

curriculum vitae
Nasser S. Alzayed (Ph.D.)

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Education:

Ph.D. Solid State Physics (Superconductivity)	University of Kansas, USA	1994
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B.Sc. Physics	King Saud University	1984

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Employment:

Demonstrator	King Saud University	1985-1988
Lecturer	King Saud University	1988-1994
Assistant prof.	King Saud University	1995-2010
Associate prof.	King Saud University	2010-Oct. 2015
Professor of Physics	King Saud University	Oct. 2015-Date

- Chairman of Physics & Astronomy Dept., King Saud University, Aug. 2009-Aug. 2011
- Chairman of the e-Learning Unit of the College of Science, King Saud University. May 2012 – May 2014.

Committees:

1. Head of the College website committee and supervisor of the College of Science computer labs (2000 to 2008)
2. Head of the Scientific Committee of the university website (2009-2011)
3. Head of the Educational Committee (Phys. Dept.), 1997/01/01 2004/12/31
4. Member of the Demonstrators Committee (Phys. Dept.), 1997/01/01 2006/06/01
5. Head of the Committee for twining with private sector (Phys. Dept.), 1997/01/01 2001/08/01
6. Member of the Curriculum Committee (Phys. Dept.), 1999/08/01 2005/08/06
7. Head of the committee to revise the Course 206 CSC (Basic Programming) (College of Science), 2000/06/01 2000/06/30

8. Member of the Physics Department Alumni committee (Phys. Dept.),2009/08/15
2011/05/10
9. Head of the Computers & Computer Labs of the College of Science 2000/05/01
2007/09/30
10. Administrator of the College website Committee 2007/06/01 2011/08/10
11. Chairman of the E-Learning & Online Courses Unit in the College of Science
2012/07/01 2014/10/30
12. Member of the Internet Committee at King Saud University 2005/07/01 2007/07/01
13. Member of the Top Supervising Committee of the e-Gate of King Saud University
2008/03/01 2011/03/01
14. Head of the Science Colleges branch committee of the e-Gate of King Saud
University 2008/03/01 2011/03/01
15. Head of the Ph.D. Program Committee (Phys. Dept.),2009/08/01 2013/08/01
16. Head of the Recruitment Committee (Saudi) (Phys. Dept.),2012/08/10 2014/12/06
17. Administrator of the Accreditation Committee (Phys. Dept.), 2009/07/15
2011/07/15
18. Head of the Solid State Research Group (Phys. Dept.),2001/06/01 2009/08/01
19. Head of the Recruitment, TA and Lecturer Committee (Phys. Dept.), Aug. 2014 -
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Ph.D. Theses:

Magnetic Properties of $Tl_2Ba_2Ca_2Cu_3O_{10-D}$ Cylindrical Shields and the effect of thermal cycling and silver addition on their quality. 1994

Publications (partial list):

1. *Thermal cycling effect on thallium 2223 high- T_c superconducting cylindrical shield*, Naser S. Alzayed, Y. Xin, W. S. He, C. X. Fan, K. W. Wong, Physica C 235-240 (1994). p 3463-3464
2. *Magnetic shields made of high T_c superconducting ceramic $Tl_2Ba_2Ca_2Cu_3O_{10}$* , S. He, Y. Xin, Naser S. Alzayed, B. R. Xu, C. X. Fan, K. W. Wong, Physica C 235-240 (1994). p 3459-3460
3. *Nondestructive testing of cracks in solid aluminum with a high temperature rf-SQUID*, D. F. Lu, Chang-xin Fan, Naser S. Alzayed, K. W. Wong, S. G. Han, J. Z. Ruan, Y. Xin, Bingruo Xu, Marvin Chester, David E. Knapp, Physica C 235-240 (1994). p 3361-3362 .
4. *High temperature RF SQUID gradiometer applied to non-destructive testing*, X. Fan, D. F. Lu, K. W. Wong, Y. Xin, B. Xu, N. S. Alzayed, M. Chester, D. E. Knapp, Cryogenics 34 N 8 (1994). p 667-670.
5. *Deep nondestructive testing using a bulk high T_c rf-SQUID*, Naser S. Alzayed, Chang-xin Fan, D. F. Lu, K. W. Wong, Marvin Chester, David E. Knapp, IEEE Transactions on Applied Superconductivity V 4 N 2 (1994). p 81-86.
6. *Thallium 2223 high T_c superconductor in a silver matrix and its magnetic shielding, thermal cycle and time aging properties*, Fei, X.; He, W.S.; Havenhill, A.; Ying, Z.Q.; Xin, Y.; Alzayed, N.; Wong, K.K.; Guo, Y.; Reichle, D.; Lucas, M.S.P. Proceedings of the Fourth International

