

ÖZGEÇMİŞ

1. **Adı Soyadı:** İlkay KALAY
2. **Unvanı:** Yrd. Doç. Dr.
3. **Öğrenim Durumu:** Doktora

Derece	Alan	Üniversite	Yıl
Lisans	Metalurji ve Malzeme Mühendisliği	Orta Doğu Teknik Üniversitesi	2001
Y. Lisans	Metalurji ve Malzeme Mühendisliği	Orta Doğu Teknik Üniversitesi	2004
Doktora	Malzeme Bilimi ve Mühendisliği	Iowa State University, A.B.D.	2010

4. **Akademik Unvanlar**
Yardımcı Doçentlik Tarihi : 12.09.2011
Doçentlik Tarihi :
Profesörlük Tarihi :

5. **Yönetilen Yüksek Lisans ve Doktora Tezleri**

- 5.1. **Yüksek Lisans Tezleri**

- a. **Eş Yürütücü:** Yüksek Lisans Tez Başlığı: "Zr-Cu-RE (Nadir Toprak elementi) Bazlı İri ve Hacimli Amorf/nanokristal Kompozitlerin Üretimi ve Karakterizasyonu", Fatih Sikan, ODTU, Metalurji ve Malzeme Mühendisliği Bölümü (2014-2016)
- b. **Eş Yürütücü:** Yüksek Lisans Tez Başlığı: "Nadir Toprak Elementi İçermeyen MnAl Alaşımlarının Geliştirilmesi", Özgün Acar, ODTU, Metalurji ve Malzeme Mühendisliği Bölümü (2014-.....)

- 5.2. **Doktora Tezleri**

6. **Yayınlar**

- 6.1. **Uluslararası hakemli dergilerde yayınlanan makaleler (SCI & SSCI & Arts and Humanities)**

- **I Kalay**, R.E. Napolitano, M.J. Kramer, "Crystallization Kinetics and Phase Transformation Mechanism in $Cu_{56}Zr_{44}$ glassy alloy", Metallurgical and Materials Transactions A-Physical Metallurgy and Materials Science, Physical Metallurgy and Materials Science, vol. 46, issue 8, pp. 3356-3364, 2015.
DOI: 10.1007/s11661-015-2921-5 *
*** Paper was featured on Advances in Engineering (January 2016)**
- T. E. Cullinan, **I Kalay**, Y.E. Kalay, R.E. Napolitano, M.J. Kramer, "Kinetics and Mechanisms of Isothermal Devitrification in Amorphous $Cu_{50}Zr_{50}$ ", Metallurgical and Materials Transactions A-Physical Metallurgy and Materials Science, vol. 46, issue 2, pp. 600-613, 2015.
DOI: 10.1007/s11661-014-2661-y
- J. Hwang, Z. H. Melgarejo, Y. E. Kalay, **I. Kalay**, M. J. Kramer, D. S. Stone, P. M. Voyles, "Nanoscale structure and structural relaxation in $Zr_{50}Cu_{45}Al_5$ bulk metallic glass", Physical Review Letters, vol. 108, issue 19, p. 195505-195510, 2012.
DOI: 10.1103/PhysRevLett.108.195505 **
**** Paper was highlighted by Physical Review Letters (May 2012)**
- Y. E. Kalay, **I. Kalay**, J. Hwang, P.M. Voyles, M. J. Kramer, "Local Chemical and Topological Order in Al-Tb and its Role in Controlling Nanocrystal Formation", Acta Materialia, vol. 60, issue 3, p. 994-1003, 2012.
DOI: 10.1007/s10853-013-7488-1 ***
***** Paper was featured on Advances in Engineering (March 2013)**
- **I. Kalay**, M.J. Kramer, R.E. Napolitano, "High-accuracy X-ray diffraction analysis of phase evolution sequence during devitrification of $Cu_{50}Zr_{50}$ metallic glass", Metallurgical and Materials Transactions A-Physical Metallurgy and Materials Science, 42A, issue 5, p.1144-1153, 2011.
DOI: 10.1007/s11661-010-0531-9
- A.M. Genc. O. Acar, **I. Kalay**, Y.E. Kalay, "Effect of Composition on the Phase Transformations of MnAl-based Alloys", submitted to Metallurgical and Materials Transactions A-Physical Metallurgy and Materials Science, 2017.
Manuscript# E-TP-17-618-A

- F. Sikan, B. Yasar, I. Kalay, “*Nanocrystallization In Cu-Zr-Al-Sm Bulk Metallic Glasses*”, submitted to Metallurgical and Materials Transactions A-Physical Metallurgy and Materials Science, 2017. **Manuscript# E-TP-17-1022-A**

