

Khalil A. Ziq: e-mail: kaziq@kfupm.edu.sa

Mobile: 966 594277269 Office 966-03-860-3761

Google scholar

https://scholar.google.com/citations?user=QY9Wq_EAAAAJ&hl=en&oi=ao

ORCID iD: [0000-0002-5061-7004](https://orcid.org/0000-0002-5061-7004)

Physics Department
King Fahd University of Petroleum & Minerals (KFUPM)
P.O. Box 1674
Dhahran, Saudi Arabia

Education: B.Sc .University of Jordan 1980.
MSc. University of Illinois, Chicago 1985.
Ph.D. University of Illinois, Chicago 1989.

Experience

1990-Present	Director of the Superconductivity and Magnetism lab. Physics Department- KFUPM
2016-Present	Coordinator of Condensed Matter research labs. Physics Department-KFUPM
2005 – Present	Professor, Physics Department; King Fahd University.
1994-2005	Associate Prof. King Fahd University.
1998-2000	Ames Lab USA Visiting Associate
1997-98	Sabbatical leave at Ames lab and The Physics Department - Iowa State University USA.
1997-98	Visiting Associate at The International Institute of Theoretical and Applied Physics- Iowa State University
1998-2000	Visiting research scientist at Ames lab and the Physics department at Iowa State University
1989-94	Assistant Prof. King Fahd University.
1982-89	University of Illinois- Chicago USA, TA and RA.
1980-82	Ministry of Education- Jordan.

Research interest: Material science, Search for new Magnetic and superconducting materials. Single Crystals and Bulk.

Magnetic materials:

- Reduced dimensional magnetic systems: Van der Waals Semiconducting-ferromagnetic materials. Magnetocaloric materials.
- Superconductors: Magnetic and thermodynamic properties.

Education interest;

1. Improving of Cognitive and Meta-cognitive Skills in learning.
2. Motivating students and children in science.
3. Designing and building experimental demonstration of various physics concepts to motivate interest in Physics.

Instrumentation and experimental skills:

- Designed and built several gadgets for magnetic studies:
 1. Vibrating sample magnetometer (VSM) for measuring 2 and 3-dimensional vector magnetization used for Rotational Magnetization processes.
 2. New ac attachment to the VSM to study vortex shaking in superconductors.
 3. Several setup: Ac-susceptibility and resistivity; magnetoresistance; Chaotic hysteresis detection.
- Designed and built various educational experiments and demonstrations for graduate and undergraduate teaching labs.

Lab Development

1. Research lab: Set up a state of the art Superconductivity and Magnetism Lab. The Lab includes:
 - Computerized Vibrating Sample Magnetometer.
 - Homemade Rotational Magnetometer.
 - Homemade DC and AC Resistivity Setup.
 - Homemade AC-susceptibility setup.
 - Superconducting-Vortex shaking setup.
2. Teaching Lab: For advanced senior lab I have designed and built the following new experiments to study:
 - Chaos and non-linearity;
 - Frequency dependent hysteresis loops.
 - Hall Effect.

Research Management activities:

1. Director of the Superconductivity and Magnetism lab (1990-present). Duties includes: Establishing research lab facilities, training graduate and undergraduate students in research activities. Supervise PhD and MSc. Thesis.
2. Coordinators of the research facilities in the department: Cryogenic lab and Surface science lab. Managing daily activities of the facility and the personnel involved.
3. International Advisory Board of the “International Conference on Materials science and its applications” 13-15 Feb 2012; Taief University Saudi Arabia.
4. Chairman of the department research committee. Duties include review proposals and making recommendations for proposals submitted to the all Centers of Research Excellence (CORE) at KFUPM.
5. Chairman of the research committee at the Physics department (KFUPM) for three years.
6. Editor for the Arabic Abstract at the Arabian Journal of Science and Engineering (AJSE) at King Fahd University. (1994-2010).
7. Chaired several committees (about 50) for reviewing of promotion cases at KFUPM and other national and International Universities.
8. Reviewed large number of research proposals and progress reports for several national and international agencies and Universities.
9. Member in the organization committee of the “First Saudi Science Conference “April 9 – 11, 2001, at KFUPM, Dhahran, Saudi-Arabia

Awards:

- 1) Nominated for 2010 Distinguished teaching award.
- 2) Distinguished research award June 2002, King Fahd University.
- 3) Undergraduate Scholarship 1975-1980 Jordan Government.
- 4) Diploma: VAX Operating System Al Mnara Training Center 10/1990.

Thesis Supervising:

Ph.D. Thesis

- 1- Sameh M. A. Altanany; Magnetic and transport properties of chromium-based half metals, Dec 10, 2019
- 2- Fares Subait Obad; Van der Waals ferromagnetic materials Oct 18, 2018, completed May, 2023.
- 3- Rami Mohammed Hamad; On the Magnetic and Superconducting properties of $\text{Fe}_{1\pm x}\text{Se}_{0.5}\text{Te}_{0.5}$ Single crystals, Nov 07, 2018.
- 4- Morad Khalid Hamad; Developing Near Room Temperature Magnetocaloric Materials, May 02, 2018
- 5- Esam Gunaid Al-Nahari; Nano Particles Inclusion and their Effects in MgB_2 Superconductor, Mar 29, 2018

- 6- A. F. Salem Doping effects in MgB₂ Superconductors. Aug 2009. Enrolled at Alazher University Egypt.
- 7- D. Alshangety "Effects of Zn substitution of the reversible and irreversible properties of TI-based Superconductors" Enrolled at Girls College Jeddah Sept 2006.
- 8- A. Mekki "Magnetic and XPS Properties of Transition Metal Glasses" Enrolled at University of Warwick - Warwick-UK. Jan 1998. Co-supervisor.
- 9- N. M. Hamdan "Effect of Temperature and Ion Irradiation on the Properties of Bi-based Superconductors" Co-advisor with Prof. H. Ozcan Middle East Technical University- Turkey –1993. June1993.

MSc. Thesis Supervised:

1. Maher Abdelhadi "Critical currents and Pinning Forces in Y₁Ba₂Cu₃O₇ High-Tc Superconductor" Physics Department. KFUPM 1993.
2. Astra Dasa Nova "Oxygen contents and disorder effects on the Magnetic Properties of Y₁₂₃ High-Tc Superconductors" Physics Department KFUPM. Sept. 1995.
3. Esam Abdulhafidh "Energy losses and pinning forces in Y₁₂₃/AgO high-Tc superconductors". Physics Department KFUPM. June 1996.
4. Shaker Alfear "Structure and Stress Measurements in Oxygen deficient Y₁₂₃ High-Tc Superconductors" Physics Department KFUPM. June 1997
5. Fuad Enaya "Magnetic Irreversibility and scaling in Y₁₂₄ High-Tc Superconductor" Physics Department. KFUPM 1998
6. Ahmed F. Salem "Free energy surface and thermodynamic scaling properties of (Y_x- Gd_{1-x}) Ba₂Cu₃O₇" Physics Department KFUPM Dec 1999.
7. H. Qadi "Hydrogen effects in GdBa₂Cu₃O₇ superconductor" Girls College- Dammam Saudi Arabia June 2006.
8. H. Al-Hashem "Gamma Irradiation effects in Gd-based superconductors. Girls College- Dammam Saudi Arabia. September 2006.
9. Afif Isamil Razzak "Ferromagnetic behaviour in ZnO-Fe". Physics Department KFUPM. 2008/09.
10. Bader Alharthi "Magnetic properties of Er-Sr-MnO Systems. Physics Department KFUPM. 2008/09.
11. T. Owalabi "MAGNETIC AND SUPERCONDUCTING PROPERTIES OF Fe(Se_{1-x}, As_x). Jun 2013-Dec 2014. Completed.
12. Mohammad Abu Baker "Substitution Effects in CrAs Superconductor" Completed 2015.
13. Feras Obad "On the magnetic state in FeAs system" 2017
14. BOLARINWA MOSHOOD OLAWALE, "Disorder effects on the magnetic states in HoCo₂" March 9 2020.