Conference and Exhibition: World Congress on Superconductivity (NASA Conf. Publ. 3290) 52-743 Vol 2 , World Congress on Superconductivity Houston, TX, USA , 778 (1995).

7. *Tl₂Ba₂Ca₂Cu₃O₁₀ and Au-Added Tl₂Ba₂Ca₂Cu₃O₁₀ Thin Films*, K. W. Wong, Y. Xin, B. R. Xu, D. F. Lu, X. Fei, W. S. He, G. F. Sun, N. Alzayed, C. X. Fan, I. N. Chan, K. Y. Chen, G. J. Salamo, Y. J. Shi, F. T. Chan, W. Y. Ching, *Lasers in Eng.* V 2 (1994). P 319-324.
8. *Magnetic Attenuation by HTC Superconducting Cylinders*, Naser S. Alzayed, K. W. Wong, C. X. Fan, Y. Xin, D. F. Lu, D. E. Knapp, *Chinese Journal of Physics*, 34 Iss: 2, pt.2 p. 698-701 (1996).
9. *Investigation of the Evolutional Processes of HTCS RF-SQUID Made from Tl₂2223 and Operated at 77 K*, N. S. Alzayed, J. King Saud University, Vol. 17, Science (1), pp 17-30 (2004).
10. *Design of ac susceptometer using closed cycle helium cryostat*, Mohammed. Shahabuddin and Nasser Saleh Alzayed , , *Phys. Stat. Sol.*, C 3, 3002 (2006) p. 3002-3006 .
11. *Low cost ac susceptometer using closed cycle helium cryostat* , Ismail A. Alfaleh, Mohammed. Shahabuddin and Nasser S. Alzayed, *submitted*.
12. *Effect of Nano-NiO Doping on the Magnetic Susceptibility and Flux Pinning in MgB₂ Superconductor*, Nasser S. Alzayed, *Int. J. Nanoparticles*, Vol. 2, Nos. 1/2/3/4/5/6, 2009, pp 372-378.
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14. M. Ben Karoui, R. Gharbi, N. Alzaied, M. Fathallah, E. Tresso, L. Scaltiro, S. Ferrero, *Effects of defects on electrical properties of 4H-SiC Schottky Diodes*, *Materials Science and Engineering*, The Netherlands, Vol. C 28, 2008, pp 799-804.
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Research Projects:

