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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAH-1996-2019

ScopusID: 8619246700

Yoksis Researcher ID: 151851

Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, Turkey 2002 - 2006

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Makina Mühendisliği Anabilim Dalı, Turkey 1999 - 2002

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, Turkey 1994 - 1998

Undergraduate, Karadeniz Technical University, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 1990 - 1994

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Tek Kristal Süperiletkenlerde Tuzaklanan Manyetik Alanın Hesaplanması, Karadeniz Technical University, -, Fizik, 2006

Postgraduate, Silisyum Katkısının Monotektoid Çinko-Alüminyum Alaşımlarının Tribolojik Özelliklerine Etkilerinin İncelenmesi, Karadeniz Technical University, -, Makina Mühendisliği, 2002

Postgraduate, YBa₂Cu₃O_{7-x} Süperiletkenlerinin "Eritme-Hızlı Soğutma-Büyütme" Metodu ile Üretilmesi, Yapısal ve Fiziksel Özelliklerinin İncelenmesi, Karadeniz Technical University, -, Fizik, 1998

Research Areas

Physics, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Magnetic Properties and Materials, Superconductivity, Natural Sciences

Academic Titles / Tasks

Professor, Karadeniz Technical University, Fen Fakültesi, Fizik, 2019 - Continues
Associate Professor, Karadeniz Technical University, Fen Fakültesi, Fizik, 2012 - 2019
Assistant Professor, Karadeniz Technical University, Fen Fakültesi, Fizik, 2007 - 2012
Lecturer PhD, Karadeniz Technical University, Fen Fakültesi, Fizik, 2006 - 2007
Lecturer, Karadeniz Technical University, Fen Fakültesi, Fizik, 1998 - 2006
Other, Diğer (Kurumlar,hastaneler Vb.), Milli Eğitim Müdürlüğü, Sınıf Öğretmeni, 1998 - 1998
Research Assistant, Karadeniz Technical University, -, Fizik, 1995 - 1998

Advising Theses

Aydiner A., MgO altlık üzerinde YBCO ve NdBCO çift katmanlı ince film çekirdek kullanarak üstten aşılama-eritme-büyütme [top seeded-melt-growth (TSMG)] yöntemi ile üretilen eklenmiş ybco külçe süperiletkeni, Postgraduate, K.NUR(Student), 2023
Aydiner A., Eritme yöntemleri ile üretilen ek malzemesiyle eklenmiş Y123 + MOLAR % X Y211 (X = 20, 25, 30) süperiletkenlerinde su jeti uygulamasının örneğin ek bölgesinin yapısal ve fiziksel özelliklerine etkisi, Doctorate, Ş.DUMAN(Student), 2022
AYDINER A., Y203 Tabakalı YBa₂Cu₃O_{7-x} Bileşiğinin Tersinmezlik Çizgisi, Postgraduate, S.Kurnaz(Student), 2016
Aydiner A., Üstten Aşılama-Eritme-Büyütme Yöntemiyle Üretilen İstiflenmiş Silindirik Halka YBCO Külçe Süperiletkeni, Doctorate, B.Çakır(Student), 2015
AYDINER A., Y203 Tabakalı YBCO Tek Kristalinin İletkenlikteki Dalgalanma Analizi, Postgraduate, Ş.Duman(Student), 2013
AYDINER A., Y203 Tabakalı YBaCuO Tek Kristalinin Çivileme Mekanizmasının "Dew-Huges Akı Çivileme Mekanizmasının Sınıflandırılması" Modeli ile Analizi, Postgraduate, K.Karaoğlu(Student), 2013
AYDINER A., Y203 Tabakalı YBa₂Cu₃O_{7-x} Bileşiğinin Yapısal ve Fiziksel Özellikleri, Postgraduate, B.Çakır(Student), 2010