PhD. thesis committee member

- 1- Yakubu Sani Wudil; Fabrication and Characterization of Nanocrystalline Bismuth Telluride Based Surfaces for Thermoelectric Applications Using Advanced Pulsed Laser Deposition. In progress. Physics-KFUPM.
- 2- Nasirudeen Olalekan Ogunlakin; Simultaneous Production Of Oxygen And Hydrogen Via Water Splitting Using $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\Delta}$ (Bscf) Membranes. In progress. ME-KFUPM.
- 3- Ahmed Younes Alsaadi; Investigation of O₂ Line Broadening in Nanoporous Alumina Using Gas in Scattering Media Absorption Spectroscopy. In progress.
- 4- Hasan Mohammed Abdullah; Electronic and Transport Properties of Locally Delaminated Bilayer Graphene. Nov 26, 2018
- 5- Tanvir Hussain; Angular Deposition of II-VI Compounds by Thermal Evaporation. Apr 26, 2018
- 6- Hafiz Adil Qayyum; Determination of the band gap of metal oxide thin films through electroreflectance. Nov 29, 2017
- 7- Abdulmajeed Hasan Hendi; Band gap engineering of metal oxides thin films through alloying with cadmium telluride. Dec 11, 2016
- 8- Qasem Ahmed Drmash; Surface Modification of ZnO-based thin films for gas sensing applications. Nov 18, 2015
- 9- Noora Awadh El Kahtany Physics Department. Girls College Dammam Saudi Arabia, June 2000.
- 10- Essam Abdelhafedh, Physics Department, King Saud University, Riyadh, Sept 2010.
- 11- Three more students from Physics Department, King Saud University, Riyadh,

MS. Thesis committee member:

1. Yusron Darojat; Laser-induced shock wave crystallization of nitrate salts. May 05, 2020.
2. Monzer Abdul Ellah Alhusien Ali Maarouf; Study of Titanium Nitride and Iron Doped Titanium Nitride Thin Films Grown by RF/DC Magnetron Sputtering. Dec 05, 2019.
3. Redhwan Abdo Moqbel; Synthesis of Graphene-based Nano Crystalline Semiconductors (CdS, ZnO₂) Using Pulsed Laser Ablation Technique. Mar 15, 2018.
4. Amar Kamal Mohamedkhair; Synthesis and Modification of Tin Oxide Based Thin Films for Hydrogen Gas Sensing. May 18, 2017
5. Fandi Oktasendra; Dynamics of Phase Slip Centers and Hot Spots in Superconducting Niobium Strips. Apr 30, 2015.

6. Sara Asseri, Physics Department, King Faisal University-AlAhsa, Jun 2014.
7. Wafa' Al-Batat Physics Department, King Faisal University-AlAhsa, 2013.
8. Esam Gunaid Al-Nahari; Synthesis and Characterization of Zinc Oxide Nanopowder Doped with Copper by Microwave Assisted Polyol Method. May 07, 2012
9. Muhammad Saleem Apr 29, 2012 Fabrication and Characterization of Iron Oxide Thin Films Prepared by Thermal Oxidation of Iron.
10. Shehab Student, Physics, King Saud University. 2012.
11. Abdulmajeed Hasan Hendi; Synthesis and Characterization of Bi₂O₃ Nano-Powder Produced by Microwave-Assisted Combustion Method. Feb 01, 2011.
12. Fahad Saad Al-Ghamdi, Physics department, King Saud University; 2011.
13. Qasem Ahmed Drmash; Synthesis and Characterization of Structure Metal Oxide/Peroxides Prepared by Laser Ablation in Liquids. Jan 19, 2010.
14. A. Aldossary Mechanical Engineering Department. KFUPM. 2009.
15. Bander Abu Zaid, Physics Department, King Faisal University-AlAhsa, 2009.
16. Said Almarzoug: Physics Department. KFUPM, 2003.
17. Amal Al-Otobi: Physics Department Girls College Dammam (June 2000).
18. Tarfa Al-Shedi: Physics Department. Girls College Dammam (June 1995).
19. Ismail E. Kaka: Earth Science Department. KFUPM (1993).

Completed Research Projects “funded”:

- 1.** N. M. Hamdan **Kh. A. Ziq** and A. S. Al-Harhi “Preparation and Characterization of Fluorinated Tl-based High-Tc Superconductors”. **SABIC** 1997-99
- 2.** **Kh. A. Ziq**, N.M. Hamdan, A. S. Al-Harhi, M. Faiz and J. Shirokoff “Magnetic, structural and transport properties of Tl(1234) hi-Tc superconductors” **KFUPM** 1999
- 3.** **Kh. A. Ziq** “Free energy surface of Lu(Ni_{1-x}Co_x)₂B₂C superconductors” **KACST** 2000.
- 4.** **K. A. Ziq (PI)**, A. Salem (CI), A. Ghannam (CI) and F. Enaya (CI). Pinning and Scaling in MgB₂ Superconductors.. **KFUPM** (September 2004-March 2006).
- 5.** Synthesis and characterization of colossal magneto resistance (CMR) materials doped with magnetic ions. **K. A. Ziq (PI)** and M.M. Abdelhadi (CI) Sept 2005-Jun 2007.
- 6.** "**Magnetic properties of ZnO-TM Semiconductor**" **Kh. A. Ziq (PI)**, A. Ghannam (CI), A. F. Salem (CI), 2006-2009. **KFUPM** Funding.
- 7.** New Group 10 metal complexes based on chelate ligands bearing nitroxide radicals: Magnetic properties and Catalytic performance in oxidation

reactions of alcohols. M. Fettouhi (PI), B. El Ali (CI) and **K. A. Ziq** (CI). Oct (2007-20010). KFUPM.

- 8. "On the Transport and magnetic properties of Novel Nanoparticles Ceramic Varistor"** Ahmed Sedky (PI), Abdalaziz Almulhem, Mohamed Abu-Abdeen, Abdullah Aljaafari, and **Khalil Ziq**. Funded by King Faisal University. Sept 2011.
- 9. Energy gap measurements and simulations in e-doped superconductors.** Kunwar Shanker (PI), **Khalil Ziq** (CI). KFUPM-funded 2010.
- 10. "Metal Complexes Based on Cyclohexylamine for the Synthesis of Metal Oxide Nanoparticles"**. Abdulaziz Bagabas (PI), and **Khalil Ziq** (CI). KACST Funding 2007-2010.
- 11. Investigation of Disorder Effects on Magnetic and Electric Properties of $\text{Nd}_{1-x}\text{Sr}_x\text{MnO}_3$ in the Ferromagnet-Antiferromagnet Competition Doping Region.** Ahmed Mansour (PI) and **Khalil Ziq** (CI). KFUPM-funded project. June 2012. No. ProjectJF101014
- 12. Investigation of the Combined Effects of Doping and Lattice Distortions on the Evolution of the Magnetic and Transport Properties of NSMO Manganite upon Quenching from High Temperatures.** **Khalil Ziq** (PI) and Ahmed Mansour (CI) and Ahmed Fathi Salem (CI). KFUPM-funded project Oct 2012- Oct 2014 project No. IN121002
- 13. "Critical Current Density in Bi-based Copper Oxide Superconducting Systems"**. A. Sedky and **Kh. A. Ziq**. Funded by King Faisal University 2011-2012.
- 14. Oxygen vacancies effects of defects on the Magnetic properties of ZnO doped with transition metals.** **Kh. Ziq** (PI), A. Salme, N. Tabet, M Dastagere and A. Ghannam. KFUPM funding Sep 2010-2013.
- 15. Detection of sudden excitations by nanometric superconducting films (DSENSF)**". K. Harrabi, **Khalil Ziq**, A. Salem. KFUPM funded. Sept 2010-2013.
- 16. "Magnetic and Photocatalytic Properties of Aggregated Zinc-Sulfide (ZnS) Nanoparticles Doped With Metal Ions"** A. AlSunaidi (PI) and **Kh. A. Ziq** (CI). KFUPM 2011-2013.
- 17. "Magnetic Interactions in Fe-based Pnictide Superconductors"** **Kh. A. Ziq** (PI) and A.F. Salem (CI). NSTIP funded project under 11-ADV1631-04. March 1st 2012-Dec 30th 2014.
- 18. "Investigation of Doping and Lattice Distortions Effects on the Evolution of the Magnetic and Transport Properties of $\text{Nd}_{(1-x)}(\text{Sr}_{(1-y)}\text{A}'_y)_x\text{MnO}_3$ Manganite"** A. Mansour (PI), **Kh. A.Ziq** and A. Fathi. KFUPM funded Oct 15-2012 - Oct 15, 2014.