1. *Gamma Radiation Effect on Physical and mechanical properties of Polyethylene PE made by SABIC, Nasser S. Alzayed*, Mohammed Shahabuddin, A.A. Moazzen, 1998, Closed. (50,000 SR).
2. *Mechanical and Thermal properites of YBCO superconducotrs, (1420H), (By KACST), Nasser S. Alzayed* , Closed (100,000 SR)
3. *Structural, Mechanical and Thermal Properties of Bulk YBaCuO Superconductors, Nasser S. Alzayed*, Ziad D. Almasri, 1996, Closed.
4. *Studying of the Magnetic Properties of the Superconducting Materials made from YBCO with Emphasis on Flux Jumps, Nasser S. Alzayed*, by Research Center, 1429 H (30,000 SR) Closed.
5. *Magnetic Attenuation of tubes made from Bi2Sr2Ca2Cu3O8+d superconductors, Nasser S. Alzayed* , by Research Center, 1420 H (30,000 SR) Closed
6. *Design and fabrication of micro-Hall probe magnetometer for the measurement of magnetization and ac susceptibility of High Tc Superconductors, Nasser S. Alzayed* , M. Shahabuddin, by Research Center, 2004 (45,000 SR) Closed
7. *Design and Fabrication of High sensitive AC Susceptometer, Nasser S. Alzayed* , M. Shahabuddin, by Research Center, 2004 (45,000 SR) Closed
8. *Influence of Carbon Doping on the Magnetic Properties of MgB2 Superconductors, M. Shahabuddin, Nasser S. Alzayed* ,by Research Center 2005 (45,000 SR) closed
9. *Nano-carbon substitution effect on electrical and magnetic properties of Magnesium Diboride superconductors, M. Shahabuddin, Nasser S. Alzayed* , by Research Center, 2006 (50,000 SR) Closed
10. *Preparation and study of the magnetic and electrical properties of nano-particle Fe3O4 doped MgB2 superconductors, Nasser S. Alzayed* , M. Shahabuddin, Intekhab Ansari, by Research Center, 2006 (50,000 SR) Closed
11. *Enhancement of Critical current density and Mechanical strength of MgB2Superconductors by doping hydrocarbon /carbohydrate. Current, M. Shahabuddin, Nasser S. Alzayed* , by Center of Excellence for Research in Engineering Materials, (650,000 SR). Closed
12. *Synthesis and magnetic and electrical properties measurement of CNT- MgB2 nano composites, Nasser S. Alzayed* , M. Shahabuddin , King Abdullan Institute for Nanotechnology, (850,000) Closed
13. *Photoinduced absorption of the new chalcogenide crystals, Nasser S. Alzayed*, I.V. Kityk, A. M. El-Naggar , supported by the Deanship of Scientific Researach, KSU. (2010) Current

14. *Modification and Electromagnetic Properties of MgB₂ Superconductors by NanoMaterials Doping for High Magnetic Field Application*, National Plan for Science & Technology, **Nasser S. Alzayed** , M. Shahabuddin , M. Asif, NPST (1, 920,000 SR) Now Closing
15. *Development of superconducting wires for high current carrying application using MgB₂*, M. Shahabuddin , **Nasser S. Alzayed** , M. Asif , NPST (1,650,000 SR). Now Closing
16. *Synthesis of new class of Iron-based rare earth Oxyarsenide SmFeAsOF Superconductor*, College of Science Research Center, **Nasser S. Alzayed** , M. Shahabuddin. Intekhab Ansari. Rejected
17. *Synthesis of MgB₂ Thin film Using Pulsed Laser Deposition System for Device Application*, **Nasser S. Alzayed** , M. Shahabuddin, I. V. Kityk, A. M. El-naggar, NPST (1,950,00 SR) . Current.
18. *Current limiting mechanism and potentiality of Magnesium diboride (MgB₂) superconductor for application* , Submitted to KACST (2013) 1,989,000 SR.

Collaboration with Distinguished International Research Groups:

With my research group, we have 3 active International Collaborations:

- 1- Institute for Superconducting & Electronic Materials (ISEM) , Australian Institute of Innovative Materials, University of Wollongong, Innovation Campus, Squires Way, North Wollongong, NSW 2500, Australia. through Prof. Jung Ho Kim and Dr. Md. Shahriar Al Hossain
- 2- TECHNICAL UNIVERSITY OF CZĘSTOCHOWA FACULTY OF ELECTRICAL ENGINEERING, AL. ARMII KRAJOWEJ 17 42-200 CZĘSTOCHOWA through Prof. Iwan V. Kityk
- 3- Max-Planck-Institute für Festkörperforschung, Heisenbergstr. 1, D-70569 Stuttgart, Germany, through Prof. S. Soltan