influential scientists, Stanford University, USA, 2020.
- **2020:** State Encouragement Awards of Egypt.
- **2020:** The best Research award, Assiut University, Assiut.
- **2019:** Top peer reviewer, Publons, Web of Science.
- **2015:** The best 15 Inventions for Universities and Institutes, Connect Arabs, Egypt
- **2015:** Travel Grant from Berzelii Center EXSELENT on Porous Materials, Department of Materials and Environmental Chemistry, Stockholm University, Sweden
- **2013:** Scinopharm Award for Analytical Chemistry in graduate Thesis, Chinese Chemical Society
- **2013:** 1<sup>st</sup> Top ranking poster in Nanoscience.
- **2013-2017:** Stockholm scholarship for PhD degree (4 years)
- **2013-**The Phi-Tau-Phi Scholastic Honor Society of the Republic of China
- **2012/2013-** National Sun-Yat Sen University Scholarship, Republic of China ROC
- **2011/2012-** National Sun-Yat Sen University Scholarship, Republic of China ROC
- **2009-** Great Honor and two promotions during Military services in the Egyptian Army, Egypt.

## Synchrotron Measurements

**2016:** 12-18 June, DESY measurements for *in situ* powder diffraction X-ray, fluorescence, and IR, Hamburg-Kiel, Germany.

**2015:** 22-26 May, DESY measurements for *in situ* powder diffraction X-ray, Hamburg, Germany.

**2014:** Theoretical and Laboratory measurement for Extended X-ray Absorption Fine Structure (EXAFS), Illinois Institute of Technology and Argonne National Laboratory", Department of Physics, APS/IIT Summer XAFS School, USA

**2014:** Theoretical and Laboratory measurement for Extended X-ray Absorption Fine Structure (EXAFS), Uppsala-Lund university, Sweden.

## International Scientific Collaborations:

- Prof. Xiaodong Zou, Stockholm University, Sweden.
- Prof. Hui-Fen Wu, National Sun Yat-Sen University, Taiwan.
- Prof. Lars Kloo, KTH, Sweden.
- Prof. Aji Mathew, Stockholm University, Sweden.

## Publications

I have **117** publications in refereed journals, **5** Patents, and **10** 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 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 number is 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\***, Functionalized Materials for Miniaturized Analytical Devices, Wiley, **2020**
4. **H. N. Abdelhamid\***, Metals Linked to Alzheimer's Disease, Frontiers in Clinical Drug Research-Alzheimer Disorders, **2020**, 9, 3-00, DOI: 10.2174/97898114109491190901, eISBN: 978-981-14-1094-9, 2019, ISBN: 978-981-14-1093-2, ISSN: 2451-8743 (Print), ISSN: 2214-5168 (Online).

5. **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
6. **H. N. Abdelhamid\***, H.-F. Wu\*, Strategies of Nanotechnology in Drug Delivery, Apple Academic Press, **2019**, Nanoparticulate Drug Delivery Systems, ISBN 1351137255, 9781351137256, <http://www.appleacademicpress.com/nanoparticulate-drug-delivery-systems-/9781771886956>.
7. **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.
8. **H.N. 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.
9. **H.N. 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.
10. **H.N. 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).

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

**2021**

1. **H. N. Abdelhamid\***, Biointerface between ZIF-8 and Biomolecules and their Applications, **Biointerface Research in Applied Chemistry**, **2021**, 11, 1.
2. **H. N. Abdelhamid\***, A review on hydrogen generation from the hydrolysis of sodium borohydride, **International Journal of Hydrogen Energy**, **2021**, 46, 1, 726-765.  
**Most Cited Articles**, since 2021, extracted from Scopus.  
<https://www.journals.elsevier.com/international-journal-of-hydrogen-energy/most-cited-articles>
3. MS Yousef, **H. N. Abdelhamid\***, M Hidalgo, R Fathy, L Gómez-Gascón, J Dorado\*, Antimicrobial activity of silver-carbon nanoparticles on the bacterial flora of bull semen, **Theriogenology** **2021**, 161, 219-227.
4. **H. N. Abdelhamid\***, W. Sharmoukh\*, Intrinsic catalase mimicking MOFzyme for sensitive detection of hydrogen peroxide and ferric ions, **Microchemical Journal**, **2021**, 163, 105873.
5. **H. N. Abdelhamid\***, Dehydrogenation of Sodium Borohydride using Cobalt Embedded Zeolitic Imidazolate Frameworks, **Journal of Solid-State Chemistry**, **2021**, 297, 122034.
6. A. Aguilar-Sanchez, B. Jalvo, A. Mautner, V. Rissanen, K. S Kontturi, **H. N. Abdelhamid**, T. Tammelinn, A. P Mathew, Charged ultrafiltration membranes based on

