



HADI BASMA PhD

Assistant professor –Instructional coach at the Ministry of education and higher education -Lebanon

PHYSICS-MATERIALS SCIENCE

Contact Details

hadibassma@gmail.com

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00966893891365


<https://www.linkedin.com/in/hadi-bassma/>

https://www.researchgate.net/profile/Hadi_Basma2

Muscat Oman- Maabela 8 near GUTECH

Languages

 English - Level C2 (TOFEL)

 Arabic - Mother Tongue

 French- Level C1

Professional Competences

- Public speaking, communication and negotiation
- Creativity and critical thinking
- Ability to work under pressure and in multinational teams
- Time management

Activities and Interests

- **Environmental Activist** - reforestation, beach cleaning, awareness campaigns
- **Sports** - hiking, Tennis, Basketball
- **Hobbies**- travelling, exploring cultures

References

Prof.Dr Ramadan Awad
Dean of the Faculty of Science
Beirut Arab University

Rawad64@yahoo.com



Education

• Beirut Arab University (BAU)

In collaboration with the Lebanese Atomic Energy Commission, the American University of Beirut (AUB), and the University of Alexandria

March 2011 – September 2015,

PhD. in physics- Materials Sciences

Thesis: Ion beam analysis and physical properties of high-temperature superconductor samples added with Nano- ferrite scale.

• Universite' Saint Joseph de Beyrouth

Diploma in Educational Guidance and Counseling- Specialty Teaching physics Sep 2019- Feb 2020

• Harvard Graduate School of Education

Middle east professional learning initiative- Diploma Feb 2019- Feb 2020.

• Beirut Arab University (BAU)

In collaboration with the Lebanese Atomic Energy Commission

September 2007- June 2009

M.Sc. in atomic physics

Thesis: PIXE analysis of coarse and fine particles of aerosol samples from Beirut.

• Lebanese University (LU)

January 2008- August 2009, Faculty of education, master's in teaching physics

September 2002 – September 2006, Faculty of science's first branch B.S. in pure physics



Work Experience

• Beirut Arab University (BAU)

2016- 2022: Assistant professor of physics.

2009-2011: Lab assistant –faculty of science.

• Ministry of education and higher education (MEHE)

2014-2022: Instructional coach in Tyre province- specialty: physics

• Lebanese Evangelical School –Tyre (LEST)

2012-2019: head of the physics department

• Kamal Salhab Official Secondary School (KSOSS)

2007-2015: secondary physics teacher



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References Mr Ali Kanabar

- Coordinator of physics-Ministry of Education and Higher Education-

Ali_kanbar72@hotmail.com



Software Skills

MICROSOFT OFFICE (EXCEL-WORD- POWERPOINT), MICROSOFT TEAMS, G-SUITE- CLASSERA- ORIGIN PRO- MATLAB, GUIXWIN, and SIMINRA.



BOOKS

PHYNAL (physics for Terminal)

Co-author of (PHYNAL) a physics guide addressed to life and general sciences Students.



AWARDS

LAAS-2016

Winner of the best research award at the 22nd international scientific conference of the Lebanese Association of the advancement of science (LAAS -USEK-Lebanon, 2016).

Research: Investigation of the mechanical properties of Gd-123 high-temperature superconductors added with Zinc and Cobalt nanoferrites.

NASR-2009 and 2013

Winner of the first prize of the National Association for Science and Research (NASR-2013)

Project: Noise pollution in Tyre city.

Winner of the first prize of the National Association for Science and Research (NASR-2009)

Project: Simple tips to save energy, money, and the environment.



Publications

- 1) Bassma, H., Abbas, S., Labban, W., Awad, R., & Matar, M. (2022). Investigation of the structural and electrical properties of CdO/(Bi, Pb)-2212 superconducting phase. *Physica Scripta*, 97(6), 065801.
- 2) Abbas, S., Bassma, H., Awad, R., & Matar, M. (2022). Tailoring the Physical Properties of (Bi, Pb)-2212 Superconductor by the Addition of CdO. 95MnO. 05O Nanoparticles. *Journal of Low Temperature Physics*, 208(3), 271-288.