Publications:

1. Effect of Mn substitution in $\text{Cr}_{1-x}\text{Mn}_x\text{SbSe}_3$ van der Waals ferromagnetic material' JA Abiola, MY Perdana, FS Obad, AH Ramelan, KA Ziq *Journal of Physics: Conference Series* 2556 (1), 012003; 2023
2. Evaluation of the critical behavior near ferromagnetic to paramagnetic phase transition in $\text{CrTe}_{1-x}\text{Sex}$ alloys: An experimental study" MK Hamad, IC Nlebedim, KA Ziq; *Physica B: Condensed Matter*, 415072; 2023
3. Influence of erbium on structural, and charged particles, photons, and neutrons shielding properties of $\text{Ba}_{1-x}\text{Er}_x\text{SnO}_3$ perovskite ceramics' MK Hamad, N Dwaikat, MH Mhareb, MI Sayyed, RM Hamad, Kh. Ziq, et al. *Journal of Rare Earths* 2; 2023
4. Room temperature magnetocaloric effect in $\text{CrTe}_{1-x}\text{Sex}$ alloys", MK Hamad, IC Nlebedim, Y Maswadeh, R Hamad, KA Ziq; *The European Physical Journal Plus* 137 (11), 1259 1 2022
5. Assessment of radiation attenuation properties for novel alloys: An experimental approach" MI Sayyed, MK Hamad, MHA Mhareb, R Kurtulus, N Dwaikat, M Saleh, Kh. A. Ziq, et al, *Radiation Physics and Chemistry* 200, 110152 21 2022
6. Structural and radiation shielding features for $\text{BaSn}_{1-x}\text{Zn}_x\text{O}_3$ perovskite" RM Hamad, MK Hamad, MHA Mhareb, MI Sayyed, YS Alajerami, .Kh. A. Ziq et al; *Physica B: Condensed Matter* 638, 413925 6 2022
7. Magnetic properties of CrSnS_3 : A new Van der Waals ferromagnet" F Obad, KA Ziq; arXiv preprint arXiv:2207.14129 2022
8. Assessment of $\text{FexSe}_{0.5}\text{Te}_{0.5}$ alloy properties for ionizing radiation shielding applications: an experimental study" RM Hamad, MK Hamad, N Dwaikat, KA Ziq; *Applied Physics A* 128 (7), 574 3 2022
9. K Alam, MB Haider, MF Al-Kuhaili, KA Ziq, BU Haq; Electronic phase transition in CrN thin films grown by reactive RF magnetron sputtering; *Ceramics International* 48 (12), 17352-17358; 2022
10. MK Hamad, MI Sayyed, MHA Mhareb, MS Sadeq, N Dwaikat, ...; Effects of TiO_2 , V_2O_5 , MnO_2 and Ti_2O_3 on structural, physical, optical and ionizing radiation shielding properties of strontium boro-tellurite glass: An experimental study; *Optical Materials* 127, 112350; 2022
11. MI Sayyed, MK Hamad, MHA Mhareb, R Kurtulus, N Dwaikat, M Saleh, ...; Assessment of radiation attenuation properties for novel alloys: An experimental approach; *Radiation Physics and Chemistry*, 110152; 2022
12. MK Hamad, IC Nlebedim, Y Maswadeh, R Hamad, KA Ziq; Room Temperature Giant Magnetocaloric Effect In $\text{CrTe}_{1-x}\text{Sex}$ Alloys; arXiv preprint arXiv:2202.05624; 2022
13. MK Hamad, Y Maswadeh, E Martinez-Teran, AA El-Gendy, KA Ziq; Structural, magnetic, and critical behavior of $\text{CrTe}_{1-x}\text{Sbx}$ alloys; *The European Physical Journal Plus* 136 (5), 1-14; 2021

14. RM Hamad, MHA Mhareb, YS Alajerami, MI Sayyed, G Saleh, MK Hamad, ...; A comprehensive ionizing radiation shielding study of $\text{Fe}_x\text{Se}_{0.5}\text{Te}_{0.5}$ alloys with various iron concentrations; *Journal of Alloys and Compounds* 858, 157636; 2021
15. MK Hamad, E Martinez-Teran, Y Maswadeh, R Hamad, EG Al-Nahari, ...; Room temperature magnetocaloric effect in $\text{CrTe}_{1-x}\text{Sbx}$ alloys; *Journal of Magnetism and Magnetic Materials* 514, 167171; 2020
16. MK Hamad, MHA Mhareb, YS Alajerami, MI Sayyed, G Saleh, ...; Radiation shielding properties of $\text{Nd}_{0.6}\text{Sr}_{0.4}\text{Mn}_{1-y}\text{Ni}_y\text{O}_3$ substitute with different concentrations of Nickle; *Radiation Physics and Chemistry* 174, 108920; 2020
17. M. Kh. Hamad, E. Martinez-Teran, Y. Maswadeh, R. Hamad, E.G. Al-Nahari, A.A. El-Gendy, Kh.A. Ziq, Room Temperature Magnetocaloric effect in $\text{CrTe}_{1-x}\text{Sbx}$ Alloys, *Journal of Magnetism and Magnetic Materials* (2020), doi: <https://doi.org/10.1016/j.jmmm.2020.167171>
18. M. Kh. Hamad, M. Mhareb, Y. Alajerami, M. Sayyed, G. Saleh, Y. Maswadeh et al., Radiation shielding properties of $\text{Nd}_{0.6}\text{Sr}_{0.4}\text{Mn}_{1-y}\text{Ni}_y\text{O}_3$ substitute with different concentrations of Nickle, *Radiation Physics And Chemistry*. 174 (2020) 108920. <https://doi.org/10.1016/j.radphyschem.2020.108920>
19. M. Kh. Hamad, Y. Maswadeh, K. Ziq, Effects of Ni substitutions on the critical behaviors in $\text{Nd}_{0.6}\text{Sr}_{0.4}\text{Mn}_{1-x}\text{Ni}_x\text{O}_3$ manganite, *Journal of Magnetism And Magnetic Materials*. 491 (2019) 165609. <https://doi.org/10.1016/j.jmmm.2019.165609>.
20. I. Abdel-Latif, A. Ahmed, H. Mohamed, S. Saleh, J. Paixão, K. Ziq, M. Kh. Hamad et al., Magnetocaloric effect, electric, and dielectric properties of $\text{Nd}_{0.6}\text{Sr}_{0.4}\text{Mn}_x\text{Co}_{1-x}\text{O}_3$ composites, *Journal Of Magnetism And Magnetic Materials*. 457 (2018) 126-134 . <https://doi.org/10.1016/j.jmmm.2018.02.087>
21. IA Ansari, E El-Nahari, AF Salem, KA Ziq, “The study of normalized pinning force behavior in $\text{Mg}_{1-x}\text{Ti}_x\text{B}_2$ superconductor”, *Indian Journal of Physics* 94 (4), (2020); 485-491
22. Mais Jamil A. Ahmad, Mousa M. Abdul-Gader Jafar, Mahmoud H. Saleh, Khawla M. Shehadeh, Ahmad Telfah, Khalil A. Ziq, Roland Hergenröder, “Evaluation of Kinetic Parameters and Thermal Stability of Melt-Quenched $\text{Bi}_x\text{Se}_{100-x}$ Alloys ($x \leq 7.5$ at%) by Non-Isothermal Thermogravimetric Analysis” *Applied Microscopy* 2017;47(3):110-120.
23. A. F. Salem, Kh. A. Ziq and A. Bahgat, “Vortex shaking and avalanches in MgB_2 superconductors” *Arabian Journal of Science and Engineering*, Feb 2015.
24. Intikha A. Ansari, M. Shahabuddin, Nasser S. Alzayed, **Khalil A. Ziq**, A.F. Salem, V.P.S. Awana and H. Kishanc “Enhancement of critical current density for nano (n)-ZnO doped MgB_2 superconductor” *Physics C*. 495, 15 December 2013, Pages 208–212.
25. M. Shahabuddin, Intikhab A. Ansari, Nasser S. Alzayed, **Khalil A. Ziq**, A.F. Salem “Effect of Nano ZnO Doping on the Nature of Pinning of MgB_2 Superconductors. *J Supercond Nov Magn* (2013) 26:1547–1552.