Jury Memberships

Post Graduate, YBCO Bazlı Maglev Sistemleri Manyetik Kuvvet Sabitinin Farklı Şartlarında İncelenmesi, KTÜ, Fen Bilimleri Enstitüsü, Fizik, December, 2014
Post Graduate, Futbol Topu Yörünge Modeli ve Analizi, KTÜ, Fen Bilimleri Enstitüsü, Matematik, June, 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The effect of the Y203 buffer layer on the microstructural and physical properties of melt-processed Y358 superconductor**
Başoğlu M., Çakır B., Duman Ş., AYDINER A.
Bulletin of Materials Science, vol.46, no.4, 2023 (SCI-Expanded)
- II. **The effect of fabrication method on physical properties of different Y211 and 20% Ag2O added YBCO sample**
Duman Ş., Çakır B., Başoğlu M., KÜÇÜKÖMEROĞLU T., AYDINER A.
Journal of Materials Science: Materials in Electronics, vol.34, no.15, 2023 (SCI-Expanded)
- III. **Magnetic properties of the welded joined TSMG Y123+x wt% Y211 (x=20 and 30) bulk superconductors**
Çakır B., Öztürk K., Guner S. B., Celik S., Aydiner A.
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.557, pp.19-25, 2019 (SCI-Expanded)
- IV. **The Effect of Using Different Y203 Layers on the Activation Energy and Irreversibility Line of MPMG**

YBCO Bulk at 1050 degrees C Growth Temperature

Kurnaz S., Cakir B., AYDINER A.

JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.31, no.10, pp.3167-3174, 2018 (SCI-Expanded)

- V. **Structural and magnetic properties of the ring shaped 40 wt% Y211 added TSMG Y123 bulk superconductors welded by Ag20 added MPMG YBCO solder material**
Cakir B., AYDINER A.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.28, no.22, pp.17098-17106, 2017 (SCI-Expanded)
- VI. **The effect of growth temperature on the irreversibility line of MPMG YBCO bulk with Y2O3 layer**
Kurnaz S., Cakir B., AYDINER A.
CRYOGENICS, vol.85, pp.51-57, 2017 (SCI-Expanded)
- VII. **Fluctuation-Induced Conductivity Analysis of Y2O3-Layered YBCO Single Crystal**
Duman S., Cakir B., AYDINER A.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.29, no.9, pp.2275-2280, 2016 (SCI-Expanded)
- VIII. **Flux Pinning in YBCO Single Crystal Grown on Y2O3 Layer**
Cakir B., AYDINER A., KARAOGLU K., DUMAN S., YANMAZ E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.27, no.5, pp.1123-1129, 2014 (SCI-Expanded)
- IX. **The Effect of Y2O3 on AC Susceptibility Measurements of MPMG YBCO Superconductor**
Cakir B., AYDINER A., BASOGLU M., YANMAZ E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.26, no.4, pp.937-941, 2013 (SCI-Expanded)
- X. **Magnetic Properties of YBCO Single-Crystal Grown on Y2O3 Layer by a Cold Top-Seeding Method**
AYDINER A., Cakir B., BASOGLU M., Seki H., WONGSATANAWARID A., Murakami M., Yanmaz E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.25, no.2, pp.391-397, 2012 (SCI-Expanded)
- XI. **The Effect of Y2O3 Buffer Layer on the Magnetic Properties of Melt-Processed YBCO Superconductor**
AYDINER A., Cakir B., Seki H., BASOGLU M., Wongsatanawarid A., Murakami M., Yanmaz E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, no.5, pp.1397-1401, 2011 (SCI-Expanded)
- XII. **Preparation and Properties of MPMG YBCO Bulk with Y2O3 Layer**
Cakir B., AYDINER A.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.24, no.5, pp.1577-1584, 2011 (SCI-Expanded)
- XIII. **The Effect of Excess Y2O3 Addition on the Mechanical Properties of Melt-Processed YBCO Superconductor**
AYDINER A., Cakir B., BASOGLU M., Yanmaz E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.23, no.8, pp.1493-1497, 2010 (SCI-Expanded)
- XIV. **Numerical calculation of trapped magnetic field for square multiple bulk superconductors**
AYDINER A., YANMAZ E.
PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.470, no.20, pp.1193-1197, 2010 (SCI-Expanded)
- XV. **Numerical Calculation of Trapped Magnetic Field for Single and Multiple Bulk Superconductors**
AYDINER A., Yanmaz E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.23, no.4, pp.457-463, 2010 (SCI-Expanded)
- XVI. **Numerical Calculation of Trapped Magnetic Field for Square and Cylindrical Superconductors**
Aydiner A., Yanmaz E.
SUPERCONDUCTOR SCIENCE AND TECHNOLOGY, vol.18, pp.1010-1015, 2005 (SCI-Expanded)
- XVII. **Effects of silicon content on the mechanical and tribological properties of monotectoid-based zinc-aluminium-silicon alloys**
Savaskan T., Aydinler A.
WEAR, vol.257, pp.377-388, 2004 (SCI-Expanded)
- XVIII. **The Effects of Ag Addition and Magnetic Field on Melt-Processed YBa2Cu3Ox Superconductors**
ATEŞ A., Yanmaz E.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.279, pp.220-228, 1998 (SCI-Expanded)
- XIX. **Thermally Activated Flux Dissipation in Ag-Added YBa2Cu3O7-x (123) Prepared by Flame-Quench-Melt-Growth (FQMG) Method**

