

## Prof. ALİ KALKANLI

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAO-5759-2021

ScopusID: 6602472893

Yoksis Researcher ID: 120236

### Education Information

Doctorate, Open University, Faculty of Science, Technology Engineering and Mathematics,  
Materials Engineering, United Kingdom 1987 - 1993

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied  
Sciences, Metalurji Ve Malzeme Mühendisliği (YI) (Tezli), Turkey 1981 - 1985

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of  
Metallurgical And Materials Engineering, Turkey 1976 - 1981

### Biography

Prof.Dr.Ali Kalkanlı

Lisans ODTÜ Metalurji Mühendisliği Bölümü

Yüksek Lisans ODTÜ Metalurji Mühendisliği Bölümü Tez konusu: Microstructure of Atomized Metal Powders

Doktora The Open University Milton Keynes U.K Tez konusu: Melt Overflow of Stainless Steel

Doktora sonrası araştırma: İnesigation of Nodular Cast Iron Developed for Sub Zero Temperatures

Çalışma ve araştırma alanları: Metal esaslı kompozitlerin üretimi, alüminyum basınçlı ve sıkıştırma döküm, hızlı katılaşma ve metal toz atomizasyonu, magnezyum alaşım geliştirme, yüksek sıcaklıkta kararlı alüminyum ve çelik alaşımlar geliştirme.

### Dissertations

Doctorate, Investigation into Melt Overflow of Alloys, Open University, Engineering , Materials Engineering, 1993

Postgraduate, Microstructures of Metal Powders, Middle East Technical University, Graduate School of Natural and

Applied Sciences, Metalurji Ve Malzeme Mühendisliği (YI) (Tezli), 1985

## Research Areas

Engineering and Technology

## Academic Titles / Tasks

Professor, Middle East Technical University, Faculty Of Engineering, Department Of Metallurgical And Materials Engineering, 2006 - Continues

## Academic and Administrative Experience

Assistant Director of the Institute, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, 2004 - 2009

## Advising Theses

KALKANLI A., Aramid fiber ve B4C parçacık ile takviye edilmiş Al7075 matrisli kompozitlerde haddelemenin ve yaşlandırmanın mekanik ve tribolojik özelliklere etkisi, Doctorate, M.EMİN(Student), 2021

KALKANLI A., Grain refinement of Al-Si-Mg cast alloys with niobium – boron addition, Postgraduate, E.BURAK(Student), 2021

KALKANLI A., Production and characterization of aluminum matrix composites for small-scale unmanned aircraft engine pistons, Postgraduate, M.Demiralp(Student), 2020

KALKANLI A., Development of functionally graded aluminum matrix composite materials for defense industry applications, Postgraduate, T.Yılmaz(Student), 2019

İmer M. B. , Kalkanlı A., COOLING CURVE THERMAL ANALYSES AND OXYGEN ACTIVITY ANALYSES FOR THE ESTIMATION OF MICROSTRUCTURAL PROPERTIES OF NODULAR CAST IRON, Postgraduate, C.ÇEHİZ(Student), 2019

KALKANLI A., Analyzing of usage of complex-shaped Cu-W parts produced by metal injection molding process for heat sink for high-performance electronic devices, Postgraduate, A.Atak(Student), 2019

KALKANLI A., Thin section high cooling rate solidification, thermomechanical processing and characterization of AISI DC53 cold work tool steel, Doctorate, İ.Seçkin(Student), 2019

KALKANLI A., Minimization of banded structure in spring steels by the optimization of continuous casting machine parameters, Postgraduate, M.Akpınar(Student), 2019

KALKANLI A., Effect of mechanical vibration on the microstructure and the mechanical properties of 7075 aluminum alloy produced by semi-solid melting method, Postgraduate, C.Metin(Student), 2019

KALKANLI A., Melt infiltration of ceramic preforms for functionally graded materials, Postgraduate, C.Erdamar(Student), 2019

KALKANLI A., Development of high temperature creep resistant aluminium based sand cast magnesium alloys, Postgraduate, E.YALINIZ(Student), 2018

KALKANLI A., Development of high strength aluminum matrix composite backing plates for ballistic armor, Postgraduate, T.DURMAZ(Student), 2017

KALKANLI A., Development of CuNiSi-X alloy catenary parts by thermomechanical processing for railway applications, Postgraduate, Ö.FARUK(Student), 2017

KALKANLI A., Production and heat treatment of 6111 aluminum alloy sheet for car body panel application, Postgraduate, A.SEVİMLİ(Student), 2015