- TEMPO-oxidized cellulose nanofibrils/poly (vinyl alcohol) antifouling coating, **RSC Advances** **2021**, 11 (12), 6859-6868.
7. AA Kassem, **H.N. Abdelhamid\***, DM Fouad, SA Ibrahim\*, Catalytic reduction of 4-nitrophenol using copper terephthalate frameworks and CuO@C composite, **Journal of Environmental Chemical Engineering** **2021**, 9 (1), 104401.
  8. **H.N. Abdelhamid\***, High performance and ultrafast reduction of 4-nitrophenol using metal-organic frameworks, **Journal of Environmental Chemical Engineering** **2021**, 9 (1), 104401.
  9. **H.N. Abdelhamid\***, G. Badr, Nanobiotechnology as a platform for the diagnosis of COVID-19: a review, *Nanotechnology for Environmental Engineering*, 2021, 6(1).
  10. **H.N. 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).
  11. **H.N. Abdelhamid\***, Acknowledgment of reviewers 2020, *International Journal of Hydrogen Energy*, 2021, doi: 10.1016/j.ijhydene.2020.12.072.
  12. D. Georgouvelas, **H.N. Abdelhamid**, J. Lia, U. Edlund, A. P. Mathew, All-cellulose functional membranes for water treatment: Adsorption of metal ions and catalytic decolorization of dyes, **Carbohydrate Polymers**, **2021**, 264, 118044.
  13. **H.N. Abdelhamid\***, K.H. Hussein, K.H., Graphene oxide as a carrier for drug delivery of methotrexate, **Biointerface Research in Applied Chemistry**, 2021, 11(6), pp. 14726–14735.
  14. M. Soliman, A.A. Sadek, **H.N. Abdelhamid**, K. Hussein\*, Graphene oxide-cellulose nanocomposite accelerates skin wound healing, **Research in Veterinary Science** **2021**, 137, 262-273.
  15. H. M. El-Bery, **H.N. Abdelhamid\***, Photocatalytic hydrogen generation via water splitting using ZIF-67 derived Co<sub>3</sub>O<sub>4</sub>@C/TiO<sub>2</sub>, *Journal of Environmental Chemical Engineering*, 2021, 9, 4, 105702.
  16. **H.N. Abdelhamid\***, Zeolitic Imidazolate Frameworks (ZIF-8) for Biomedical Applications: A Review, **Curr Med Chem**, 2021, doi: 10.2174/0929867328666210608143703.
  17. **H.N. Abdelhamid\***, Zeolitic imidazolate frameworks (ZIF-8, ZIF-67, and ZIF-L) for hydrogen production, **Applied Organometallic Chemistry**, 2021,

## 2020

18. **H. N. Abdelhamid\***, Mohamed N.God, Abd El-Aziz A.Said, Selective dehydrogenation of isopropanol on carbonized metal–organic frameworks, **Nano-Structures & Nano-Objects**, **2020**, 24, 100605.
19. **H. N. Abdelhamid\***, UiO-66 as a catalyst for hydrogen production via the hydrolysis of sodium borohydride, **Dalton Transactions**, **2020**, 49, 10851 – 10857.
20. H. N. Abdelhamid\*, G.A. Mahmoud, W. Sharmoukh, A cerium-based MOFzyme with multi-enzyme-like activity for the disruption and inhibition of fungal recolonization, *J. Mater. Chem. B*, 2020,8, 7548 – 7556.

**2020 Journal of Materials Chemistry B most popular articles.**

<https://pubs.rsc.org/en/journals/articlecollectionlanding?sercode=tb&themeid=6d17fc85-d214-4b8b-aefa-4e45c8d07800>

