**Curriculum Vitae**

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| **Personal information** | |
| **Full Name** | Dr. Mohamed Bakr Mahmoud Mohamed |
| **Gender** | Male |
| **E-mail**: | [mbm1977@yahoo.com](mailto:mbm1977@yahoo.com). |
| **Mobile** | +966-(0)543207886 |
| **Nationality** | Egyptian |
| **ORCID** | <https://orcid.org/0000-0003-1558-5737> |
| **Scopus** | <https://www.scopus.com/authid/detail.uri?authorId=37018029400> |
| **h-index:** | 26 |
| **Education** |  |
| 2007–2011 | PhD, Materials science  Darmstadt University of technology, Germany |
| 2001-2005 | MSc. solid state physics  Ain shams university, Cairo, Egypt |
| 1995–1999 | BSc, Physics  Ain shams university, Cairo, Egypt  Grade Excellent with Honor |

**Awards and academic honors**

* PhD Scholarship granted from the missions sector in the Egyptian ministry of higher education.

The mission aims at getting PhD in Physics from Darmstadt University of technology,

Germany (2007–2011).

* Ain shams university Award for being ranked the first at the graduating class (1999).
* ICTP diploma in condensed matter physics, Italy (2003-2004).
* Best poster award: 9th international work shop of crystallography, Egypt (2004).
* Ain shams university price in crystallography, Egypt (2016).
* Vinus Kamel Award for material science and its applications, Egypt (2016).

**Employment History**

* Prof. in Department of Physics, Faculty of Science, Ain shams University Cairo, Egypt (2021- until now).
* Prof. Associate in Department of Physics, Faculty of Science, Taibah University, KSA. (2016- until now).
* Prof. Associate in Department of Physics, Faculty of Science, Ain shams University, Cairo, Egypt (2016- until now).
* Prof. Assistant in Department of Physics, Faculty of Science, Taibah University, KSA (2014-2016).
* Prof. Assistant in Department of Physics, Faculty of Science, Ain shams University, Cairo, Egypt (2011-2014).
* Teaching Assistant in Department of Physics, Faculty of Science, Ain shams University, Cairo, Egypt (1999-2007).

**Conferences presentations and attended**

* Workshop/School on Bioinformatics and Structural modeling“SESAME Project, Sabanci University, Istanbul, Turkey, 2001.
* Workshop on Computer-based Crystallographic Teaching Materials, Ismailia, Egypt, 2002.
* College on Science at the Nanoscale, ICTP, Italy, 2004.
* 9th international workshop of crystallography recent advances in X-Ray powder diffraction, Asyut, Egypt, 2004.
* School on Ion Beam Analysis and Accelerator Applications, ICTP, Italy, 2006.
* (Poster) M.Bakr, A. Senyshyn and H. Fuess "Neutron diffraction and magnetic study of GaFe1-xMnxO3with x=0, 0.05 and 0.10", 16th Meeting of German Crystallographic Society, (Erlangen, Germany) V27, 2008.
* (Oral) Structural and magnetic properties of GaFe1-xMnxO3, in Materials of 17th annual meeting of German Crystallographic Society, Hanover, Germany, 2009.
* (Oral) "Structural, magnetic and ferroelectric properties in multiferroic GaFeO3"20th International School on the Physics and Chemistry of Condensed Matter, Bialowieza, Poland, 2009.
* (Oral) "Structural, magnetic and ferroelectric properties of multiferroic GaFe1-xMnxO3" European Crystallographic Meeting (ECM-25), Istanbul, Turkey, collected Abstracts, Acta Cryst. A65, s213, Istanbul, Turkey, 2009.
* 3rd European School on Multiferroics (ESMF-3), Groningen, Netherland, 2009.
* 41st IFF Spring School "Electronic oxides: Correlation Phenomena, Exotic Phases, and Novel Functionalities", Julich, Germany, 2010.
* (Poster) M.Bakr, H. Wang and H. Fuess "Effect of doping on magnetic and dielectric
* properties of GaFeO3 "The European Powder Diffraction Conference EPDIC 12, Darmstadt, Germany, 2010.
* (Oral) Karimat El-Sayed , Mohammed Bakr Mohammed, The Effect of Nanocrystalline Ni1-xZnxFe1.5Cr0.5O4 on Crystal structure, Electric and Magnetic properties of Polyaniline and BaTiO3, 20th Meeting of German Crystallographic Society, Munich, Germany, 2012.
* 11th International School and Workshop on Macromolecular Structure of Biological and Non-biological Materials Hurghada, Red Sea, Egypt, 2012.
* 11th Users Meeting of SESAME, Amman-Jordan, 2013.
* Pearson Workshops (a set of 8 workshops on Faculty Change Management), Taibah University, Saudi Arabia, 2015-2016.
* On-line Workshop on Excited Charge Dynamics in Semiconductors, ICTP, Trieste, Italy, 2020.

