

Designation **Asst. Prof. (Dr.)**
Name **Ahmed A. Al-Tabbakh**

ADDRESSES & CONTACT DETAILS

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QUALIFICATIONS

1. **Postdoctoral fellow of the Center for Nanomaterials Research, Universiti Teknologi MARA, Malaysia 2011 – 2013, Lithium Ion Batteries.**
2. **Ph.D. in Applied Physics, University of Pune, India, May 2009.** Thesis title “Development of retarding field analyzer and its applications to study energy distribution of field emitted electrons from ZnO tetrapods and LaB₆ emitters”.
3. **M.Sc. Physics, Electron Optics, Al Nahrain University, Baghdad, Iraq, 2001.**
4. **B.Sc. Physics, Baghdad University, Baghdad, Iraq, 1998**

INDICES

Google Scholar h-index: 4 Research Gate Score: 21.12

EXPERIENCE

7April 2014 – Present Assistant Professor of Physics / Department of Physics, Al-Nahrain University.

Jan. 2010 – April 2014 Senior Lecturer at Department of Physics, Al-Nahrain University.

Nov.2011 – Oct.2013 Postdoctoral Research Fellow at the Centre for Nanomaterials Research – Universiti Teknologi MARA

Jun. – Aug. 2008 Postdoctoral fellow of the Department of Physics – University of Pune – Pune – India.

March - May 2007 Laboratory Assistant at Physics Department, University of Pune.

Sep. 2002 Established a laboratory and taught the course for general physics, electricity and mechanics for undergraduate level at Air Defense Academy, Baghdad, Iraq.

Oct. 1999 – Jan. 2001 Lecturer and Laboratory Assistant at Physics Department, Al-Nahrain University. Laboratories: Mechanics, Electric Circuits and Measurements and Computer Programming.

PUBLICATIONS (29)

1. Layth Al-Gebory, Aseel B Al-Zubaidi, **Ahmed A Al-Tabbakh**, Production of Self-Cleaning SiO₂/CNT Nanoparticles Substituted Cement Mortar, **Engineering and Technology Journal** **38(3A)**, 335-342, 2020.
2. Benchaabane Aida, Hajlaoui Mohsen, Hnainia Nissrine, **Al-Tabbakh Ahmad**, Zeinert Andeas, Bouchriha Habib, Optical properties enhancement of hybrid nanocomposites thin films based on P3HT matrix and ZnO@SiO₂ core-shell nanoparticles, **Optical Materials** **102**, 109829, 2020.
3. Shatha Riyad Ahmedizat, Aseel Basim Al-Zubaidi, **Ahmed A Al-Tabbakh**, Amine Achour, Alaa Abdul Hamead, Comparative study of erosion wear of glass fiber/epoxy composite reinforced with Al₂O₃ nano and micro particles, **Materials Today: Proceedings** **20**, 420-427, 2020.
4. **Ahmed A. Al-Tabbakh**, Principles of electron optics: volume one: basic geometrical optics & volume two: applied geometrical optics, Book Review, **Contemporary Physics** **60(1)**, 103-104, 2019, DOI:10.1080/00107514.2019.1614675
5. **Ahmed A. Al-Tabbakh**, Nilgun Karatepe, Aseel B. Al-Zubaidi, Aida Benchaabane, Natheer B. Mahmood, Crystallite size and lattice strain of lithiated spinel material for rechargeable battery by X-ray diffraction peak- broadening analysis, **International Journal of Energy Research** **43(5)**, 1-9, 2019. DOI: 10.1002/er.4390.
Impact factor 3.01
6. **Ahmed A. Al-Tabbakh**, The behavior of the Fowler–Nordheim plot for ZnO–Cu virtual emitter arrays, **Indian J. Phys.** **2018**, DOI 10.1007/s12648-018-1276-3.
7. **Ahmed A. Al-Tabbakh**, Field electron emission area revisited: an integrated method for the area extraction model, **Turkish Journal of Physics** **42**, 27- 32, 2018.
DOI:10.3906/z-1705-7.
8. Adawiya J. Haider, **Ahmed A. Al-Tabbakh**, Aseel B. Al-Zubaidi, Rusul A. Rsool, Preparation and characterization of LiCo_{0.5}Ni_{0.45}Ag_{0.05}O₂ Cathode material for lithium–ion battery, **Journal of Materials Science: Materials in Electronics** **29 (15)**, 13277–13285, 2018, <https://doi.org/10.1007/s10854-018-9451-z>. **Impact Factor 2.324**
9. Adawiya J. Haider, Rusul Abed Al-Rsool, **Ahmed A. Al-Tabbakh**, Abdul Nasser M. Al-Gebori, Aliaa Mohamed, Structural, morphological and optical properties of LiCo_{0.5}Ni_{0.45}Ag_{0.05}O₂ thin films, **AIP Conference Proceedings** **1968**, 020001, 2018, doi: 10.1063/1.5039160.
10. **Ahmed A. Al-Tabbakh**, Symmetry in crystallography: understanding the international tables, Book Review, **Contemporary Physics**, **58**, 371, 2017, DOI:10.1080/00107514.2017.1371232