KALKANLI A., Development of cast and heat treated 7075 alloy rifle receiver, Postgraduate, A.UMUR(Student), 2015

KALKANLI A., Elimination of pearlite-ferrite band using soft reduction during continuous casting of HSLA steel /,

Postgraduate, S.YETKİN(Student), 2014

KARAKAYA İ., KALKANLI A., Liquid phase sintering of tungsten-nickel-cobalt heavy alloys, Postgraduate, O.DİNÇER(Student), 2014

Gökler M. İ. , Kalkanli A., An alternative process including sand casting forging and heat treatment of 30mm diameter X48CrMoV8-1 tool steel, Postgraduate, İ.ALP(Student), 2012

KALKANLI A., Development of automobile chassis parts via aluminium extrusion and sand casting technology, Postgraduate, O.Demirel(Student), 2012

KALKANLI A., Development of automobile chassis parts via aluminum extrusion and sand casting technology, Postgraduate, O.DEMİREL(Student), 2012

GÖKLER M. İ. , KALKANLI A., An Alternative process including sand casting, forging and heat treatment of 30mm diameter X48CrMoV8-1 tool steel, Postgraduate, İ.Alp(Student), 2012

KALKANLI A., Analysis of magnesium addition, hydrogen porosity and T6 heat treatment effects on mechanical and microstructural properties of pressure die cast 7075 aluminum alloy, Postgraduate, E.ALAT(Student), 2012

KALKANLI A., The examination of metal working technology in Kültepe in Assyrian trade colonies period, Doctorate, L.ERCANLI(Student), 2012

KALKANLI A., Production and assesment of compacted graphite iron diesel engine blocks, Postgraduate, A.ALKAN(Student), 2011

KALKANLI A., Effect of process parameters on mechanical properties of high pressure die cast magnesium AZ91 components, Postgraduate, İ.YILMAZ(Student), 2011

KALKANLI A., Al-Fe-V-Si alaşımlarının yüksek sıcaklık aşınma özelliklerinin incelenmesi, Postgraduate, E.KORAMAN(Student), 2011

SEVİNÇ N., KALKANLI A., A study on the production and properties of in-situ titanium diboride particulate reinforced aluminum A356 alloy composite, Postgraduate, O.SERDARLI(Student), 2011

KALKANLI A., Non-destructive X-ray flourescence analysis of Early Bronze Age metal items from Kalinkaya-Toptaştepe: With critical remarks on the formerly applied electrochemical cleaning procedure, Postgraduate, E.YİĞİT(Student), 2011

KALKANLI A., Improvement of impact resistance of aluminum and zinc based die cast parts by means of tool steel inserts, Postgraduate, M.KAMBEROĞLU(Student), 2011

KALKANLI A., Processing and assessment of aluminum ceramic fiber reinforced metal matrix composite parts for automotive and defense applications, Postgraduate, G.TÜRKYILMAZ(Student), 2009

KALKANLI A., Production and characterization of high performance al - fe - v - si alloys for elevated temperature applications, Postgraduate, S.Sayılğan(Student), 2009

KALKANLI A., Processing and assessment of aluminum ceramic fiber reinforced aluminum metal matrix composite parts for automotive and defense applications, Postgraduate, G.Türkyılmaz(Student), 2009

KALKANLI A., Production and characterization of high performance Al-Fe-V-Si alloys for elevated temperature applications, Postgraduate, S.SAYILGAN(Student), 2009

KALKANLI A., Production and characterization of alumina fiber reinforced squeeze cast aluminum alloy matrix composites, Postgraduate, Ö.KELEŞ(Student), 2008

KALKANLI A., Assessment and modelling of particle clustering in cast aluminum matrix composites, Doctorate, A.ÇETİN(Student), 2008

KALKANLI A., Production of coal crusher hammer heads by bi-metal casting, Postgraduate, T.KIRMA(Student), 2008

KALKANLI A., An investigation of compacted graphite cast iron production by means of thermal analysis technique and other process control windows, Doctorate, O.El(Student), 2007

KALKANLI A., Spray rolling of rapidly solidified Al-Fe-V-Si alloy, Postgraduate, H.AKIN(Student), 2006

KALKANLI A., An investigation of compacted graphite cast iron by means of thermal analysis technique and other process control windows, Doctorate, O.EL(Student), 2006

TURANLI L., KALKANLI A., Investigation of the effects of temperature on physical and mechanical properties of monolithic refractory made with pozzolanic materials, Postgraduate, B.MURAT(Student), 2005