ATEŞ A., Yanmaz E., Çelebi S.

JOURNAL OF ALLOYS AND COMPOUNDS, vol.268, pp.215-220, 1998 (SCI-Expanded)

XX. **Microstructural and Physical Properties of YBa₂Cu₃O_{7-x} Superconductors Prepared by the Flame-Quench-Melt-Growth (FQMG) Method**

Gençer A., ATEŞ A., Aksu E., Nezir S., Çelebi S., Yanmaz E.

PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS, vol.279, pp.165-172, 1997 (SCI-Expanded)

Articles Published in Other Journals

I. **Pinning properties of Y211 added cold top seeded YBCO grown on Y2O3 layer**

ÇAKIR B., DUMAN Ş., AYDINER A.

Journal of Physics:Conference Series, 2016 (Scopus)

Books & Book Chapters

I. **Chapter 6: Numerical Calculation of Trapped Magnetic Field for Bulk Superconductors**

AYDINER A.

in: Superconductivity: Theory, Materials and Applications, Romanovskii V.R., Editor, Nova Publisher, Hauppauge, pp.363-380, 2012

Refereed Congress / Symposium Publications in Proceedings

I. **A Study of Fluctuation Induced Conductivity Analysis for Welded TSMG YBCO Using a Solder Material Produced by Different Melting Methods**

Duman Ş., Çakır B., Aydın A.

13th International Workshop on Processing and Applications of Superconducting (RE)BCO Materials, Caen, France, 31 August - 01 September 2023, pp.50

II. **Critical Current Density Distribution Map of the Bulk YBCO Superconductor**

Çakır B., Yeşilkanat C. M., Duman Ş., Aydın A.

13th International Workshop on Processing and Applications of Superconducting (RE)BCO Materials, Caen, France, 31 August - 01 September 2023, pp.40

III. **The Effect of Post-Growth Thermal Treatment of Bulk YBCO Superconductor on the Pinning Mechanism**

Çakır B., Duman Ş., Aydın A.

8th International Conference on Superconductivity and Magnetism - "ICSM2023", Muğla, Turkey, 4 - 11 May 2023

IV. **JOINING OF THE BULK Y123 SUPERCONDUCTORS BY WELDING**

Çakır B., Duman Ş., Aydın A.

TURKISH PHYSICAL SOCIETY 38TH INTERNATIONAL PHYSICS CONGRESS (TFD38, Muğla, Turkey, 31 August - 04 September 2022, pp.7829524

V. **The Effect of Production Method of Solder Material on Activation Energy of Welded YBCO**

Duman Ş., Çakır B., Başoğlu M., Küçükömeroğlu T., Aydın A.

TURKISH PHYSICAL SOCIETY 38TH INTERNATIONAL PHYSICS CONGRESS (TFD3, Muğla, Turkey, 31 August - 04 September 2022, pp.7829516

VI. **Magnetic Properties and Irreversibility Field Line of TSMG Y123**

Çakır B., Duman Ş., AYDINER A.

International Conference on Condensed Matter and Materials Science (ICMMS-2019), Adana, Turkey, 14 - 19 October 2019, pp.40

VII. **Physical Properties of Welding Regions in the Welded Joined TSMG Y123 + x wt% Y211 (x=0, 20**

and 30) Bulk Superconductors

Çakır B., Duman Ş., AYDINER A.