21. **H. N. Abdelhamid\***, Zinc Hydroxide Nitrate Nanosheets Conversion into Hierarchical Zeolitic Imidazolate Frameworks Nanocomposite and Their Application for CO<sub>2</sub> Sorption, **Materials Today Chemistry**, 2020, 15, 100222.
22. S. Kumaran, **H. N. Abdelhamid**, N. Hasan, H.-F. Wu\*, Cytotoxicity of palladium nanoparticle against *Aspergillus niger*, **Nanoscience-Nanotechnology-Asia**, 2020, 10, 1.
23. M. Goda<sup>§</sup>, **H.N. Abdelhamid<sup>§\*</sup>**, and A. A. Said\*, Zirconium Oxide Sulfate-Carbon (ZrOSO<sub>4</sub>@C)-derived from Carbonized UiO-66 for Selective Production of Dimethyl Ether, **ACS Appl. Mater. Interfaces**, 2020, 12, 1, 646-653.
24. **H. N. Abdelhamid\***, Salts Induced Formation of Hierarchical Porous ZIF-8 and Their Applications for CO<sub>2</sub> Sorption and Hydrogen Generation via NaBH<sub>4</sub> Hydrolysis, to **Macromolecular Chemistry and Physics**, 2020, 221, 7, 2000031.
25. **H. N. Abdelhamid\***, Hierarchical Porous ZIF-8 for Hydrogen Production via the Hydrolysis of Sodium Borohydride, **Dalton Transactions**, 2020, 49, 4416 – 4424.
26. **H.N. Abdelhamid\***, M. Dowaidar, Ü. Langel, Carbonized Chitosan Encapsulated Hierarchical Porous Zeolitic Imidazolate Frameworks Nanoparticles for Gene Delivery **Microporous and Mesoporous Materials**, 2020, 302, 110200.
27. **H.N. Abdelhamid\***, M. Dowaidar, M. Hällbrink, Ü. Langel\*, Gene Delivery Using Cell Penetrating Peptides-Zeolitic Imidazolate Frameworks, **Microporous and Mesoporous Materials**, 2020, 300, 110173.
28. **H. N. Abdelhamid\***, Nanocytotoxicity using matrix-assisted laser desorption ionization mass spectrometry, **Future Microbiology**, 2020.
29. **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 number is 978-0-12-819943-5.
30. **H. N. Abdelhamid\***, Dye encapsulated hierarchical porous zeolitic imidazolate frameworks for carbon dioxide adsorption, **Journal of Environmental Chemical Engineering** 8, 2020, 1040082.
31. A. A. Kassem, **H. N. Abdelhamid\***, D. M. Fouad, S. A. Ibrahim\*, Hydrogenation reduction of dyes using metal-organic framework-derived CuO@C, **Microporous and Mesoporous Materials**, 2020, 305, 110340.
32. Ahmed R. Abdellah, **H. N. Abdelhamid\***, Abu-Bakr A.A.M. El-Adasy, Ahmed A. Atalla, Kamal I. Aly\*, One-pot synthesis of hierarchical porous covalent organic frameworks and two-dimensional nanomaterials for selective removal of anionic dyes, **Journal of Environmental Chemical Engineering**, 2020, 8, 5, 104054.

**2019**

33. K. Hany Hussein<sup>§</sup>, **H.N. Abdelhami<sup>§\*</sup>**, X. Zou\*, H.-M. Woo\*, Ultrasonicated graphene oxide enhances bone and skin wound regeneration, **Materials Science & Engineering C**, 2019, 94, 484-492.
34. A. F. Abdel-Magied<sup>\*§</sup>, **H. N. Abdelhamid<sup>\*§</sup>**, R. M. Ashour, X. Zou and Kerstin Forsberg\*, Hierarchical Porous Zeolitic Imidazolate Framework Nanoparticles for



Efficient Adsorption of Rare-earth Elements, **Microporous and Mesoporous Materials**, 2019, 278, 175-184.

35. Sahar Sultan<sup>§</sup>, **H. N. Abdelhamid<sup>§</sup>**, X. Zou\*, Aji. P. Mathew\*, CelloMOF: Nanocellulose Enabled 3D Printing of Metal-Organic Frameworks, **Advanced Functional Materials**, 2019, 29, 1805372.
36. **H. N. Abdelhamid\***, M. Wilk-Kozubek, A. M. El-Zohry, A. Bermejo Gómez, A. Valiente, B. Martín-Matute, A.-V. Mudring\*, X. Zou\*, Luminescence Properties of a Family of Lanthanide Metal-Organic Frameworks, **Microporous and Mesoporous Materials**, 2019, 279, 400-406.
37. **H. N. Abdelhamid\***, H.-F. Wu\*, Strategies of Nanotechnology in Drug Delivery, Apple Academic Press, 2019, Nanoparticulate Drug Delivery Systems, ISBN 1351137255, 9781351137256, <http://www.appleacademicpress.com/nanoparticulate-drug-delivery-systems-/9781771886956>
38. **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.
39. Luis Valencia\*, **H. N. Abdelhamid\***, Nanocellulose leaf-like zeolitic imidazolate framework (ZIF-L) foams for selective capture of carbon dioxide, **Carbohydrate Polymers**, 2019, 213, 338-345.
40. **H. N. Abdelhamid\***, A. A. Metwally, H. M. Elbery, M. Elshazly, R. M. Hathout\*, Synthesis of CdS-modified chitosan quantum dots for the drug delivery of Sesamol, **Carbohydrate Polymers**, 2019, 214, 90-99.
41. **H. N. Abdelhamid\***, Surfactant Assisted Synthesis of Hierarchical Porous Metal-Organic Frameworks Nanosheets, **Nanotechnology**, 2019, 30 (43), 435601.
42. **H. N. Abdelhamid\***, A. M. El-Zohry, J. Cong, T. Thersleff, M. Karlsson, L. Kloo, X. Zou, Towards Implementing Hierarchical Porous Zeolitic Imidazolate Frameworks in Dye Sensitized Solar Cells, **Royal Society of Open Science**, 2019, 6 (7), 190723.
43. **H. N. Abdelhamid\***, H.-F. Wu\*, A New Binary Matrix for Specific Detection of Mercury (II) Using Matrix Assisted Laser Desorption Ionization Mass Spectrometry, **Journal of American Mass Spectrometry**, 2019,30(12), 2617-2622.
44. **H. N. Abdelhamid\***, Surface assisted laser desorption ionization mass spectrometry: A Review, **Microchimica Acta**, 2019, 186:682.
45. A.A. Kassem, **H.N. Abdelhamid\***, D. M. Fouad, S. A. Ibrahim\*, Metal-Organic Frameworks (MOFs) and MOFs-derived CuO@C for Hydrogen Generation from Sodium Borohydride, **International Journal of Hydrogen Energy**, 2019, 44, 59, 31230-31238.