KALKANLI A., Hot dynamic consolidation of AlFeVSi alloy powders, Postgraduate, Ş.EZGİ(Student), 2005

KALKANLI A., Production and properties of in-situ aluminum titanium diboride composites formed by slag-metal reaction method, Postgraduate, A.Changızı(Student), 2005

KALKANLI A., Thermal analysis of eutectic modified and grain refined aluminum-silicon alloys, Postgraduate,

H.EROL(Student), 2005

KALKANLI A., Characterization of silicon carbide particulate reinforced squeeze cast aluminum 7075 matrix composite, Postgraduate, H.SENCER(Student), 2004

SEVİNÇ N., KALKANLI A., Aluminum oxide and titanium diboride reinforced metal matrix composite and its mechanical properties, Postgraduate, A.KURTOĞLU(Student), 2004

KALKANLI A., Delamination of layered materials under impact loading, Postgraduate, D.DİNÇ(Student), 2003

KALKANLI A., Thermal analysis of gray cast iron by interpretation of cooling curves, Postgraduate, A.ÇETİN(Student), 2002

KALKANLI A., Alüminyum alaşımlarının yönlü katılaşması ve süreç parametrelerinin irdelenmesi, Doctorate, K.KUNT(Student), 2002

KALKANLI A., Semisolid casting of aluminum silicon alloys, Postgraduate, Ö.KEMAL(Student), 2001

KALKANLI A., Characterization of rapidly solidified Al-Fe-V-Si alloy powders, Postgraduate, B.ARAL(Student), 2001

KAYNAK C., KALKANLI A., Fatigue behavior of aluminum matrix SiC particulate reinforced composites, Postgraduate, K.SÜHA(Student), 2001

KALKANLI A., SEVİNÇ N., A Study on the production of aluminium oxide-titanium diboride particulate reinforced aluminium composite, Postgraduate, M.ELMADAĞLI(Student), 2000

ÖGEL B., KALKANLI A., Mikrostructural and consolidation studies of air-atomized Al-Fe-V-Si and Al-Cr-Fe alloy powders, Postgraduate, Ö.GENCEL(Student), 2000

SEVİNÇ N., KALKANLI A., A study on the production of aluminium oxide-titanium diboride particulate reinforced aluminum composite, Postgraduate, M.Elmadağlı(Student), 2000

KALKANLI A., As-cast property determination of gray cast irons by thermal analysis, Postgraduate, İ.Uysal(Student), 1998

KALKANLI A., Production and heat treatment of alloyed high strength ductile iron., Postgraduate, F.ŞENİZ(Student), 1998

KALKANLI A., Production and characterization of aluminum matrix-tic composites by vacuum sintering, Postgraduate, R.ALPARSLAN(Student), 1998

KALKANLI A., The Production of compacted graphite cast iron and effects of different section sizes, time and postinoculation on the microstructural and mechanical properties., Postgraduate, F.Haraççı(Student), 1998

KALKANLI A., The Production of compacted graphite cost iron and effects of different section sizes, time and postinoculation on the microstructural and mechanical properties, Postgraduate, F.HARAÇÇI(Student), 1998

KALKANLI A., The Production of a ceramic magnet strontium hexaferrite, Postgraduate, E.ÇİFÇİ(Student), 1998

KALKANLI A., Microstructure and high temperature phase studies of rapidly solidified Al-Fe-V-Si alloy, Postgraduate, S.KEMAL(Student), 1997

KALKANLI A., In-situ production of TiC particulate reinforced AL metal matrix composite, Postgraduate, T.SEZENÖZ(Student), 1997

KALKANLI A., In-Situ production of TiC particulate reinforced Al metal matrix composite, Postgraduate, T.Sezenöz(Student), 1997

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

- The effect of B<sub>4</sub>C reinforcements on the microstructure, mechanical properties, and wear behavior of AA7075 alloy matrix produced by squeeze casting**  
Demir M. E. , ÇELİK Y. H. , KILIÇKAP E., KALKANLI A.  
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART E-JOURNAL OF PROCESS MECHANICAL ENGINEERING, 2022 (SCI-Expanded)

## Supported Projects

KALKANLI A., LEVENT KESKİN H., Project Supported by Higher Education Institutions, ORTAKÖY-ŞAPİNUWA



PROJESİ, 2014 - 2014

KALKANLI A., ÇARDAKLI İ. S. , Project Supported by Higher Education Institutions, SOLIDIFICATION AND SECONDARY HARDENING OF 8% CR COLD WORK TOOL STEEL, 2013 - 2013

