

# Prof. YAKUP BALCI

## Personal Information

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## Education Information

Doctorate, Inonu University, Fen Edeb Fak/Fizik Bölümü, Fenedb Fak, Turkey 1993 - 1997

Postgraduate, Inonu University, Fen Edeb Fak . Fen Bilimleri, Fizik, Genel Fizik, Turkey 1985 - 1987

## Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Thermal Properties of Condensed Matter, Natural Sciences

## Academic Titles / Tasks

Professor, Inonu University, Fen Edebiyat Fakültesi, Fizik, 2014 - Continues

Associate Professor, Inonu University, Fen Edeb Fk, Fizik, 2009 - 2013

Assistant Professor, Inonu University, Fen Edeb Fak, Fizik, 1997 - 2012

Research Assistant, Inonu University, Fen Edeb Fak, Fizik, 1985 - 1997

## Academic and Administrative Experience

Inonu University, Fen-Edebiyat Fakültesi, 2005 - Continues

Inonu University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2010 - 2013

## Courses

Katıhal Fiziği II, Undergraduate, 2013-2014

GENEL FİZİK(ELEKTRİK), Undergraduate, 2013-2014

GENEL FİZİK(MEKANİK), Undergraduate, 2013-2014

Katıhal fiziği I, Undergraduate, 2013-2014

FAZ DÖNÜŞÜMLERİ, Undergraduate Minor, 2013-2014

KATIHAL FİZİĞİ, Undergraduate Double Major, 2013-2014

Katıhal fiziği I, Undergraduate, 2012-2013

Katıhal Fiziği II, Undergraduate, 2012-2013

FAZ DÖNÜŞÜMLERİ, Undergraduate Minor, 2012-2013

X-IŞINLARI, Undergraduate Double Major, 2012-2013

GENEL FİZİK(ELEKTRİK), Undergraduate, 2012-2013  
GENEL FİZİK(MEKANİK), Undergraduate, 2012-2013  
KATIHAL FİZİĞİ, Undergraduate Double Major, 2012-2013  
X-İŞİNLARI, Undergraduate Double Major, 2011-2012  
Kathal Fiziği II, Undergraduate, 2011-2012  
KATIHAL FİZİĞİ, Undergraduate Double Major, 2011-2012  
FAZ DÖNÜŞÜMLERİ, Undergraduate Minor, 2011-2012  
GENEL FİZİK(MEKANİK), Undergraduate, 2011-2012  
Kathal fiziği I, Undergraduate, 2011-2012  
GENEL FİZİK(ELEKTRİK), Undergraduate, 2011-2012  
GENEL FİZİK(ELEKTRİK), Undergraduate, 2010-2011  
Kathal fiziği I, Undergraduate, 2010-2011  
X-İŞİNLARI, Undergraduate Double Major, 2010-2011  
Kathal Fiziği II, Undergraduate, 2010-2011  
GENEL FİZİK(MEKANİK), Undergraduate, 2009-2010  
Kathal Fiziği II, Undergraduate, 2009-2010  
FAZ DÖNÜŞÜMLERİ, Undergraduate Minor, 2009-2010  
Süperilietkenler, Undergraduate Double Major, 2009-2010  
GENEL FİZİK(ELEKTRİK), Undergraduate, 2009-2010  
Kathal fiziği I, Undergraduate, 2009-2010  
KATIHAL FİZİĞİ, Undergraduate Double Major, 2009-2010  
Kathal fiziği I, Undergraduate, 2008-2009  
X-İŞİNLARI, Undergraduate Double Major, 2008-2009  
Kathal Fiziği II, Undergraduate, 2008-2009  
FAZ DÖNÜŞÜMLERİ, Undergraduate Minor, 2008-2009  
KATIHAL FİZİĞİ, Undergraduate Double Major, 2008-2009  
Kathal Fiziği II, Undergraduate, 2007-2008  
GENEL FİZİK(ELEKTRİK), Undergraduate, 2007-2008  
GENEL FİZİK(MEKANİK), Undergraduate, 2007-2008  
Kathal fiziği I, Undergraduate, 2007-2008  
Süperilietkenler, Undergraduate Double Major, 2007-2008  
Kathal Fiziği II, Undergraduate, 2006-2007  
X-İŞİNLARI, Undergraduate Double Major, 2006-2007  
FAZ DÖNÜŞÜMLERİ, Undergraduate Minor, 2006-2007  
KATIHAL FİZİĞİ, Undergraduate Double Major, 2006-2007  
Kathal fiziği I, Undergraduate, 2005-2006  
Kathal Fiziği II, Undergraduate, 2005-2006  
Süperilietkenler, Undergraduate Double Major, 2005-2006  
X-İŞİNLARI, Undergraduate Double Major, 2005-2006  
Kathal Fiziği II, Undergraduate, 2004-2005  
Kathal fiziği I, Undergraduate, 2004-2005  
X-İŞİNLARI, Undergraduate Double Major, 2003-2004  
Süperilietkenler, Undergraduate Double Major, 2003-2004  
KATIHAL FİZİĞİ, Undergraduate Double Major, 2003-2004  
Kathal Fiziği II, Undergraduate, 2003-2004  
Kathal fiziği I, Undergraduate, 2002-2003  
Kathal Fiziği II, Undergraduate, 2002-2003  
KATIHAL FİZİĞİ, Undergraduate Double Major, 2001-2002  
Kathal Fiziği II, Undergraduate, 2001-2002  
Kathal fiziği I, Undergraduate, 2001-2002  
Süperilietkenler, Undergraduate Double Major, 2001-2002