## 2018

46. **H.N. Abdelhamid**, H.-F. Wu\*, Selective biosensing of *Staphylococcus aureus*, **Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**, 2018, 188, 50-56.
47. A. S. Etman<sup>§</sup>, **H. N. Abdelhamid<sup>§</sup>**, Y.-Y. Yuan, L. Wang, X. Zou\*, J. Sun\*, Facile Water-Based Strategy for Synthesizing MoO<sub>3-x</sub>: Efficient Visible Light Photocatalysts for Dye Degradation Nanosheets, **ACS Omega**, 2018, 3 (2), pp 2193–2201.

48. H. N. Abdelhamid\*, X. Zou\*, Template-Free and Room Temperature Synthesis of Hierarchical Porous Zeolitic Imidazole Framework Nanoparticles and Their Dye and CO<sub>2</sub> Sorption, **Green Chemistry**, 2018, **20**, 1074-1084.
49. H. N. Abdelhamid\*, Nanoparticle assisted laser desorption/ionization mass spectrometry for small molecule analytes, **MicrochimicaActa**, 2018,185:200.
50. H.N. Abdelhamid\*, Nanoparticles Assisted Laser Desorption/Ionization Mass Spectrometry' (Chapter 8), *Handbook of Smart Materials in Analytical Chemistry (vol. II)*, 2018, John Wiley & Sons.
51. H. N. Abdelhamid\*, Ionic Liquid-Assisted Laser Desorption/Ionization–Mass Spectrometry: Matrices, Microextraction, and Separation, **Methods Protoc.**2018, *1*(2), 23; <https://doi.org/10.3390/mps1020023>.
52. H. N. Abdelhamid\*, H.-F. Wu\*, Graphene and Its Derivatives as Platforms for MALDI-MS, **Handbook on the Graphene Materials**, 2018, Wiley- Scrivener<sup>©</sup>, USA.
53. H. E. Emama\*, H. N. Abdelhamid\*, Reda M. Abdelhameed\*, One-pot Synthesis of Self-cleaned Photoluminescent Viscose Fabric Incorporated Lanthanide-Metal-Organic Framework (Ln-MOF), **Dyes and Pigments** 159 (2018) 491–498.
54. M. Dowaidar<sup>§</sup>, H.N. Abdelhamid<sup>§\*</sup>, M. Hällbrink, X. Zou, Ü. Langel\*, Chitosan enhances gene delivery of oligonucleotide complexes with magnetic nanoparticles-cell penetrating peptide, **Journal of Biomaterials Applications**, 2018,33,3.

2017

55. H.N. Abdelhamid\*, Overview of organic matrixes for matrix assisted laser desorption/ionization mass spectrometry, **TrcAC trends in Analytical Chemistry**, 2017, 89, 68-98.
56. H.N. Abdelhamid, Y.C. Lin, H.-F. Wu, Thymine Chitosan Nanomagnets (TCTS) for Specific Capture and Biosensing of Mercury, **MicrochimicaActa**, 2017, 184 (5), 1517-1527.
57. H.N. Abdelhamid\*, H.-F. Wu\*, Frontiers in Clinical Drug Research - Alzheimer Disorders, Chapter 1, Biological Mass Spectrometry for Diagnosis of Alzheimer's Disease, 2016, Vol.6, 3-22, Bentham ebooks, eBook Reference No: 9781681083391-16-1038.
58. Y.-C. Chen, H.N. Abdelhamid, H.-F. Wu\*, Simple, direct and quantitative analysis of quinidine drug in fish tissues, **Mass Spectrometry Letter**, 2017, 8 (1), 8-13.
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