6.2. Uluslararası diğer hakemli dergilerde yayınlanan makaleler

6.3. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (*Proceedings*) basılan bildiriler

- F. Sikan, I. Kalay, Y. E. Kalay, “*Sm Microalloyed Cu-Zr-Al Bulk Metallic Glasses*”, 18th International Metallurgy & Materials Congress, UCEAT Chamber of Metallurgical Engineers, Istanbul, Türkiye, Congress e-Book, p. 424-427, 2016.
- I. (Saltoglu) Kalay, M. V. Akdeniz and A. O. Mekhrabov, “*Synthesis and Characterization of Zirconium Based Bulk Amorphous Alloys*”, 12th International Metallurgy & Materials Congress, UCEAT Chamber of Metallurgical Engineers, Istanbul, Türkiye, Congress e-Book, p. 1103-1109, 2005.
- I. (Saltoglu) Kalay, A. O. Mekhrabov and M. V. Akdeniz, “*Prediction of Bulk Glass Forming Ability in Zirconium Based Multicomponent Alloy Systems*”, 12th International Metallurgy & Materials Congress, UCEAT Chamber of Metallurgical Engineers, Istanbul, Türkiye, Congress e-Book, p. 2078-2085, 2005.

6.4. Yazılan uluslararası kitaplar veya kitaplarda bölümler

6.5. Ulusal hakemli dergilerde yayınlanan makaleler

6.6. Ulusal bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler

6.7. Diğer yayınlar

6.8. Uluslararası atıflar

TOPLAM ATIF SAYISI:100

7. Ulusal & Uluslararası Projeler

1. **Proje Yürütücüsü, TUBİTAK 3501 (117M295)** “Samaryum Katkılı Bakır-Zirkonyum-Aluminyum Bazlı Metalik Cam ve Nanokompozitlerinin Üretilmesi ve Geliştirilmesi”, (**Ekim 2017- Ekim 2019**)
2. **Proje Yürütücüsü, AFOSR’s (The Air Force Office of Scientific Research, U.S.A.)** BAA Topic: Aerospace Materials for Extreme Environments, “The Local Structure and Chemistry in Marginal Glass Forming Alloys”, (**Mart 2017- Mart 2020**)
3. **Araştırmacı**, U.S. Department of Energy Projects AL-90-501-002; “Structure and Chemistry in Condensed Systems”, (2008-2010).
4. **Araştırmacı**, Advanced Photon Source, Argonne National Laboratory; “Time resolved phase transitions in Al and Zr based model alloy systems”, 2007.
5. **Araştırmacı**, ODTU BAP-2002-07-02-00-108; “Synthesis and Characterization of Zirconium Based Bulk Amorphous Alloys”, (2002-2004)

8. İdari Görevler

9. Bilimsel ve Mesleki Kuruluşlara Üyelikler

- Materials Advantage (TMS, AIST, ACerS, ASM International)
- ODTÜ ve ISU Mezunlar Topluluğu Üyeliği

10. Ödüller

1. **Paper was featured on *Advances in Engineering (January 2016)***, I. Kalay, R.E. Napolitano, M.J. Kramer, “*Crystallization Kinetics and Phase Transformation Mechanism in Cu₅₆Zr₄₄ glassy alloy*”, Metallurgical and Materials Transactions A-Physical Metallurgy and Materials Science, Physical Metallurgy and Materials Science, vol. 46, issue 8, pp. 3356-3364, 2015.
2. **EN İYİ POSTER ÖDÜLÜ**, “Phase Selection in Cu-Zr Metallic Glasses”, TMS 2015 144th Annual Meeting & Exhibition (Florida/A.B.D.) kongresi, March 2015.
3. **Paper was featured on *Advances in Engineering (March 2013)***, Y. E. Kalay, I. Kalay, J. Hwang, P.M. Voyles, M. J. Kramer, “*Local Chemical and Topological Order in Al-Tb and its Role in Controlling Nanocrystal Formation*”, Acta Materialia, vol. 60, issue 3, p. 994-1003, February 2012.

Paper was highlighted by Physical Review Letters (May 2012), J. Hwang, Z. H. Melgarejo, Y. E. Kalay, I. Kalay, M. J. Kramer, D. S. Stone, P. M. Voyles, "Nanoscale structure and structural relaxation in Zr₅₀Cu₄₅Al₅ bulk metallic glass", Physical Review Letters, vol. 108, issue 19, p. 195505-195510, May 2012.