International Conference on Condensed Matter and Materials Science (ICCMMS-2019), Adana, Turkey, 14 - 19 October 2019, pp.74

- VIII. **Fluctuation Induced Conductivity in Welded TSMG YBCO Superconductors**
Duman Ş., Çakır B., AYDINER A.
14th European Conference on Applied Superconductivity (EUCAS2019), Glasgow, United Kingdom, 1 - 05 September 2019, pp.77
- IX. **Investigation of Excess Conductivity in Welded and Ring Shaped TSMG YBCO Superconductors**
Duman Ş., Çakır B., AYDINER A.
11th International Workshop on Processing and Applications of Superconducting Bulk Materials (PASREG2019), Prag, Czech Republic, 29 - 30 August 2019, pp.29
- X. **Magnetic Properties of Melt Processed Y123 Samples with Different Ag2O Addition**
Çakır B., Duman Ş., AYDINER A.
5th International Materials Science and Nanotechnology for Next Generation Conference (MSNG2018), Nevşehir, Turkey, 4 - 06 October 2018, pp.1
- XI. **The Effect of Ag2O Addition on Activation Energy of MPMG Y123**
Duman Ş., Çakır B., AYDINER A.
34th International Physical Congress (TFD), Muğla, Turkey, 5 - 09 September 2018, pp.1
- XII. **Trapped Magnetic Field of YBCO(358) Superconductors Produced by MPMG Method**
BASOGLU M., Duman Ş., Çakır B., AYDINER A.
International Conference on Science and Technology (ICONST 2018), Prizren, Kosova, 5 - 09 September 2018, pp.1
- XIII. **Fluctuation Induced Conductivity of MPMG YBCO Samples with Different Ag2O Concentration**
Duman Ş., Çakır B., AYDINER A.
6th International Conference of Superconductivity and Magnetism (ICSM2018), Antalya, Turkey, 29 April - 04 May 2018, pp.2
- XIV. **Physical Properties of TSMG YBCO Bulk Superconductor Welded by Ag2O Added YBCO**
Çakır B., ÖZTÜRK K., Çelik Ş., Güner S. B., AYDINER A.
6th International Conference of Superconductivity and Magnetism (ICSM2018), Antalya, Turkey, 29 April - 04 May 2018, pp.1
- XV. **Activation Energy of Y211 Added TSMG YBCO Grown on Y2O3 Layer**
Duman Ş., Çakır B., AYDINER A.
International Conference on Condensed Matter and Material Science, Adana, Turkey, 11 - 15 October 2017, pp.72
- XVI. **Pinning Properties of the TSMG Y123 Bulk Superconductors Welded by a Solder Material**
Çakır B., AYDINER A.
International Conference on Condensed Matter and Material Science, Adana, Turkey, 11 - 15 October 2017, pp.33
- XVII. **The Effect of x % wt. Y211 (x = 20, 30 and 40) Addition on Pinning Mechanism of the TSMG YBCO Grown on Y2O3 Layer**
Çakır B., AYDINER A.
Turkish Physical Society, 33th International Physical Congress, Muğla, Turkey, 6 - 10 September 2017, pp.191
- XVIII. **Fluctuation Induced Conductivity of TSMG YBCO grown on Y2O3 Layer Welded with Ag2O Added MPMG YBCO**
Duman Ş., Çakır B., AYDINER A.
5th International Conference of Superconductivity and Magnetism (ICSM2016), 2016, Antalya, Turkey, 24 - 30 April 2016, pp.100
- XIX. **Influence of Y211 Inclusions on Magnetic Levitation Force of Cold Top-Seeded YBCO Grown on Y2O3 Layer**
Çakır B., AYDINER A., ÖZTÜRK K., Çelik Ş., Güner S. B.
5th International Conference of Superconductivity and Magnetism (ICSM2016), 2016, Antalya, Turkey, 24 - 30 April 2016, pp.120
- XX. **Pinning properties of Y211 added cold top-seeded YBCO grown on Y2O3 layer**

Çakır B., Duman Ş., AYDINER A.

International Physics Conference at the Anatolian Peak (IPCAP2016), 2016, Erzurum, Turkey, 25 - 27 February 2016, pp.12034-12043

XXI. The Effect of Y2O3 on AC Susceptibility Measurements of MPMG YBCO Superconductor

Çakır B., AYDINER A.