11. **Ahmed A. Al-Tabbakh**, Microscopy: A very short introduction, Book Review, **Contemporary Physics** 58, 2017, DOI: [10.1080/00107514.2017.1291721](https://doi.org/10.1080/00107514.2017.1291721)
12. **Ahmed A. Al-Tabbakh**, Norlida Kamarulzaman, An Innovative Method to Observe Rate Capability of Li-Ion Battery Composed of Spinel Cathode Material, **Journal of Energy Storage** 3, 36–42, 2015.
13. **Ahmed A. Al-Tabbakh**, Fowler-Nordheim Plot Characteristics for ZnO Virtual Field Emitter Array, **Philosophical Magazine** 95(26), 2839 – 2850, 2015. DOI: [10.1080/14786435.2015.1083133](https://doi.org/10.1080/14786435.2015.1083133). (2015) **Impact Factor 1.825**.
14. **Ahmed A. Al-Tabbakh**, Aseel B. Al-Zubaidi, Norlida Kamarulzaman, “Correlating capacity and Li content in layered material for Li ion battery using XRD and particle size distribution measurements”, **India Journal of Physics** 90 (3), 297-305, 2016. DOI [10.1007/s12648-015-0748-y](https://doi.org/10.1007/s12648-015-0748-y), (2016). **Impact Factor 1.337**.
15. **Ahmed A. Al-Tabbakh**, Norlida Kamarulzaman, Aseel B. Al-Zubaidi, Synthesis and properties of a spinel cathode material for lithium ion battery with flat potential plateau, **Turkish Journal of Physics** 39, 187 – 198, 2015.
16. **Ahmed A. Al-Tabbakh** and Norlida Kamarulzaman, “Evaluation of the electrochemical capacity of spinel $\text{Li}_{1.0348}\text{Mn}_{1.9152}\text{Fe}_{0.0494}\text{O}_4$ compound from combined X-ray diffraction and particle size distribution measurements, **Journal of Solid State Electrochemistry** 18, 2411 – 2418, 2014, DOI: [10.1007/s10008-014-2486-z](https://doi.org/10.1007/s10008-014-2486-z). **Impact Factor: 2.446, 3 Citations**.
17. **Ahmed A. Al-Tabbakh**, M. A. More, Dilip. S. Joag, Imtiaz S. Mulla and Vijayamohan K. Pillai, “The Fowler – Nordheim Plot Behavior and Mechanism of Field Electron Emission from ZnO Tetrapod Structures”, **ACS NANO** 4 (10), 5585–5590, 2010. **Impact Factor: 12.03, 52 Citations**.
18. **Ahmed A. Al-Tabbakh**, Mahendra A. More, Dilip S. Joag, Niranjana S. Ramgir, Imtiaz S. Mulla and Vijayamohan K. Pillai, “Energy Analysis of Field Emitted Electrons from a ZnO Tetrapod” **Applied Physics Letters** 90, 162102, 2007. **Impact Factor: 3.52, 20 Citations**.
19. Ahmad K. Ahmad, Sabah M. Juma and **Ahmed A. Al-Tabbakh**, “Computer Aided Design of an Electrostatic FIB System”, **Indian Journal of Physics B**, Vol. 76(6), pp 711-714, 2002. **Impact Factor: 1.785, 4 Citations**.
20. **Ahmed A. Al-Tabbakh**, "A fresh look at thermal field emission from tungsten tip", **Turkish Journal of Physics** 36, 271-278, 2012. **1 Citation**.
21. **Ahmed A. AL-Tabbakh**, M. A. More, D. S. JOAG, " Development and Utilization of a Retarding Analyzer for Field Emission Investigation of LaB6/W Emitter", **Turkish Journal of Physics** 37, 219-228, 2013.