KALKANLI A., YETKİN S., Project Supported by Higher Education Institutions, THERMAL CONDUCTİVİTY OF COMPACTED GRAPHİTE IRON, 2013 - 2013

KALKANLI A., TAŞTAN Ö. B. , Project Supported by Higher Education Institutions, OPTIMIZATION OF PRODUCTION PARAMETERS OF ADI FOR INDUSTRY APPLİCATIONS, 2013 - 2013

KALKANLI A., Project Supported by Higher Education Institutions, Lisansüstü Tez Projeleri İçin Ortak Sarf Ve Yedek Parça Alımları, 2009 - 2011

## **Contractual Researches**

KALKANLI A., ROKETSAN A.Ş. PROJESİ, 2014 - 2015

KALKANLI A., Hafif ve Çevreci Yerli Tasarım Dört Kapılı Otomobil Geliştirilmesi, 2010 - 2012

KALKANLI A., Hafif ve Çevreci dört kapılı dizel ve iki kapılı elektrikli yerli otomobil geliştirilmesi, 2010 - 2012

KALKANLI A., ALUMİNYUM ESASLISERAMİK FİBER TAKVİYELİ KOMPOZİT SAVUNMA SANAYİ PARÇALARI ÜRETİMİ VE KARAKTERİZASYONU, 2011 - 2011

KALKANLI A., Alüminyum esash seramik fiber takviyeli kompozit savunma sanayi parçaları üretimi ve karakterizasyonu, 2007 - 2009

KALKANLI A., Kompakt Grafit iç Yapılı Motor Bloğu için Malzeme ve Üretim Teknolojisi Geliştirme, 2007 - 2007

KALKANLI A., Minikargo ön travers için Alüminyum alaşım geliştirilmesi, 2007 - 2007

KALKANLI A., Sert Lehimle Su verilmiş Takım Çeliği Sanayi Bıçakları Üretimi, 2007 - 2007

## **Scientific Refereeing**

TUBİTAK Project, 1511 - TUBİTAK Priority Fields Research Technology Development and Innovation PDP, NEMAK İzmir Döküm Sanayi, Turkey, October 2021

TUBİTAK Project, 1511 - TUBİTAK Priority Fields Research Technology Development and Innovation PDP, Tuğçelik Alüminyum ve metal San, Turkey, September 2021

TUBİTAK Project, 1511 - TUBİTAK Priority Fields Research Technology Development and Innovation PDP, ONAT Alüminyum , Turkey, August 2021

TUBİTAK Project, 1501 - Industry R & D Projects Support Program, MESAN, Turkey, June 2021

TUBİTAK Project, 1501 - Industry R & D Projects Support Program, TOTOMAK Makina ve Yedek Parça, Turkey, October 2019

TUBİTAK Project, 1507 - TÜBİTAK SME R&D Start Support Program, Bozok Savunma, Turkey, April 2019

TUBİTAK Project, 1501 - Industry R & D Projects Support Program, Sistem Alüminyum, Turkey, January 2019

TUBİTAK Project, 1501 - Industry R & D Projects Support Program, DELTAL Otomotiv, Turkey, January 2019

TUBİTAK Project, 1507 - TÜBİTAK SME R&D Start Support Program, Albaksan, Turkey, August 2018

## **Scientific Consultations**

Gemciler Güven Metal (TEYDEB ODTÜ Döner sermaye), Project Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Metallurgical And Materials Engineering, Turkey, 2020 - Continues

Sinter Metal A.Ş (TEYDEB ODTÜ Projesi), Project Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Metallurgical And Materials Engineering, Turkey, 2020 - Continues

DİTAŞ (TEYDEB ODTÜ Döner sermaye), Project Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Metallurgical And Materials Engineering, Turkey, 2020 - Continues

TEİ Altun Döküm OTEST , Project Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of

Metallurgical And Materials Engineering, Turkey, 2020 - Continues

TAİ Altun Döküm OTEST , Project Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of

Metallurgical And Materials Engineering, Turkey, 2019 - Continues

## **Metrics**

Publication: 26

Citation (WoS): 298

Citation (Scopus): 361

H-Index (WoS): 8

H-Index (Scopus): 9

## **Congress and Symposium Activities**

Aluminyum ve Bakır Sektörleri Gelişim Çalıştayı, Attendee, Antalya, Turkey, 2017

1. Uluslararası İleri Malzemeler Konferansı, Attendee, Karabük, Turkey, 2017

9.Ulusal Döküm Kongresi, Attendee, Eskişehir, Turkey, 2017