26. Salem, A.F., **Ziq, K.A.**, Bahgat, A.A “Scaling Behavior in Aluminum Doped MgB₂ Superconductor” J Supercond Nov Magn (2013) 26:1517–1520.
27. KA Ziq, H Hashem; “Gamma radiation effects on GdBa₂Cu₃O₇ high temperature superconductor” Physica Status Solidi c 3 (9), 2975-2977
28. MK Hamad, Y Maswadeh, KA Ziq, “Effects of Ni substitutions on the critical behaviors in Nd_{0.6}Sr_{0.4}Mn_{1-x}Ni_xO₃ manganite” Journal of Magnetism and Magnetic Materials 491, 165609, 2019, also see arXiv preprint arXiv:1907.10344 2019
29. MK Hamad, KA Ziq, “ Critical behavior of CrTe_{1-x}Sb_x ferromagnet”, AIP Advances 8 (10), 101416, 2018
30. RM Hamad, TS Kayed, S Kunwar, KA Elsayed, E Abu-Ruz, KA Ziq, “Effects of Iron Contents on the Vortex State in Fe_xSe_{0.5}Te_{0.5}”. Journal of Superconductivity and Novel Magnetism 31 (6), 2018.
31. Intikhab A. Ansari, E. El-Nahari, Kh. A. Ziq, Critical current and pinning forces in Ti-substituted MgB₂ superconductor. Indian J. of Physics, Feb. 2018.
32. A. Abdel-Latif, A. M. Ahmed, H. F. Mohamed, S. A. Saleh, J. A. Paixão, Kh A. Ziq, M. Kh. Hamad, E G Al-Nahari, M. Ghoza, S. Allam “Magnetocaloric effect, electric, and dielectric properties of Nd_{0.6}Sr_{0.4}Mn_xCo_{1-x}O₃ composites” J. Magn. Magn. Mater. 457, (2018), 126-134
33. R. M. Hamad, T. S. Kayed, S. Kunwar, K. A. Elsayed, E. Abu-Ruz and Kh. A. Ziq, “Effects of iron contents on the vortex state in Fe_xSe_{0.5}Te_{0.5}” Journal of Superconductivity and Novel Magnetism, Oct 2017.
34. Mais Jamil A. Ahmad, Mousa M. Abdul-Gader Jafar, Mahmoud H. Saleh, Khawla M. Shehadeh, Ahmad Telfah, Khalil A. Ziq, Roland Hergenröder, “Evaluation of Kinetic Parameters and Thermal Stability of Melt-Quenched Bi_xSe_{100-x} Alloys (x ≤7.5 at%) by Non-Isothermal Thermogravimetric Analysis” Applied Microscopy 2017;47(3):110-120.
35. T. Frawley, R. Schoonmaker, S. H. Lee, C.-H. Du, P. Steadman, J. Stempfer, Kh. A. Ziq, S. J. Clark, T. Lancaster, and P. D. Hatton, “Elucidation of the helical spin structure of FeAs”. Phys. Rev. B 95, 064424, 22 February 2017.
36. KA Ziq, M. Abu Baker, M Faiz, E. El-Nahari “On the phase diagram of CrAs_{1-x}Sb_x”, Journal of Physics: Conference Series 869 (1), 012044, 2017.
37. MK Hamad, IA Abdel-Latif, KA Ziq “Effect of cobalt doping in Nd_{1-x}Sr_xMn_{1-y}Co_yO₃”, Journal of Physics: Conference Series 869 (1), 012032, 2017.
38. RM Hamad, TS Kayed, S Kunwar, KA Ziq, “Thermally activated flux flow in FeSe_{0.5}Te_{0.5} superconducting single crystal” Journal of Physics: Conference Series 869 (1), 012034, 2017.
39. S Kunwar, RM Hamad, KA Ziq, “Coexistence of Weak and Strong Coupling Mechanism, in an Iron-Based Superconductor FeSe_{0.5}Te_{0.5}: Possible Signature of BCS-BEC Crossover” Journal of Superconductivity and Novel Magnetism, 1-6, 2017.
40. A. F. Salem, Kh. A. Ziq and A. Bahgat, “Vortex shaking and avalanches in MgB₂ superconductors” Arabian Journal of Science and Engineering, Feb 2015.

41. K. Harrabi, A. F. Salem, **K. Ziq**, A. I. Mansour, S. Kunwar, J. P. Maneval, G. Berdiyrov “Characterization of the current-induced resistive spots in superconducting YBa₂Cu₃O₇ strips”. *Appl. Phys. A* (2014) 117:2033–2036, DOI 10.1007/s00339-014-8613-y
42. Y. A. Hamam, H. M. EL-Ghanem, I. M. Arafa, **Kh. A. Ziq** and M. R. Said, *Jordan J. of Physics*; 7 1 23-34 Magnetic properties of Coll, CollI and Coll–III coordinated polymer”. Yarmouk University 2014
43. A.I. Mansour · **Kh. Ziq** · A.F. Salem · R. Hamam “Effect of Ultrafast Thermal Quenching on the Transport and Magnetotransport Properties of Nd_{0.67}Sr_{0.33}MnO₃”; *J Supercond Nov Magn*, 27, (2014) 183-186. DOI 10.1007/s10948-013-2236-y
44. Intikha A. Ansari, M. Shahabuddin, Nasser S. Alzayed, **Khalil A. Ziq**, A.F. Salem, V.P.S. Awana and H. Kishanc “Enhancement of critical current density for nano (n)-ZnO doped MgB₂ superconductor” *Physics C*. 495, 15 December 2013, Pages 208–212.
45. **Kh. A. Ziq** and A. F. Salem “Magnetic properties of FeAs single crystal” *J. Supercond Nov Magn* (2013) 26:1185–1188.
46. M.M. Abdelhadi · **K.A. Ziq**; Effect of Mn-Site Doping with Nickel on the Electric and Magnetic Properties of Sm_{0.55}Sr_{0.45}MnO₃ Manganites, 1. *J Supercond Nov Magn* (2013) 26:1445–1450.
47. M. Shahabuddin, Intikhab A. Ansari, Nasser S. Alzayed, **Khalil A. Ziq**, A.F. Salem “Effect of Nano ZnO Doping on the Nature of Pinning of MgB₂ Superconductors. *J Supercond Nov Magn* (2013) 26:1547–1552.
48. Salem, A.F., **Ziq, K.A.**, Bahgat, A.A “Scaling Behavior in Aluminum Doped MgB₂ Superconductor” *J Supercond Nov Magn* (2013) 26:1517–1520.
49. A. Sedky and **Kh. A. Ziq** Mechanical and magnetic properties of ZnO/Fe₂O₃ ceramic varistors. *J. Superlattices and Microstructures*, 52 (2012) 99–106.
50. **Kh. A. Ziq**, A. Ismail, A. F. Salem, Shakeel Ahmed, and A. Ghannam Effects of Cu-Doping on the Magnetic State of Zn_{0.9-x}Fe_{0.1}Cu_xO *J. Nanosci. Nanotechnol.* 11, 2579-2582 (2011)
51. **K. A. Ziq** and B. Al-Harhi “Effect of Cr-doping on the magnetic state of Er_{0.55}Sr_{0.45}Mn_{1-x}Cr_xO₃. *Journal of Superconductivity and Novel Magnetism*, 24, Issue 1-2, January 2011, pp 299-302
52. M. M. Abdelhadi and **K. A. Ziq**; Effect of Nickel Doping on the Magnetotransport Properties of Sm_{0.55}Sr_{0.45}MnO₃ Manganites *Journal of*

Superconductivity and Novel Magnetism, 24, Issue 1-2, January 2011, pp 319-323

53. A. Salem, A. E. Al-Salami, **K. A. Ziq** and H. Adrian "Preparation and Characterization of Nanometer Grained High Temperature Superconducting High-Quality Epitaxial Bi-2223 Thin Films Grown by DC Sputtering" Journal of Superconductivity and Novel Magnetism, 24, Issue 1-2, January 2011, pp 159-163
54. **Kh. A. Ziq**, I. Afef "Magnetic properties of Cu doped ZnO:Fe semiconductor" International Journal of Nanoscience, Vol. 9, No. 6 (2010) 591-594.
55. Abdulaziz A. Bagabas, **Khalil A. Ziq**, Ahmed F. Salem and Emad S. Abdurrihem "Magnetic Properties of Some Hydrated Transition Metal Oxide and Hydroxide Nanoparticles Synthesized in Different Media" Multi-functional Materials and structure –Advanced Material Research Vol., 123-125 (2010) 727-730.
56. P. A. Jalil and **Kh. A. Ziq** "Improving of Cognitive and Meta-cognitive Skills of the Students in View of the Educational Practices in the Gulf Region" Journal of Turkish Science Education, 6(3), (2009) 3.
57. Lemine, O.M.; Msalam, R.; Alyamani, A.; Sajieddine, M.; Mufti, S.; Ziq, K.; Salem, A.F.; Bououdina, M "Structural and magnetic properties of hematite nanocrystalline obtained by ball milling" International Journal of Nanosciences, 8, (2009), 267.
58. I. A. Ansari, M. Shahabuddin, **K. A. Ziq**, A. F. Salem, V. P. S. Awana, M. Husain, H. Kishan, "The effect of nano-alumina on structural and magnetic properties of MgB₂ superconductors" Superconductor Science & Technology 20, 8 (2007) 827.
59. A. M. Shemsia, B. El Ali, **Kh. A. Ziq**, M. Morsy, T. D. Keene, S. Decurtins and M. Fettouhia "Mixed-ligand platinum and palladium complexes based on dinitrogen chelating ligands and a pyridine bearing the nitronyl nitroxide radical" Inorganic Chemistry Communications 10 (2007) 1355–1359.
60. M. Faiz, **Kh. A. Ziq**, N. M. Hamdan, J. Shirokoff, and A. S. Al-Harhi. "Effect of Annealing on the Hole Content of Tl-1234 Superconductor" Submitted to "Journal of Electron Spectroscopy and Related Phenomena" (2009).
61. Kh. A. Ziq, H. El-Ghanem, I. Arafa, Y. Hamam "Spin glass behavior in complexes of iron doped coordinated polymers" Journal of Non-Crystalline Solids, Volume 354, Issues 12-13, 15 February 2008, Pages 1386-1388
62. **Kh. A. Ziq** and H. Qadi " Hydrogen effects on vortex pinning in GdBa₂Cu₃O₇ high temperature superconductor" phys. stat. sol. (c) 3, No. 9, (2006)2999–3001.