ICSM2012 III. International Conference on Superconductivity and Magnetism, Istanbul, Turkey, 29 Nisan-4 Mayıs 2012, 2012, İstanbul, Turkey, 29 April - 04 May 2012, pp.100

XXII. Effective Activation Energy in MPMG YBCO Bulk with Y2O3 Layer

AYDINER A., ÇAKIR B., Yanmaz E., BASOGLU M.

ISS2010 23rd International Symposium on Superconductivity, Tokyo, Japan, 1 - 03 November 2010, pp.215

XXIII. Numerical Calculation of Trapped Magnetic Field for Square Multiple Bulk Superconductors

AYDINER A., YANMAZ E.

ISS2009 22nd International Symposium on Superconductivity, Tokyo, Japan, 2 - 04 November 2009, pp.1193-1197

Supported Projects

Aydiner A., Çakır B., Duman Ş., Başoğlu M., Yeşilkanat C. M., TUBITAK Project, Külçe YBCO Süperiletkenlerinin Tuzaklanan Manyetik Alan Ölçümlerine Bağlı Olarak Derin Öğrenme Yöntemleri ile Kritik Akım Yoğunluklarının Tahmin Edilmesi, 2021 - 2024

AYDINER A., DUMAN Ş., ÇAKIR B., Project Supported by Higher Education Institutions, TSMG Yöntemi ile Üretilen Ek Malzemesiyle Eklenmiş Y123 Molar 20 Y211 Süperiletkeninde Su Jeti Uygulamasının Örneğin Ek Bölgesinin Yapısal ve Fiziksel Özelliklerine Etkisi, 2021 - 2022

Aydiner A., Çakır B., Başoğlu M., TUBITAK Project, Production of Magnetic Shields Using Joined YBCO Bulk Superconductor Produced by Top Seeded-Melt-Growth (TSMG) Method and Application of Cryogenics Current Comparator (CCC), 2020 - 2022

AYDINER A., DUMAN Ş., ÇAKIR B., Project Supported by Higher Education Institutions, Eritme Yöntemleri ile Üretilen Ek Malzemesiyle Eklenmiş Y123 Molar x Y211 x 20 25 30 Süperiletkenlerinde Su Jeti Uygulamasının Örneğin Ek Bölgesinin Yapısal ve Fiziksel Özelliklerine Etkisi, 2018 - 2022

Aydiner A., Çakır B., Duman Ş., Project Supported by Higher Education Institutions, Lehim Malzemeli Ekleme Yönteminde Kullanılan Isıl İşlemin Eklenen Külçe TSMG YBCO Örneklerinin Süperiletken Özelliklerine Etkisi, 2018 - 2021

Başoğlu M., Aydiner A., TUBITAK Project, The Investigation of the Structural and Physical Properties of Y2O3 Layered Bulk Y358 Superconductor Produced by Melt-Powder-Melt-Growth (MPMG) Method, 2018 - 2020

Aydiner A., Çakır B., Duman Ş., Project Supported by Higher Education Institutions, Soğuk Aşılama Yöntemi ile Üretilen 35 mm Çaplı YBCO Tek Kristalinin Tersinmezlik Eğrisinin Belirlenmesi, 2017 - 2020

AYDINER A., ÇAKIR B., DUMAN Ş., Project Supported by Higher Education Institutions, İstiflenmiş YBCO Külçe Süperiletkeninde Kullanılan Ag2O Katkılı YBCO Süperiletken Ek Malzemesinin İletkenlikteki Dalgalanma Analizi ve Kinetik Enerji Yoğunluğu, 2016 - 2017

AYDINER A., Project Supported by Higher Education Institutions, İSTİFLENMİŞ YBCO HALKA SÜPERİLETKENİNİN MANYETİK ÖZELLİKLERİ, 2014 - 2016

AYDINER A., Project Supported by Higher Education Institutions, Maglev Sistemlerine Yönelik Külçe Süperiletken Üretimi Ve Tuzaklanan Manyetik Alan Hesaplamaları, 2009 - 2012

AYDINER A., TUBITAK Project, Tek ve Çoklu Külçe Süperiletkenlerde Tuzaklanan Manyetik Alanın Hesaplanması ve Külçe Süperiletken Üretimi, 2008 - 2012

Metrics

Publication: 45

Citation (WoS): 102

Citation (Scopus): 110

H-Index (WoS): 5

H-Index (Scopus): 5

Non Academic Experience

Milli Eğitim Bakanlıđı