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References Dr Ziad Alhelou

Executive Director at the Lebanese Evangelical Society

ziadelhelou@gmail.com

- 3) Abbas, S., Basma, H., Awad, R., & Hassan, M. S. (2022). Structural and electrical investigations of novel CdFeO/(Bi, Pb)-2212 superconductor composite. *Phase Transitions*, 95(8-9), 651-666.
- 4) Basma, H., Al Boukhari, J., Abd Al Nabi, M., Aridi, A., Sayed Hassan, R., Naoufal, D., ... & Awad, R. (2022). Enhancement of the magnetic and optical properties of NiO. 5ZnO. 5Fe₂O₄ nanoparticles by ruthenium doping. *Applied Physics A*, 128(5), 1-15.
- 5) Al Boukhari, J., Basma, H., Khsheish, M., Sayed Hassan, R., & Awad, R. (2022). The effect of ruthenium substitution on the optical and magnetic properties of zinc ferrite nanoparticles. *Journal of Materials Science: Materials in Electronics*, 1-14.
- 6) Basma, H., Rmeid, S., Awad, R., & Said, M. (2022). STRUCTURAL AND MAGNETO CONDUCTIVITY STUDIES OF NIO/SMBA₂CU₃O₇-Δ SUPERCONDUCTING COMPOSITE. *BAU Journal-Science and Technology*, 4(1), 9.
- 7) Matar, M., Basma, H., Abbas, S., & Awad, R. (2022). Thermal and Mechanical Investigations of (Bi, Pb)-2212 superconductor added with different oxide nanoparticles.
- 8) Chehade, W., Basma, H., Abdallah, A. M., Hassan, R. S., & Awad, R. (2021). Synthesis and magneto-optical studies of novel NiO. 5ZnO. 5Fe₂O₄/ZnO. 95CoO. 05O nanocomposite as a candidate for photocatalytic applications. *Ceramics International*.
- 9) Basma, H., Rahal, H. T., & Awad, R. (2021). Enhancement of the magnetic properties of Ba_{1-x}BixFe₁₂O₁₉ Nanoparticles. *Journal of Magnetism and Magnetic Materials*, 168413.
- 10) Abbas, S., Basma, H. , & Awad, R. (2021). Preparation and Characterization of transition metal ions (Fe³⁺, Mn²⁺) doped CdO nanoparticles. *Int.J of nanoparticles*.
- 11) Abbas, S., Basma, H., Al Boukhari, J., & Awad, R. (2021). Characterization of CdO nanoparticles prepared by co-precipitation method under different pH and calcination temperatures. *Applied Physics A*, 127(7), 1-17.
- 12) Srour, A., Basma, H., Noureldeen, S., Malaeb, W., & Awad, R. (2021). ESR Investigations of (BaSnO₃) x/(Cu, Ti) 1223 composite in the normal and superconducting state. *Phase Transitions*, 1-11.



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References

Prof Mohamad Roumie'
Research director –LAEC
mroumie@cncrs.edu.lb

- 13) AbuHlaiwa, H., Basma, H., Rekaby, M., Roumie, M., & Awad, R. (2020). Influence of Lead Fluoride Substitution on the Physical Properties of (Cu-Tl)₁₂₂₃ Phase. *Journal of Low-Temperature Physics*, 1-15.
- 14) Basma, H., Abdeen, W., & El-Tahan, A. (2020). Studies of SmBa₂Cu₃O_{7-δ}/ZnFe₂O₄ Superconducting Composites. *BAU Journal-Science and Technology*, 1(2), 10.
- 15) Basma, H., Al-Mokdad, F., & Awad, R. (2020). Structural and Dielectric Properties of Zn_{1-x}MoxO Nanoparticles *Jordan Journal of Physics*, 13(2), 165-170.
- 16) AbuHlaiwa, H., Basma, H., Rekaby, M., & Awad, R. (2019). Influence of lead fluoride on the mechanical properties of (Cu, Tl): 1223 Phase. *Applied Physics A*, 125(10), 715.
- 17) A. M. Abdallah H. Basma and R. Awad (2019) Preparation, Characterization, and Application of Nickel Oxide Nanoparticles in Glucose and Lactose Biosensors *Modern Applied Science*, 13,6.
- 18) Basma.H, Rahal.H, Al-Mokdad.F, Romie'.M, Awad.R (2019) Unusual magnetic behavior of nanosized ZnO doped with Mo⁶⁺. *Materials research express*.IOP Publishing. <https://doi.org/10.1088/2053-1591/ab129b>
- 19) Younes.I, Basma.H, Anas.M Awad. R, (2019) Investigation of the Dielectric Properties Of (Cu, Tl) 1234 Added with Graphene. *Modern Applied Science*, 13,4.
- 20) Malaeb, W., Basma, H., Awad, R., Hibino, T., & Kamihara, Y. (2019). Improvement of the Superconducting Properties of GdBa₂Cu₃O_{7-δ} with Nano-Sized Ferrite Addition. *Journal of Superconductivity and Novel Magnetism*, 1-5.
- 21) Rmeid, S., Basma, H., Roumie, M., Hassan, F. E., & Awad, R. (2019). Vickers Microhardness Studies for SmBa₂Cu₃O_{7-δ} Added with NiO Nanosized Particles. *Journal of Superconductivity and Novel Magnetism*, 1-10.
- 22) Basma, H., Isber, S., Noureldeen, S., Anas, M., & Awad, R. (2017, July). EPR studies for GdBa₂Cu₃O_{7-δ} added with nanosized ferrite CoFe₂O₄. In *Journal of Physics: Conference Series* (Vol. 869, No. 1, p. 012024). IOP Publishing.
- 23) Malaeb, W., Basma, H., Barakat, M. M., & Awad, R. (2016). Investigation of the mechanical properties of GdBa₂Cu₃O_{7-δ} added with nano-sized ferrites ZnFe₂O₄ and CoFe₂O₄ using ultrasonic measurements. *Journal of Superconductivity and Novel Magnetism*.