63. **Kh. A. Ziq** and H. Hashem "Gamma radiation effects on GdBa₂Cu₃O₇ high temperature Superconductor" *phys. stat. sol. (c)* 3, No. 9, (2006) 2975–2977.
64. **Kh. A. Ziq**, J. Shirokoff and S. Al-fear "Residual surface stress measurements in YBa₂Cu₃O_x superconductors" *Applied Surface Science*, 252, (2005) 916-920.
65. **Kh. A. Ziq** "On the thermodynamic critical field in MgB₂ superconductor" *Journal of Alloys and Compounds* 397 (2005) 265.
66. A. Mekki, **Kh. A. Ziq**, D. Holland and C.F. McConville, "Magnetic Properties of Praseodymium Ions In Na₂O-Pr₂O₃-SiO₂ Glasses" *Journal of Magnetism And Magnetic Materials* 260 (1-2): (2003) 60.
67. A. El-Ali, K. A. Azez, I. A. Al-Omari, J. Shobaki, M. K. Hasan, B. A. Albeiss and K. Khasawneh, **Kh. A. Ziq**, A. F. Salem, " The Paramagnetic Contribution in The Magnetization Behavior Of Y_{1-x}Gd_xBa₂Cu₃O₇" *Physica B-Condensed Matter* 321 (1-4), (2002) 320.
68. **K A Ziq**, A F Salem and D K Finnemore "Scaling Of The Flux Pinning In La_{1.45}Nd_{0.4}Sr_{0.15}CuO₄ Stripe Phase Superconductor" *Physica B-Condensed Matter* 321 (1-4): 317-319 (2002)
69. A Mekki, **K A Ziq**, Holland D and C F McConville "An XPS And Physical Property Study Of Sodium Praseodymium Silicate Glass Structure" *Physics and Chemistry of Glasses* 43 (1): 41-46 (2002).
70. **K A Ziq** and A Mekki "Environmental Effect on the Magnetic Properties of Fe Ions In Glasses And Ceramics" *Journal of Non-Crystalline Solids* 293: 688-692 (2001).
71. **K. A. Ziq** "Oxygen content and disorder effects on the critical current density in YBa₂Cu₃O_x" *Superconductor Science and Technology* 14 (1): 30-33 (2001).
72. A. Mekki, D. Holland, **Kh. A. Ziq** and C. F. McConville "Structural and Magnetic Properties of Sodium Iron Germanate Glasses" *Journal of Non-Crystalline Solids* 272 (2-3): 179-190 (2000)
73. **K. A. Ziq**, P. C. Canfield, J. E. Ostenson and D. K. Finnemore "Scaling of flux pinning with thermodynamic critical field" *Physical Review B* 60 (5): 3603-3607 (1999).
74. N M Hamdan, **K A Ziq** and A S Al-Harathi " Effect of Fluorine on the Phase Formation and Superconducting Properties of Tl-1223 Superconductors" *Physica C* 314 (1-2): 125-132 (1999)
75. M. Faiz, X. Zhou, E. J. Moler, Z. Hussain, N.M. Hamdan and **Kh. A. Ziq** "An X-Ray Absorption Spectroscopic Study of YBa₂Cu_{3-x}Fe_xO_{7+y}" *Journal of Electron Spectroscopy And Related Phenomena* 103: 707-711 (1999).
76. M. Faiz, M. Ahmed, N. M. Hamdan, **Kh. A. Ziq** and J. Shirokoff "Study of Metal Distributions In YBa₂Cu₃O_{7-x}/Ag₂O Composites" *Superconductor Science and Technology* 11 (6): 558-562 (1998).

77. N M Hamdan, **K A Ziq**, A. S. Al-Harhi and J. Shirokoff "The Effect of Fluorine on The Phase Formation And Properties of Tl-Based Superconductors" *Journal of Superconductivity* 11 (1): 95-96 (1998).
78. A Mekki A, **K A Ziq** "Magnetic Properties of a SiO₂-Na₂O-Fe₂O₃ Glass And Glass Ceramic" *Journal Of Magnetism and Magnetic Materials* 189 (2): 207-213 (1998).
79. A Mekki, D Holland, **K Ziq** and C. F. McConville "Magnetisation and XPS Studies of the Redox State of Copper In SiO₂-Na₂O-CuO Glasses" *Physics And Chemistry Of Glasses* 39 (1): 45-49 (1998).
80. A Mekki, D Holland, **K Ziq** and C. F. McConville "XPS and Magnetization Studies Of Cobalt Sodium Silicate Glasses" *Journal of Non-Crystalline Solids* 220 (2-3): 267-279 (1997).
81. A. A. Pramana, **K A Ziq** and N M Hamdan "Magnetic Energy Loss In Polycrystalline YBa₂Cu₃O_{7-d} with Varying Oxygen Content" *Physica C* 282: 1445-1446 Part 3 (1997).
82. N. M. Hamdan **Kh. A. Ziq** and A. S. Al-Harhi "Effect of Fluorine on the Critical Current Density of Thallium Based High T_c Superconductors" *Journal of Low Temperature Physics* 105 (5-6): 1493-1498 (1996).
83. **K A Ziq** and M M Abdelhadi "Non-Ohmic I-V Behavior In YBa₂Cu₃O_{7-d}/Ag₂O High T-C Superconductors Composite" *Journal of Low Temperature Physics* 105 (5-6): 1141-1146 (1996).
84. **K A Ziq**, MM Abdelhadi, NM Hamdan and A. Al-Harhi "Non-Ohmic I-V Behaviour In Granular YBa₂Cu₃O_{7-d} and (Bi,Pb)₂Sr₂Ca₂Cu₃O₁₀ High-T_c Superconductors" *Superconductor Science and Technology* 9 (3): 192-196 (1996).
85. N M Hamdan and **Kh. A. Ziq** "Critical Behavior in Flux Flow Resistance in Bi-based High-T_c Superconductor" *Abhath Al-Yarmouk* 4 51 (1995).
86. **Kh. A. Ziq** and M M Abdelhadi "Viscous Flow in YBCO/(Ag₂O)_x High-T_c Superconductor, *Abhath Al-Yarmouk* 4 77 (1995).
87. N M Hamdan, H Ozkan, **K A Ziq** and M. Albess "Variation of the Lattice-Parameters of a Bi-Based Superconductor with Temperature" *Physica C* 235: 1235-1236 Part 2 (1994).
88. **K A Ziq**, NM Hamdan and J Shirokoff "Anisotropic Stress Measurements on High T-C Superconductors" *Physica C* 235: 1217-1218 Part 2 (1994).
89. N M Abdelhadi and **K A Ziq** "The Behavior of the Flux-Flow Resistance in YBCO/(Ag₂O)_x" *Superconductor Science and Technology* 7 (3): 99-102 (1994).
90. N M Hamdan, **K A Ziq** and J Shirokoff "Anisotropic Stress of a (Bi-Pb)₂Sr₂Ca₂Cu₃O₁₀ High-T_c Superconductor" *Superconductor Science and Technology* 7 (3): 118-120 (1994).

91. N M Hamdan, **K A Ziq**, A B Hallak, and H. Ozcan "Anisotropic Changes Induced By Ion Irradiation On Bi-Based High Tc Superconductors" Solid State Communications 87 (12): 1129-1131 (1993).
92. K A Ziq and J S Kouvel "Rotational Behavior and Symmetry of the Induced Anisotropy in a Cu-Mn Spin-Glass Alloy" Journal of Magnetism and Magnetic Materials 98 (3): 245-249 (1991).
93. **K A Ziq** and J S Kouvel "Rotational Magnetic-Properties Of Ni-Mn And Au-Fe Spin-Glass Alloys" Physical Review B 41 (7): 4579-4586 (1990)
94. **K A Ziq** and J.S. Kouvel "Isothermal Anisotropy Rotation in a Au-Fe Spin Glass Alloy" Journal of Applied Physics 63 4346 (1988).
95. **K A Ziq** and J S Kouvel "Spin-Glass Domains In Cu-Mn" Journal of Magnetism and Magnetic Materials 75 (1-2): 149-153 (1988).
96. J S Kouvel, W Abdulrazzaq and **K Ziq** "Ferro-Spin-Glass Domain Model For Disordered Ni-Mn" Physical Review B 35 (4): 1768-1775 (1987)
97. **K Ziq** and J. S. Kouvel "Magnetization-Vector Measurements on a Ni-Mn Spin-Glass Alloy" Journal of Applied Physics 61 (8): 3625-3627 Part 2A (1987).
98. A.M. Hindeleh, N. A. Halim and **K A Ziq** "Solid-State Morphology And Mechanical-Properties Of Kevlar-29 Fiber" Journal of Macromolecular Science-Physics B23 (3): 289-309 (1984)