Kathal Fiziği II, Undergraduate, 2000-2001  
FAZ DÖNÜŞÜMLERİ, Undergraduate Minor, 2000-2001  
X-IŞINLARI, Undergraduate Double Major, 2000-2001

## Advising Theses

BALCI Y., YBCO(123) Kalın filimlerin üretimi ve karakterizasyonu, Postgraduate, E.Ortakoğlu(Student), 2012  
BALCI Y., Ultrasonik Spray Pyrolysis yöntemi ile İnce/kalın MgB<sub>2</sub> süperiletken filmlerin hazırlanması ve karakterizasyonu, Postgraduate, K.Onar(Student), 2011  
BALCI Y., Metali MgB<sub>2</sub> süperiletkenlerin tüp metodu ile hazırlanması ve hole katkılarının MgB<sub>2</sub> sisteminde oluşturacağı etkilerin incelenmesi, Postgraduate, Z.Deniz(Student), 2005  
BALCI Y., YBCO Süperiletken örneklerin tüp metodu(PITM) ile hazırlanması , Cd ve Ca katkılanmasının sistem üzerine etkileri, Postgraduate, S.Alagöz(Student), 2003  
BALCI Y., HgBaCaO Süperiletkenlerin sentezlenmesi ve değişik oranda Pb Katkılanmasının bu süperiletkenlerin elektriksel ve fiziksel özellikleri üzerindeki etkilerinin incelenmesi, Postgraduate, M.Doğan(Student), 2000