22. F. Jamali Sheini¹, **Ahmed A. Al-Tabbakh**, D. S. Joag, M. A. More, “Field Emission Investigation of as-Synthesized Cu/Zno Nanostructure Films”, **Iranian Physical Journal**, 2-4, 1-5, **2009**.
23. Ahmad K. Ahmad, Fadhil A. Ali, **Ahmed A. Al-Tabbakh**, Sabah M. Juma, Computer aided design of a magnetic lens using a combined dynamic programming and artificial intelligence technique, **Iraqi Journal of Applied Physics** 10(1), 33-37, **2014**.
24. **Ahmed A. Al-Tabbakh**, “Optimization of Ion Beam System Using the Inverse Problem Procedure”, DAE-BRNS-PSI Symposium on Ion Beam Technology and Applications, September 19-20, **2007**, Bhabha Atomic Research Centre, Trombay, Mumbai – 400085, India.
25. Development of Analyzer for Field Electron Energy Spectroscopy; An Integrated Guide for Analyzer Fabrication and Utilization, LAMBERT academic publication, Germany **2013 (Book Publication)**.
26. Ahmad K. Ahmad, Sabah M. Juma and **Ahmed A. Al-Tabbakh**, “Simulation of an Electrostatic FIB System”, European Simulation Symposium, Marseille, France **2001**.
27. Aseel B. Al-Zubaidi, **Ahmed A. Al-Tabbakh**, Hanaa A. Al-Qaessy, Ragad N. Al-Kaseey, **Engineering and Technology Journal** 32(B), 519 – 532, **2013**.
28. Aseel B. Al-Zubaidi, **Ahmed A. Al-Tabbakh**, Ragad O. Abbas, Nazar J. Riza, Mechanical and Thermal Properties of Cockles Shell Cementing Material, **Iraqi Journal of Physics** 13(26), 107-111, **2015**.
29. Ahmad K. Ahmad, **Ahmed A. Al-Tabbakh** and Sabah M. Juma, “Optical Properties of Two-Interval Spline Electrostatic Lens Model”, Conference of Arab Science and Technology, Syria **2002**.

CONFERENCES AND SEMINARS

- TWAS 14th General Conference and 28th General Meeting, 27 – 29 November 2018, Trieste, Italy. (Poster Presentation)
- First International Conference on Current Nanotechnology and its Applications, Jordan University of Science and Technology, **Irbid, Jordan 10-12 April 2018** (Invited speaker).
- Workshop on Materials Science and Technology, The University of Jordan, **Amman, Jordan, 8-9 April 2018** (Invited speaker and member of review committee of postgraduate studies).

- Workshop on Scientific Refugees: Transnational Resources, **13-17 March 2017, Trieste, Italy** (Invited speaker).
- TWAS 27th General Meeting, 13 – 18 Nov. 2016, **Kigali Rwanda** (Poster presentation).
- Energy Materials Nanotechnology EMN Meeting on Batteries, 21 – 25 February 2016, Orlando, Florida, USA. (**Unattended poster presentation**)
- TWAS 13th General Conference & 26th General Meeting at the Austrian Academy of Sciences (OeAW) 18 – 21 Nov. 2015, **Vienna, Austria**. (Oral and poster presentations).
- The 5th International Scientific Conference on Nanotechnology and Advanced Materials and their Applications (ICNAMA 2015), Nanotechnology and Advanced Materials Research Center, University of Technology, **Baghdad, Iraq**.
- The 1st International Conference on Physics for Sustainable Development, 28 – 30 October 2014, Al-Nahrain University, **Baghdad, Iraq**. (*Oral presentation*)
- Energy Materials and Nanotechnology (EMN) Spring Meeting, 27 Feb. – 2 Mar. 2014, **Las Vegas, USA**. (*Invited talk*)
- The 4th International Scientific Conference on Nanotechnology and Advanced Materials and their Applications (ICNAMA 2013), 3-4 Nov. 2013, University of Technology, **Baghdad, Iraq**. (*Oral presentation*)
- DAE-BRNS-PSI Symposium on Ion Beam Technology and Applications (SIBTA), Power Beam – 07 19-21 Sep. 2007, Multipurpose Hall, Training School Hostel, Anushaktinagar, **Mumbai – 400094, India**.
- National Workshop on Plasma and Laser Processing of Advanced Materials, Department of Physics, University of Pune, **Pune, India**, 7-9 November 2006.
- Poster Presentation “Enhanced Field Emission Characteristics of Novel ZnO Multipod Nanostructures” in absentia, presented by Prof. D.S. Joag at Joint 19th International Vacuum Nanoelectronics Conference and 50th International Field Emission Symposium, Guilin, CHINA, Organized by Sun Yat-sen University, July 17 – 20, 2006
- Raman Memorial Conference, Department of Physics, University of Pune, **Pune, India** 2006.