Conference Presentation:

1. International Conference on Magnetism ICM July 15-20-2018, SAN FRANCISCO USA.
2. Kh. A. Ziq "**Effects of disorder in ZnO-CuO**" International Conference on Superconductivity and Magnetism , Turkey, 2016 (ICSM2016).
3. Kh. A. Ziq, A. F. Salem "Thermodynamic scaling in FeSe_{0.5}Te_{0.45} Single Crystal" EUCAS _ Sept 15-30-2013 Genoa Italy.
4. Kh. A. Ziq, A. F. Salem "Energy gap in MgB₃ SCI" EUCAS _ Sept 15-30-2013 Genoa Italy.
5. K.A. F Salem "Phase slip in HTSC" EUCAS _ Sept 15-30-2013 Genoa Italy.
6. Kh. A. Ziq "**Magnetic properties of FeAs single crystal**" 3rd International Conference on Superconductivity and Magnetism Istanbul, Turkey, April 29- May 4-2012 (ICSM2012).
7. A. Fathi, Kh. A. Ziq "**Ac susceptibility of doped MgB₂ superconductors**" 3rd International Conference on Superconductivity and Magnetism Istanbul, Turkey, April 29- May 4-2012 (ICSM2012).
8. Kh. A. Ziq "**Magnetic and transport properties of FeAs and RhAs**" 2rd International Conference on Superconductivity and Magnetism Istanbul, Turkey, April 29- May 4-2010 (ICSM2010).
9. Abdulaziz A. Bagabas, **Khalil A. Ziq**, Ahmed F. Salem and Emad S. Abdurrihem "Magnetic Properties of Some Hydrated Transition Metal Oxide and Hydroxide Nanoparticles Synthesized in Different Media"

- Multi-functional Materials and structure –III conference (MMFS)
Hosted by Jeollabbuk-do, Chonbuk National University _Korea 2009
10. M.M. Abdelhadi • K.A. Ziq; 3rd International Conference on Superconductivity and Magnetism Istanbul, Turkey, April 29- May 4-2012 (ICSM2012).
 11. 5. Salem, A.F., Ziq, K.A., Bahgat, A.A “3rd International Conference on Superconductivity and Magnetism Istanbul, Turkey, April 29- May 4-2012 (ICSM2012).
 12. K. A. Ziq and B. Al-Harhi “3rd International Conference on Superconductivity and Magnetism Istanbul, Turkey, April 29- May 4-2012 (ICSM2012).
 13. A. Salem, A. E. Al-Salami, K. A. Ziq and H. Adrian 2nd International Conference on Superconductivity and Magnetism Antalya, Turkey, April 29- May 4-2010 (ICSM2010).
 14. Abdulaziz A. Bagabas, **Khalil A. Ziq**, Ahmed F. Salem and Emad S. Abdurrihem “ Magnetic Properties of Some Hydrated Transition Metal Oxide and Hydroxide Nanoparticles Synthesized in Different Media” Multi-functional Materials and structure –III conference (MMFS-2010) Hosted by Jeollabbuk-do, Chonbuk National University _Korea
 15. Kh. A. Ziq, I. Afef, A.F. Salem, A. Shakeel and A. Ghannam "Enhanced ferromagnetic properties of Cu doped ZnO:Fe semiconductor" ICMAT Singapore 2009.
 16. Kh. A. Ziq, I. Afef, A.F. Salem, A. Shakeel and A. Ghannam "Magnetic properties of Cu doped ZnO:Fe semiconductor" International conference on Nanotechnology and Advanced Materials, Bahrain 4 – 7 May 2009.
 17. D. M. Al-Shangiti , and Kh. A. Ziq "Vortices Fluctuation of Zn- doped Tl-1223 Superconductor" International conference on superconductivity and Magnetism-ICSM-2008, August 25-29 Side-Antalya, Turkey.
 18. D. M. Al-Shangiti, and Kh. A. Ziq "Non Local Effect in Zn-doped Tl-1223 Superconductor" International conference on superconductivity and Magnetism-ICSM-2008, August 25-29 Side-Antalya, Turkey.
 19. Kh. A. Ziq, A. F. Salem, and A. Ghannam "Vortex shaking effects in MgB₂ superconductor" International conference on superconductivity and Magnetism-ICSM-2008, August 25-29 Side-Antalya, Turkey.
 20. A. F. Salem, Kh. A. Ziq, and A. Bianconi "Vortex avalanches effects in Al doped MgB₂ superconductor" International conference on superconductivity and Magnetism-ICSM-2008, August 25-29 Side-Antalya, Turkey.
 21. M. Faiz, A. Fathi, N. Tabet and Kh. A. Ziq "XPS, XRD, and AFM Characterization of Mg_{1-x}Al_xB₂ Superconductor" International conference on superconductivity and Magnetism-ICSM-2008, August 25-29 Side-Antalya, Turkey.

22. Kh. A. Ziq, A. F. Salem, M. M. Faiz, A. Ghannam "Magnetic and XPS of $\text{SmAsFe}_{1-x}\text{V}_x\text{O}$ superconductor" International conference on superconductivity and Magnetism-ICSM-2008, August 25-29 Side-Antalya, Turkey
23. **Kh. A. Ziq**, M. Shahabuddin, Intikhab A. Ansari, **A. F. Salem**, H. Kishan "Effects of Al_2O_3 Nano-Particles on the Irreversible Properties of MgB_2 Superconductor" . AIP Proceedings of the First Sharja International Conference on Nanotechnology and its Applications, 10-12 April, 2007, Sharja.
24. K. A. Ziq "Spin Glass behavior in Complexes of coordinated Polymers" Proceedings of 2005 International Symposium on Glass in Connection with the Annual Meeting of the International Commission on Glass. ISG/ICG 2005, April 10-14 2005. Shanghai, China. SC2-6, 15:35-15:55
25. **K. A. Ziq** and F. Enaya
Energy losses in $\text{YBa}_2\text{Cu}_4\text{O}_8$ high-Tc superconductors
6th Annual IEEE Technical Exchange meeting. Dhahran, April 20-21 (1999) 168.
26. **K. A. Ziq**, N. M. Hamdan and A.S. Al-Harhi
"Temperature Dependence of the magnetic energy losses in a $(\text{Bi,Pb})_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10-\delta}$ High-Tc Superconductor" Proceedings of the 10th International Symposium on Superconductivity, Gifu, Japan, October 27-30 (1997)585.
27. A.S. Al-Harhi, N. M. Hamdan, and **K. A. Ziq**
"Fluorination of the over-doped Tl-1223 Superconductor" Proceedings of the 10th International Superconductivity Symposium, Gifu, Japan, October 27-30 (1997) 383.
28. **K. A. Ziq** and M. Abdelhadi
Viscous Flow in $\text{YBCO}/(\text{Ag}_2\text{O})_x$ High-Tc Superconductor" Proceedings of the First symposium Magnetism and Superconductors, Yarmouk University Jordan Nov. 22-24 (1993) 141.
29. N. Hamdan and **K A. Ziq**
Critical Behavior in Flux Flow Resistance in Bi-based High-Tc Superconductor
Proceedings of the First symposium Magnetism and Superconductors, Yarmouk University Jordan Nov. 22-24 (1993) 145.
30. N. Hamdan and **Kh. A. Ziq**
Critical Currents and Pinning forces in $(\text{Bi, Pb})_2\text{Sr}_2\text{Cu}_3\text{O}_{10}$ Hi-Tc Superconductors
Proceedings of the Materials and Material Science Workshop Oman, Jan 19 (1992) 493.