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effect of grain size on the electrical and magnetic properties of MgB<sub>2</sub> thick films deposited on the Al<sub>2</sub>O<sub>3</sub> single crystal substrates**  
ONAR K., BALCI Y., YAKINCI M. C.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.25, no.5, pp.2104-2110, 2014 (SCI-Expanded)
- II. **Improved superconducting properties of MgB<sub>2</sub> thin films fabricated by ultrasonic spray pyrolysis method at high temperature**  
YAKINCI M. C., YAKINCI Z. D., AKSAN M. A., BALCI Y.  
CRYOGENICS, vol.52, no.12, pp.749-754, 2012 (SCI-Expanded)
- III. **Nano-sized Spherical MgB<sub>2</sub> Superconducting Powder Fabrication Using MHz Range Ultrasonic Spray Pyrolysis (USP) System**  
YAKINCI M. C., AKSAN M. A., BALCI Y., ALTIN S., ÖNAL Y., Aydogdu Y.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, pp.235-239, 2011 (SCI-Expanded)
- IV. **Power Law Dependence of I-V Characteristics of Bi-2212 Whiskers at Low Magnetic Fields**  
ALTIN S., ALTIN E., AKSAN M. A., BALCI Y., YAKINCI M. C.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, pp.223-227, 2011 (SCI-Expanded)
- V. **Oxidation Behavior of Bi(Pb,Ga) SrCaCuO System**  
BALCI Y., Ceylan M., AKSAN M. A., YAKINCI M. C.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, pp.511-513, 2011 (SCI-Expanded)
- VI. **Effect of Bi deficiency on grain alignment of BiPb-2223 thin film fabricated using rf sputtering process and on critical current density properties**  
AKSAN M. A., ALTIN S., YAKINCI M. C., GÜLDESTE A., BALCI Y.  
MATERIALS SCIENCE AND TECHNOLOGY, vol.27, no.1, pp.314-319, 2011 (SCI-Expanded)
- VII. **Effects of In-situ and Ex-situ Heat-Treatment Procedures on the Transport Properties of the MgB<sub>2</sub> Superconducting Thin Films Fabricated by Ultrasonic Spray Pyrolysis (USP) System**  
YAKINCI M. C., Aydogdu Y., AKSAN M. A., BALCI Y., ALTIN S.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, pp.241-245, 2011 (SCI-Expanded)
- VIII. **Effect of Bi<sub>2</sub>O<sub>3</sub> Addition on the Single-Crystal BiSrCaCuO Whisker Growth**  
ALTIN S., AKSAN M. A., ALTIN E., BALCI Y., YAKINCI M. C.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, pp.331-339, 2011 (SCI-Expanded)
- IX. **Effect of Ce substitution on superconducting properties of Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>10+delta</sub> system**

**fabricated by glass-ceramic technique**

OZTURK R., AKSAN M. A., ALTIN S., YAKINCI M. C., BALCI Y.

JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, pp.1105-1110, 2011 (SCI-Expanded)

- X. **Effects of SnO on growth and physical properties of BSCCO whiskers**  
ALTIN S., AKSAN M. A., BALCI Y., YAKINCI M. C.  
MATERIALS SCIENCE AND TECHNOLOGY, vol.26, no.9, pp.1125-1131, 2010 (SCI-Expanded)
- XI. **The single crystal superconducting Bi-2212 whiskers fabrication and their thermal transport properties**  
ALTIN S., AKSAN M. A., YAKINCI M. C., BALCI Y.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.502, no.1, pp.16-23, 2010 (SCI-Expanded)
- XII. **Transport Properties under Magnetic Field and J(c)(H) Peak Effect on Single-Crystal Bi-2212 Whiskers**  
ALTIN S., AKSAN M. A., BALCI Y., YAKINCI M. C.  
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.22, no.8, pp.775-784, 2009 (SCI-Expanded)
- XIII. **The effect of Mo addition on the microstructure and J(c) properties of MgB<sub>2</sub> tapes fabricated by PIT method**  
Bayazit E., ALTIN S., YAKINCI M. C., AKSAN M. A., BALCI Y.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.457, pp.42-46, 2008 (SCI-Expanded)
- XIV. **Structural characterization and transport properties of the HTc Bi<sub>2</sub>Sr<sub>2</sub>(Ca,Cd)Cu<sub>2</sub>O<sub>8</sub>+delta glass-ceramic rods**  
Aksan M. A., ALTIN S., BALCI Y., YAKINCI M. E.  
MATERIALS CHEMISTRY AND PHYSICS, vol.106, pp.428-436, 2007 (SCI-Expanded)
- XV. **Magnetoresistance properties of Co-added MgB<sub>2</sub> tapes prepared by PIT method**  
BAYAZIT E., YAKINCI M. E., BALCI Y., AKSAN M. A.  
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.460, pp.610-611, 2007 (SCI-Expanded)
- XVI. **Effects of thickness on the grain alignment and J(c) properties of (Hg<sub>0.8</sub>Re<sub>0.2</sub>)Ba<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>x</sub> superconductor thick films**  
YAKINCI M. E., AKSAN M. A., BALCI Y., ALTIN S.  
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.460, pp.1386-1387, 2007 (SCI-Expanded)
- XVII. **Fabrication and properties of superconducting single crystal cross-(micro) whiskers junction**  
ALTIN S., YAKINCI M. E., AKSAN M. A., BALCI Y.  
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.460, pp.1337-1338, 2007 (SCI-Expanded)
- XVIII. **Effects of preparation pressure on the magnetic and I-V properties of nano Cu particles added MgB<sub>2</sub> tapes**  
YAKINCI Z. D., BALCI Y., YAKINCI M. E., AKSAN M. A.  
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.460, pp.859-861, 2007 (SCI-Expanded)
- XIX. **Degradation of superconducting properties in MgB<sub>2</sub> by Cu addition**  
AKSAN M. A., GULDESTE A., BALCI Y., YAKINCI M.  
SOLID STATE COMMUNICATIONS, vol.137, no.6, pp.320-325, 2006 (SCI-Expanded)
- XX. **Thermal analysis study of Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3-x</sub>Er<sub>x</sub>O<sub>10</sub>+delta glass-ceramic system**  
AKSAN M. A., YAKINCI M., BALCI Y.  
JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY, vol.81, no.2, pp.417-423, 2005 (SCI-Expanded)
- XXI. **Fabrication and properties of (Hg<sub>0.8</sub>Re<sub>0.2</sub>)Ba<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>x</sub> superconducting thick films**  
YAKINCI M., AKSAN M. A., BALCI Y.  
SUPERCONDUCTOR SCIENCE & TECHNOLOGY, vol.18, no.4, pp.494-502, 2005 (SCI-Expanded)
- XXII. **Thermoelectric power and thermal conductivity properties in superconducting (MgB<sub>2</sub>)(<sub>2-x</sub>)Cr<sub>x</sub> materials**  
YAKINCI M., BALCI Y., AKSAN M. A.  
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.408, pp.684-685, 2004 (SCI-Expanded)
- XXIII. **Enhanced J<sub>c</sub> properties of MgB<sub>2</sub> materials processed under a magnetic field**  
AKSAN M. A., YAKINCI M., BALCI Y.

- PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.408, pp.132-133, 2004 (SCI-Expanded)
- XXIV. **Effect of substrates on I-c anisotropy in thick film Bi<sub>1.7</sub>Ga<sub>0.3</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>10+y</sub> glass-ceramic superconductors**  
YAKINCI Z., BALCI Y., YAKINCI M., Aksan M. A.  
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.408, pp.900-901, 2004 (SCI-Expanded)
- XXV. **Crystallization activation energy and hole concentration properties of the Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>1-x</sub>Cd<sub>x</sub>Cu<sub>2</sub>O<sub>8+y</sub> glass-ceramic superconductor rods**  
OZHANLI Z., YAKINCI M., BALCI Y., Aksan M. A.  
JOURNAL OF SUPERCONDUCTIVITY, vol.15, no.6, pp.543-547, 2002 (SCI-Expanded)
- XXVI. **Study on the physical and electrical properties of Bi<sub>2-delta</sub> Zn delta Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>10+y</sub> glass-ceramic superconductors**  
Aksan M. A., YAKINCI M., BALCI Y.  
JOURNAL OF SUPERCONDUCTIVITY, vol.15, no.6, pp.553-558, 2002 (SCI-Expanded)
- XXVII. **Degradation of superconducting properties in MgB<sub>2</sub> by formation of the MgB<sub>4</sub> phase**  
YAKINCI M., BALCI Y., Aksan M. A., ADIGUZEL H. İ., GENCER A.  
JOURNAL OF SUPERCONDUCTIVITY, vol.15, no.6, pp.607-611, 2002 (SCI-Expanded)
- XXVIII. **An investigation on the activation energy and the enthalpy of the primary crystallization of glass-ceramic Bi-rich BSCCOHTc superconductors**  
Balci Y., CEYLAN M., YAKINCI M.  
MATERIALS SCIENCE AND ENGINEERING B-SOLID STATE MATERIALS FOR ADVANCED TECHNOLOGY, vol.86, no.1, pp.83-91, 2001 (SCI-Expanded)
- XXIX. **Synthesis and characterization of glass-ceramic Bi<sub>2-x</sub>GaxSr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>10+y</sub> superconductors**  
Aksan M. A., YAKINCI M., BALCI Y.  
SUPERCONDUCTOR SCIENCE & TECHNOLOGY, vol.13, no.7, pp.955-963, 2000 (SCI-Expanded)
- XXX. **Thermal conductivity properties of glass-ceramic (Bi<sub>2-delta-gamma</sub> Ga delta Tl gamma)Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>10+x</sub> high-T-c superconductors**  
BALCI Y., YAKINCI M., Aksan M. A., OZDES A., ATES H.  
JOURNAL OF LOW TEMPERATURE PHYSICS, vol.117, pp.963-967, 1999 (SCI-Expanded)
- XXXI. **In-situ single chamber arc sputtering process for YCd<sub>0.3</sub>Ba<sub>2</sub>Cu<sub>3</sub>O<sub>7-delta</sub> superconducting thin films**  
YAKINCI M., BALCI Y., Aksan M. A., AYDOGDU Y., ATES H.  
JOURNAL OF LOW TEMPERATURE PHYSICS, vol.117, pp.645-649, 1999 (SCI-Expanded)
- XXXII. **Thermal conductivity properties of Bi<sub>2-alpha</sub> Tl alpha Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>10+z</sub> glass-ceramic HTc superconductor rods**  
Aksan M. A., YAKINCI M., BALCI Y., ATES H.  
JOURNAL OF LOW TEMPERATURE PHYSICS, vol.117, pp.957-961, 1999 (SCI-Expanded)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Normal state electronic properties under applied magnetic fields of whiskers fabricated by Bi Ga and Sb doping**  
ALTIN S., AKSAN M. A., BALCI Y., ALTIN E., YAKINCI M. E.  
2 nd International Conference On Superconductivity and Magnetism Antalya, Turkey, 2010, 28 - 30 May 2010
- II. **Power Law Dependences on I V of Bi 212 Whiskers at Low Magnetic fields**  
ALTIN S., AKSAN M. A., BALCI Y., ALTIN E., YAKINCI M. E.  
2 nd International Conference On Superconductivity and Magnetism Antalya, Turkey, 2010, 28 - 30 May 2010
- III. **Magnetoresistance properties of MgB<sub>2</sub> thick films on YSZ substrate using spray pyrolysis method**  
ALTIN S., AKSAN M. A., YAKINCI Z. D., Oezabaci M., BALCI Y., YAKINCI M. C.  
International Conference on Superconductivity and Magnetism (ICSM), Side, Turkey, 25 - 29 August 2008, vol.153
- IV. **Pinning Properties of Bi-2212 Single Crystal Whiskers**  
ALTIN S., AKSAN M. A., BALCI Y., YAKINCI M. C.