- National Workshop on Advanced Techniques for Characterization of Nanomaterials (XRD, SEM/EDS, SPM), Department of Physics, University of Pune, **Pune, India**, June 28 – July 2, 2005.
- Raman Memorial Conference, Department of Physics, University of Pune, **Pune, India**, 2005

AWARDS

- Al-Nahrain University Prize for Best Published Paper in Pure Sciences **2019**.
- Al-Nahrain University Prize for Best Published Paper in Pure Sciences **2016**.
- The world Academy of Science (TWAS) Young Affiliate Fellow **2015 – 2019**.
- Postdoctoral Position – Centre for Nanomaterials Research – Universiti Teknologi MARA – Malaysia, Nov. 2011 – Oct. **2013**.
- Postdoctoral fellowship (UGC-Dr. D. S. Kothari fellowship – India **2008**.
- Best Paper Award at the DAE-BRNS-PSI Symposium on Ion Beam Technology and Applications, Power Beam 07, BARC, Mumbai, September **2007**.
- Best oral presentation at Raman Memorial Conference 2006, Department of Physics, University of Pune **2006**.
- Indian Council for Cultural Relations (ICCR) Research Scholarship, **2002-2007**.

SKILLS

- Synthesis and Characterization of nanomaterials for energy storage applications.
- Working with XRD qualitative and quantitative analysis software.
- Operating SIMION7, 3D Design Package of Electron Optics
- Microsoft Visual Basic Programming
- FORTRAN Language Programming

MEMBERSHIP

- **TWAS Young Affiliate 2015 – 2019**
- **Review Editor:** Frontiers, a community-oriented open-access academic publisher and research network.
- **Member,** Iraqi Society of Nanotechnology, until 1/12/2014.

PERSONAL INFORMATION

Date of birth / Nationality	13 Feb. 1977 / Iraqi
Languages:	Arabic, English
Marital Status:	Married/ has two children (Ibrahim and Maya)
Spouse name, education and profession	Dr. Aseel Basim Al-Zubaidi, Ph.D. in Physics, Assistant Professor at Department of Materials Engineering/ University of Technology/Baghdad/Iraq

LIST OF REFERENCES

Prof. Dr. Mahendra A. More

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تواريخ مهمة

- تاريخ التعيين في جامعة النهريين - مدرس – أمر جامعي (639/1/3) في 14-1-2010.
- استاذ مساعد (2014-4-7) – امر جامعي (16583/6/1) في 4-10-2015.

كتب الشكر والتقدير وتتمين الجهود

1. شكر وتقدير – رئيس الجامعة 14981/6 في 11-11-2018.
2. شكر وتقدير من مدير مركز بحوث النانوتكنولوجي والمواد المتقدمة – الجامعة التكنولوجية 2015-11-17.
3. شكر وتقدي – رئيس جامعة النهريين – (17420/6) في 19-10-2015.
4. تتمين جهود – رئيس جامعة النهريين – (17422/6) في 19-10-2015.
5. شكر وتقدير – مساعد رئيس جامعة النهريين للشؤون العلمية (1555/1) في 2-2-2015.
6. شكر وتقدير – رئيس جامعة النهريين – (14784/6) في 24-9-2014.
7. شكر وتقدير – عميد كلية العلوم – جامعة النهريين (ع س / 323) في 6-10-2011.
8. شكر وتقدير – عميد كلية العلوم – جامعة النهريين (ع / 1534) في 3-5-2011.
9. شكر وتقدير – مساعد رئيس الجامعة التكنولوجية للشؤون العلمية – (م م ع / 33) في 9-1-2011.