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References

Dr Mahdi Mansour

Associate Professor –Lebanese International University

- 24) Isber, S., Basma, H., Noureldeen, S., Barakat, M. M., Roumie, M., & Awad, R. (2016). EPR Studies for $GdBa_2Cu_3O_{7-\delta}$ Added with Nanosized Ferrite $ZnFe_2O_4$ Before and After Irradiation by 3 MeV H^+ Ions. Journal of Superconductivity and Novel Magnetism, 1-6
- 25) Mansour, M., Roumie, M., Samad, B. A., Basma, H., & Korek, M. (2015). RBS and XRD Characterization of Yttrium Iron Garnet Thin Films. In Journal of Physics: Conference Series (Vol. 592, No. 1, p. 012138). IOP Publishing.
- 26) Basma, H., R. Awad, M. Roumié, S. Isber, S. Marhaba, and A. I. AbouAly. "Study of the Irreversibility Line of $GdBa_2Cu_3O_{7-\delta}$ Added with Nanosized Ferrite $CoFe_2O_4$." Journal of Superconductivity and Novel Magnetism 29, no. 1 (2016): 179-185.
- 27) Basma, H., Roumié, M., Awad, R., Marhaba, S., Albast, M., & Abualy, A. (2015). Ion Beam Analysis and Electric Properties of $GdBa_2Cu_3O_{7-\delta}$ Added with Nanosized Ferrites $ZnFe_2O_4$ and $CoFe_2O_4$. Materials Sciences and Applications, 6(09), 828.
- 28) Awad, R., Roumié, M., Isber, S., Marhaba, S., AbouAly, A. I., & Basma, H. (2015). Investigation of Temperature Dependence of the Irreversibility Line of $GdBa_2Cu_3O_{7-\delta}$ Added with Nanosized Ferrite $ZnFe_2O_4$. Journal of Superconductivity and Novel Magnetism, 28(2), 535-539.4



Conferences- fellowships

Education

- **Middle east Professional Learning Initiative (MEPLI)- Graduate School of education-Harvard University.**

Regional convener of the MEPLI program for the years 2020, 2021 by Harvard graduate school of education- presenting on topics related to learning loss during the COVID crisis- Online learning difficulties and effective instructional coaching strategies.

Feb 2019- Feb 2020, representing the ministry of education and higher education in one year of fully funded scholarship (ONLINE and on-campus blended courses) for professional development in K-12 education.

- **TWAS-AAAS-BA regional workshop on science diplomacy** June 12 to 16 2019 Bibliotheca Alexandria-Egypt: solving regional conflicts using science diplomacy-American Association of Advancement of Science.

- **Education Conference 2019-Doha Qatar 23-24 April**



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Associate Professor –Lebanese International University
Mahdi.mansour@liu.edu.lb

Interactive workshop presenter: Enhancing classroom dynamics through active learning in science classes.