International Conference on Superconductivity and Magnetism (ICSM), Side, Turkey, 25 - 29 August 2008, vol.153

- V. **Çökeltme Yöntemi Kullanılarak MgB<sub>2</sub> Kalın Filmlerin Hazırlanması ve Karakterizasyonu**  
YAKINCI Z. D., ALTIN E., türk n., ALTIN S., ÖZABACI M., AKSAN M. A., BALCI Y., YAKINCI M. E.  
II. Ulusal Bor Çalıştayı, Ankara, 2008, Turkey, 20 - 22 June 2008
- VI. **Dip Coating Yöntemi ile Şerit MgB<sub>2</sub> Süperiletkenlerin Eldesi ve Karakterizasyonu**  
ÖZABACI M., ALTIN S., gülşah K., YAKINCI Z. D., ALTIN E., AKSAN M. A., BALCI Y., YAKINCI M. E.  
II. Ulusal Bor Çalıştayı, Ankara, 2008, Turkey, 13 - 15 June 2008
- VII. **Magnetoresistance properties of Co added MgB<sub>2</sub> tapes prepared by PIT method**  
ALTIN E., BALCI Y., AKSAN M. A., YAKINCI M. E.  
8th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors, Dresden (Germany), 9 - 14 July 2006
- VIII. **Co Katkılı MgB<sub>2</sub> Süperiletken Sistem**  
ALTIN E., BALCI Y., AKSAN M. A., YAKINCI M. E.  
III. Ulusal Yüksek Sıcaklık Süperiletkenler Sempozyumu, BOLU, Turkey, 20 - 22 June 2005

## Metrics

Publication: 40

Citation (WoS): 238

Citation (Scopus): 210

H-Index (WoS): 8

H-Index (Scopus): 8