Local and National Conference Presentations:

1. Nano Particles Inclusion in MgB_2 Superconductor, E. G. Al-Nahari and Kh. A. Ziq, *Frontiers in theoretical and Applied Physics*, Sharjah UAE (FTAPS2017)
2. Thermally activated flux flow in $FeSe_{0.5}Te_{0.5}$ Superconducting single crystal R M Hamad, Kh A Ziq, T S Kayed and S. Kunwar, *Frontiers in theoretical and Applied Physics*. Sharjah UAE (FTAPS2017).
3. On the Phase diagram of $CrAs_{1-x}Sbx$, Kh. A. Ziq, M. Abubaker, M. Faiz and E. Al-Nahari *Frontiers in theoretical and Applied Physics*, Sharjah UAE (FTAPS2017).
4. Effects of Al_2O_3 Nano-Particles on the Irreversible Properties of MgB_2 Superconductor Kh. A. Ziq, M. Shahabuddin, Intikhab A. Ansari, A. F. Salem, H. Kishan First Sharja International Conference on Nanotechnology and its Applications, Sharja, 10-12 April, 2007.
5. "High-temperature ferromagnetism in Fe-doped $ZnO:Cu$ " Kh. A. Ziq and Afef I. Taleb Third Saudi Science Conference "New Horizons In Science And Their Applications" 10-13 March 2007.
6. "Non-local effects in $TlBa_2Ca_2Cu_3O_9$ superconductor" Dalal Alshagetti and Kh. A. Ziq, Third Saudi Science Conference "New Horizons In Science And Their Applications, 10-13 March 2007
7. "Thermodynamic critical field Scaling of the critical current density and pinning forces in $GdBa_2Cu_3O_7$ superconductor" Kh. A. Ziq and Hala AlHashem Third Saudi Science Conference "New Horizons In Science And Their Applications" 10-13 March 2007
8. "On the magnetic state of $R_{0.55}Sr_{0.45}MnO_3$ " Kh. A. Ziq, B. Alharthi, Third Saudi Science Conference" New Horizons In Science And Their Applications " 10-13 March 2007
9. "Hydrogenation effects on critical current density and pinning forces in $GdBa_2Cu_3O_7$ superconductor" Kh. A. Ziq and Haifa Qadi Third Saudi Science Conference" New Horizons In Science And Their Applications" 10-13 March 2007.
10. "Thermodynamic Critical Field in MgB_2 Superconducting Samples Doped with Ti" A. F. Salem, K. A. Ziq, A. A. Ghannam and F. Enaya " Third Saudi Science Conference" New Horizons In Science And Their Applications" 10-13 March 2007.
11. "Pinning forces and critical current density in Carbon doped MgB_2 Superconducting" K. A. Ziq, F. Enaya A. F. Salem, A. and A. Ghannam Third Saudi Science Conference" New Horizons In Science And Their Applications " 10-13 March 2007.
12. Giant magnet-resistance in $Sm_{0.55}Sr_{0.45}MnO_3$ " M. Abdelhadi and Kh. A. Ziq Third Saudi Science Conference" New Horizons In Science And Their Applications" 10-13 March 2007
13. Kh. A. Ziq and H. Hashem "Gamma radiation effects on $GdBa_2Cu_3O_7$ high temperature Superconductor" Sept 2005 Agadir Morocco.

14. Kh. A. Ziq and H. Qadi " Hydrogen effects on vortex pinning in $\text{GdBa}_2\text{Cu}_3\text{O}_7$ high temperature superconductor" Sept 2005 Agadir Morocco.
15. Kh. A. Ziq, A. F. Salem, A. Ghannam and F. Enaya " Vortex Shaking in MgB_2 superconductor. Sept 2005 Agadir Morocco
16. K. A. Ziq "On the reversible magnetization in MgB_2 superconductor" 2nd Saudi science conference April 2004 Jeddah Saudi Arabia
17. K. A. Ziq "Vortex pinning in MgB_2 superconductors" EUCAC Salerno Italy August 2003.
18. K. A. Ziq and H. Hashem "Gamma ray irradiation effect on $\text{GdBa}_2\text{Cu}_3\text{O}_7$ high temperature superconductor" 2nd Saudi science conference April 2004 Jeddah Saudi Arabia
19. K. A. Ziq and D. Alshangetti "On the condensation energy of TI-based high temperature Superconductor" 2nd Saudi science conference April 2004 Jeddah Saudi Arabia
20. K. A. Ziq and H. Qadi "Hydrogen effect on $\text{GdBa}_2\text{Cu}_3\text{O}_7$ high temperature Superconductor" 2nd Saudi science conference April 2004 Jeddah Saudi Arabia
21. F. Enaya and K. A. Ziq "Remanent Magnetization and irreversible field in $\text{YBa}_2\text{Cu}_4\text{O}_8$ high temperature Superconductor" 2nd Saudi science conference April 2004 Jeddah Saudi Arabia
22. K. A. Ziq and A. F. Salem, A. Ghannam "Substitution effects in MgB_2 Superconductor" 2nd Saudi science conference April 2004 Jeddah Saudi Arabia.
23. J.A. Johnson, D. Holland, A. Mekki, K. A. Ziq and C.F. McConville, "The structure of glasses by pulsed neutron diffraction and X-ray photoelectron spectroscopy" International Conference on Advanced Ceramics and Glasses, November 4-8, 2001, Hawaii, USA.
24. K. A. Ziq and A. F. Salm D. Finnemore "Thermodynamic Scaling in the Strip Phase" The second regional conference on magnetic and superconducting materials. Sept 2001, Yarmouk Univ. Irbid Jordan.
25. El-Ali, K. A. Ziq, A. F. Salim, K. A. Azez, I. A. Al-Omari, J. Shobaki, M. K. Hasan, B. A. Albeiss and K. Khasawneh "Effect of Gd-contents on the superconducting properties of $\text{Y}_{1-x}\text{Gd}_x\text{Ba}_2\text{Cu}_3\text{O}_7$ ". The second regional conference on magnetic and superconducting materials. Sept 2001, Yarmouk Univ. Irbid Jordan.
26. K. A. Ziq and F. Enaya "Scaling behavior of the energy losses in $\text{YBa}_2\text{Cu}_4\text{O}_8$ high temperature superconductor". First Saudi Science conference, KFUPM, Dhahran April 9-11 (2001) 168.
27. K. A. Ziq and A. Mekki "On the magnetic behavior of Fe-ions in sodium silicate and sodium germinate glasses" First Saudi Science conference, KFUPM, Dhahran April 9-11 (2001)

28. K. A. Ziq and A. A. Pramana DN "Oxygen disorder effects on the critical current density and pinning forces in YBa₂Cu₃O_x" First Saudi Science conference, KFUPM, Dhahran April 9-11 (2001)
29. K. A. Ziq and E. Abdul Hafidh "Effects of Ag₂O on Pinning Force in YBa₂Cu₃O₇ Superconductors" First Saudi Science conference, KFUPM, Dhahran April 9-11 (2001).
30. K. A. Ziq, S.N. Alfaer, J. Shirokoff "Residual stress measurements in YBa₂Cu₃O_x superconductors" First Saudi Science conference, KFUPM, Dhahran April 9-11 (2001).
31. K. A. Ziq and A. F. Salem "Thermodynamic critical field in Y_{1-x}Gd_xCu₃O₇ high T_c superconductors" First Saudi Science conference, KFUPM, Dhahran April 9-11 (2001).
32. K. A. Ziq and A. Mekki "Environmental effect on the magnetic properties of Fe ions in silicate and germanate glasses and ceramics", Published in the Proceedings of the 8th International Conference on the Structure of Non-Crystalline Materials, August 6-11, 2000, Aberystwyth, Wales, UK.
33. M. Faiz, X. Zhou, E. J. Moler, Z. Hussain, N.M. Hamdan and K. A. Ziq "An X-ray Absorption Spectroscopy Study of YBa₂Cu_{3-x}FexO_{7+y} VUV-12 Conference, San Francisco, Ca, USA, Aug. 3-7, 1998.
34. Kh. A. Ziq "The Induced Anisotropy in a Reentrant Ni-Mn Spin-Glass Alloy" Abstract. International Conference on Condensed Matter Physics. 13-16 April 1992, Bahrain.
35. Kh. A. Ziq "Critical Current Measurements in Y (123) Hi-Tc Superconductors" International conference on Condensed Matter Physics 13-16 April 1992, Bahrain.
36. Kh. A. Ziq "Rotational Behavior of "The Induced Anisotropy in a Cu Mn Spin-Glass Bul. American Phys. Soc. 36, No.3 (1991) 342.
37. Kh. A. Ziq "On the diamagnetic Response of trapped flux status in Y123 Hi-Tc Superconductor", Bul. American. Phys. Soc., 36,3 (1991) 670.
38. Kh. A. Ziq "On the Field Cooled Induced Anisotropy in spin Glass", Bul. Am. Phys. Soc. 35 (1990).
39. Kh. A. Ziq "Rotational Behavior of the Induced Anisotropy in a Cu-Mn Spin-Glass Alloy", Physical Society, March 1991. ", American Physical Society, March 1991.
40. Kh. A. Ziq "On the Induced Anisotropy in Spin-glass", American Physical Society, March 1990.
41. **Kh. A. Ziq** and M. M. Abdelhadi "Non-Ohmic I-V behavior in YBa₂Cu₃O₇/Ag₂O High-Tc Superconductor Composite. MOS-96 Conference Aug. 2-6-1996.
42. Hamdan **Kh. A. Ziq** and A. S. Al-Harhi "Effect of Fluorine on the Critical Current Density of Thallium Based High T_c Superconductors. MOS-96 Conference Aug. 2-6-1996.
43. "Rotational Magnetic Processes in Spin-Glasses", The International Conference on Magnetism, Paris, July 1988.