- **National education conference -2019 Evangelical Schools**
April 3-5 2019 Attendee.
Ninth International Conference on effective teaching and learning in higher education - American University of Beirut Feb 15-16, 2019
Representing the ministry of education and higher education.

- **Science Technology and Innovation Policy- STIP- November 13-20-2018 –Indian Institute of Science Bangalore-India- Center of Nanoscience and engineering**
Representing the ministry of education and higher education in an intensive 7 days course workshop.

- **Summer meeting of the American Association of physics teachers AAPT-August 2018- Washington Dc-United states.**
Workshops @ AAPT:
 - ✓ NGSS Three-Dimensional High School Physics Lessons (attendee)
 - ✓ Integrated STEM Education (attendee)
 - ✓ Integrating Modern Physics into High School Physics (attendee)
 - ✓ Using Social Psychol. Interventions to Improve Learning (attendee)

- **1st Student Innovation and Research Conference for Arab Universities and Schools- Beirut Arab university – March 2018**
 - ✓ Challenges in Science and Math Education...Obstacles and new horizons (oral presentation)
 - ✓ Integrated STEM Education: Infusing Engineering Design Practices in STEM (Oral presentation-workshop)
 - ✓ Multiple intelligence: We are all equally smart (Oral presentation-workshop)

- **Fifth annual symposium of the teaching of writing in Lebanon- April 2018- AUB Lebanon (attendee)**
 - ✓ Writing through the 4 Cs in the content areas -- integrating creativity, critical thinking, collaboration, and communication (attendee)
 - ✓ Digital storytelling across the curriculum – using multimedia tools for WAC (attendee)
 - ✓ Sharing and Collaborating through Web tools to Develop Writing in the Content Area (attendee)
- **Quality and innovation in Teacher professional development: issues and challenges Nov-2017**
 - ✓ Lebanese American University LAU (attendee)

- **SMEC-2016 Science and math education conference –March 2016** American University of Beirut –AUB (attendee)



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Conferences

Materials science

- **International Conference of superconductivity and Magnetism ICSM-Oct 2021 Bodrum-Turkey.**
synthesize and magneto-optical studies of novel NiO. 5ZnO. 5Fe₂O₄/ZnO. 95CoO. 05O nanocomposite as a candidate for photocatalytic applications (oral presentation)
 - **Fourth International Symposium on Dielectric Materials and applications- ISYDMA-2019- May-Amman-Jordan.**
Structural and dielectric properties of Zn_{1-x}Mo_xO (oral presentation)
 - **International Conference of superconductivity and Magnetism ICSM-May 2018 – Antalya-Turkey.**
Optical and Magnetic Properties of ZnO nanoparticles doped by Mo⁶⁺ (oral presentation)
 - **Frontiers in Theoretical and Applied Physics –American university of Sharjah FTAPS-Feb 2017**
EPR studies for GdBa₂Cu₃O_{7-δ} added with nanosized ferrite CoFe₂O₄ (oral presentation)
 - **International Conference on Strongly Correlated Electron Systems, SCES-July 2017. – Prague-Czech Republic**
EPR studies of SmBa₂Cu₃O_{7-δ} /ZnFe₂O₄ superconducting composites (poster presentation)
 - **International Conference of superconductivity and Magnetism ICSM-April 2016 – Fethiye-Turkey.**
EPR Studies for GdBa₂Cu₃O_{7-δ} Added with Nanosized Ferrite ZnFe₂O₄ Before and After Irradiation by 3 MeV H⁺ Ions. (Poster presentation)
- 22nd international scientific conference of LAAS –USEK-**
- Investigation of the mechanical properties of Gd-123 high-temperature superconductors added with Zinc and Cobalt nano-ferrites. (Oral presentation)
- **21st LAAS International Science Conference Horizon 2020: March 2015-Advances in Sciences and technology Saint Joseph University (USJ), Lebanon.**



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- **International Conference on Strongly Correlated Electron Systems, SCES –July 2014. – Grenoble-France.**

RBS and XRD Characterization of Yttrium Iron Garnet Thin Films. (Poster presentation)

- **International Conference of superconductivity and Magnetism ICSM May 2014 – Antalya-Turkey.**

Investigation of Temperature Dependence of the Irreversibility Line of $GdBa_2Cu_3O_{7-\delta}$ Added with Nanosized Ferrite $ZnFe_2O_4$. (poster presentation)