**Publications and Preprints**

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| **Scoups *175 Articles*** <https://www.scopus.com/authid/detail.uri?authorId=37018029400>  **Research Interests**  Structural –properties correlations in   * Electrode materials for Li-ion Batteries and supercapacitors * Solar cells. * **Multiferroics, multifunction materials, polymer nanocomposites.** |

**Book chapter**

* M.Yehia, S.M. Ismail, S.S.Ata-Allah, Sh.Labib, **M.B.Mohamed**, Chapter 11 - Structural and Magnetic Properties of Ni Nanoferrites Doped With Rare Earth and Transition Metals, Magnetic Nanostructured Materials, 2018, Pages 323-350.

<https://www.sciencedirect.com/science/article/pii/B9780128139042000115>.

**Teaching Experience**

I taught the following syllabuses:

• Electromagnetism, solid state physics, crystallography, spectroscopy, physics department,

Faculty of science, Ain Shams University, Egypt.

• Electricity and magnetism, Properties of matter and Optics, atomics and nuclear at Higher Technological Institute – Tenth of Ramadan City, Egypt.

* Fundamental of physics, Bio physics, electricity and magnetisms (physics department, Faculty of science, Taibah University, KSA.

**Professional membership**

* Membership of national committee of crystallography, Egypt.
* Membership of the Egyptian society of crystallography and applications (ESCA).
* Membership of the Egyptian Materials research Society (Eg-MRS).

**Experimental skills**

* Design, synthesis of novel functional materials, bulk and nano scales using different methods such as sol gel, ceramics methods.
* Characteristics the samples using different techniques:
* Structural and microstructural analysis using X-Ray diffraction (XRD) analysis using Rietvield analysis (Fullprof, Maud programs).
* Transmission Electron Microscope (TEM) and Scanning electron microscope (SEM).
* Fourier Transform Infrared Spectroscopy (FTIR) and FT-Raman
* Thermal analysis using DTA, TGA, DSC.
* SQUID and VSM magnometers.
* Magnetic structure using neutron powder diffraction and Mossbauer spectroscopy.
* DC, AC electrical conductivities and dielectric properties.
* Ultraviolet-Visible-Near Infrared Spectroscopy (UV-VIS-NIR)
* Photoluminescence (PL).
* DFT calculation.

**Activities**

* **Associate Editor**, International journal of applied ceramics.

<https://ceramics.onlinelibrary.wiley.com/hub/journal/17447402/homepage/editorialboard>

* **Review Editor in** frontiersin for[Dielectric and Ferroelectric Materials](https://loop.frontiersin.org/journal/1800/section/2127)

https://loop.frontiersin.org/people/1998629/overview.

* **Reviewer** of more than 80 Scientific papers in Peer- review international journals such as:

Materials Research Bulletin, Journal of Magnetism and magnetic materials, Powder technology, Solid state communications, Physics and Chemistry of Solids, Radiation Effects and Defects in Solids, Journal of the American Ceramic Society, alloys and compounds, Australian Journal of Chemistry, Materials Science and Engineering B, Materials Chemistry and Physics, Chinese Physics Letters, journal Applied Physics A, Journal of Physical Chemistry, Rare Metals, RSC Advances, Journal of Applied Ceramic Technology, Physica B, Journal of Fluorescence, Superconductivity and Novel Magnetism, SN Applied Sciences, International Journal of Applied Ceramic Technology, Rare Metals, polymer composite, Journal of Materials Science: Materials in Electronics “.

* Supervision and co-supervising: 2 PhD, 4 M.Sc. and 4 graduation projects students.