44. N. M. Hamdan, Kh. A. Ziq, B. A. Albis and H. Ozkan "Variation of the lattice parameters of Bi-based superconductors" M²S HTSC-IV International Conference on High Tc Superconductors, Grenoble, France, 7-9 July 1994.
45. Kh. A. Ziq "Using Mathematical In Energy Band Calculations" Work - Shop on Using Computer in Physics Al-Ain UAE. March 1996.
46. Faiz, M. Ahmed, **Kh. A. Ziq** and M. Al-Ohali "Study of Metal Distribution in High-Tc Superconductors by Micro-PIXE" 21st International Nathiagali Summer College on Physics and Contemporary Needs. 27th June-11th July 1996.
47. Pramana, **Kh. A. Ziq** "Magnetic Energy Losses in YBa₂Cu₃O₇ Single Crystal." 21st International Nathiagali Summer College on Physics and Contemporary Needs. 27th June-11th July 1996.
48. **Kh. A. Ziq**, N. M. Hamdan and J. Shirokoff "Anisotropic Stress measurements on high Tc superconductors" M² S HTSC-IV International Conference on High Tc Superconductors, Grenoble, France, 7-9 July 1994.
49. Kh. A. Ziq "Diamagnetic Response of Trapped flux States in Hi-Tc Superconductors. Amer. Phys Soc. March 1992.
50. A. Pramana, **Kh. A. Ziq** and N.M. Hamdan " Magnetic Energy Losses in Polycrystalline YBa₂Cu₃O₇ with Varying Oxygen Content." 5th international Conference on Materials and Mechanism of Superconductors: High-Tc Superconductors. Beijing-China Feb 20 1997
51. **Kh. A. Ziq** "Magnetic Energy Losses in High Purity Nb-Superconductor." 5th international Conference on Materials and Mechanism of Superconductors: High-Tc Superconductors. Beijing-China Feb 20 1997.

Seminars:

1. Fe-based superconductors, KFUPM Physics Dept Dec 2012.
2. Disorder effects on the magnetic properties of ZnO-Cu-Fe' KFUPM –Physics dept March 2010
3. Vortex Motion and shaking effects in MgB₂superconductors 2010
4. Magnetic properties of ZnO-TM semiconductor, KFUPM, Physics April 24, 2007.
5. Superconductivity made simple. A seminar given to High school students in AlKhobar High School October 20 2003.
6. Superconductivity and practical Applications. KFUPM Physics Department Sept 2003.
7. Introduction to Physics and Research Activities at the Physics Department. A seminar given to Orientation student at KFUPM, Oct 2003.
8. What is Physics all about? A seminar given to Orientation student at KFUPM, Feb 2003.
9. Magnetic polymer KFUPM Physics Oct 2002
10. Magnetic polymer KFUPM Chemistry March 2003
11. Superconductivity in MgB₂ System KFUPM Physics April 2003.
12. Biomagnetism. KFUPM, Physics Department, Oct. 2001.

- 13.** High Temperature superconductors and its applications. Public lecture given at OAB KFUPM-March 2001.
- 14.** High Temperature superconductors: A new beast on the loose. KFUPM, Physics Department, April 2000.
- 15.** Hydrogen in Solids. KFUPM, Physics Department, Nov. 1999
- 16.** The stripe Phase in superconductors. KFUPM, Physics Department, March 1999.
- 17.** Thermodynamical Scaling in Superconductors. KFUPM Physics Department, March 1998.
- 18.** "Magnetic Energy Losses in High-Tc Superconductors" KFUPM Physics Dept. Oct 27 1996.
- 19.** "On Residual Stress Measurements in Y123/Ag2O High-Tc Superconductors" King Abdulaziz University, Physics Department, Jeddah, April 1995.
- 20.** "Selected Topics in Teaching Basic Physics" KFUPM, Physics 1994
- 21.** "Viscous Flow in High-Tc Superconductors" KFUPM, Physics Nov. 12 1993.
- 22.** "Flux Flow Resistance in Hi-Tc Superconductors" KFUPM, Physics Department Dec. 1992.
- 23.** "Rotational Magnetic Measurements: Application to Spin-Glasses and Hi-Tc Superconductors", KSU Physics Department, May 1992
- 24.** "Critical Currents and Pinning Forces in (Bi,Pb)Sr₂Cu₃O₁₀ Hi-Tc Superconductors", Sultan Qaboos University [Oman] Jan 92
- 25.** "Reentrant Aspects of Spin-Glasses", Nov. 91, Phys. Department, KFUPM.
- 26.** "Spin-Glasses Properties of Transition Metal Alloys", KFUPM, Chemistry Department, March 1990.
- 27.** "Magnetization and Induced Anisotropy Rotation in Spin-glasses and Hi-Tc Superconductors", KFUPM, Physics department, October 1989.
- 28.** "On the Induced Anisotropy in Spin-Glasses and Hi-Tc Superconductors", King Abdulaziz University, Physics Department, Jeddah, November 1990.
- 29.** Trend in superconductivity research.: Given on Saturday's Physics Tea at the Physics Department –KFUPM.
- 30.** A new look at teaching Modern Physics. Given on Saturday's Physics Tea at the Physics Department –KFUPM.
- 31.** Physics in the structure of Cake. Given on Saturday's Physics Tea at the Physics Department –KFUPM.
- 32.** Negative Dielectric Constant. Given on Saturday's Physics Tea at the Physics Department –KFUPM.
- 33.** Shot noise and thermal noise. Given on Saturday's Physics Tea at the Physics Department –KFUPM.

Teaching:

The following courses have been taught several times at the physics department King Fahd University.

Undergraduate courses:

1. General Physics –Phys. 101 and Phys.102 for science and engineering students.
2. Physics of Semiconductors Phys. 203: For electrical engineering student.
3. Electricity and Magnetism 305.
4. Electrodynamics 306.
5. Solid State physics Phys. 432.
6. Statistical Physics Phys. 405.
7. Thermodynamics and statistical Physics.
8. Introductory Experimental Physics: Phys. 101, 102,
9. Advanced Experimental Physics 304 and 403.

Graduate courses

1. Solid State Physics 532 (several times).
 2. Low temperature Physics 530 graduate students (two times)
 3. Surface physics for graduate student Phys. 590 “Joint with Dr. Dabbosi ,Bahlouli and Salim.(One time) .
 4. Graduate experimental lab Phys. 503 (several times).
 5. Superconductivity.
 6. Magnetism and Magnetic materials.
 7. Introduction to Data analysis in Magnetisms and superconductivity.
- Dammam Girls College

Course Development

Participated in the development of the following courses:

1. Phys. 590: An advanced course in surface Science at the graduate level.
2. Phys 203 Electric and Magnetic Properties of Semiconductors.

Teaching labs Development:

Installed, tested and modified several computerized lab experiments and demonstrations for:

1. Physics 101:
2. Physics 403:

Student training activities

- Summer Training: supervised the following summer training:

1. Alamri -1990 "Superconductivity"

2. Husamedden -1993 " Vibrating Sample Magnetometer"
3. Aldhamen –1999 “Ac and Dc Magnetic measurements in Superconductors.
4. M. Alsumdani 2003 “Magnetic and superconducting properties of GdBa₂CuO₇ superconductors.

Students Seminars: supervised the following students

1. Ibrahim Alhadhod: “Phase Transition” Spring1990
2. Husamedden : “Some Aspects of the Mixed State of Hi-Tc SC” Spring 1993.
3. Amer Althukar “The concept of Vortex in Physics-Theory ” June 2002.
4. M. Hezam “The concept of Vortex in Physics-Experiment” June 2002.

Senior Courses and Lab projects:

Supervised more than 40 student projects related to class work, examples are given below:

Course	No. Of Projects	Type
Phys. 432	3	1. Energy band calculation 2. Fermi-Dirac Statistics 3. Various experiments in Hi-Tc Superconductivity 4. Shot Noise, Lock in Techniques
Phys. 304	2	1. Dielectric properties of Y(123) 2. Inductance measurements in Hi-Tc
Phys. 503	3	1 I-V Characteristics in HTS 2 Angle Resolved PES Physics in 2-D 3. Rotational Magnetic Technique in Hi-Tc S.C 4. Magnetoresistance.
Phys. 530	1	Critical Fluctuations in Superconductors

Community Service

- Editor for the Arabic abstract: Translation and scientific usage started 1993. Over 200 Abstracts have been translated.
- Voluntary work at Iowa State University: Teaching Arabic for non-Arabic speaking students.
- Presented several seminars to high school students.
- Refereed several research papers for AJSE, Physica C and B.

- Refereed several research papers for the First Workshop on material science, KACST.
- Refereed several research projects for KACST, King Abdelaziz University and Quaid-e-Azam University Pakistan.
- Served in several national and international faculty promotion committees.