

# Prof. SERDAR AKTAŞ

## Personal Information

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## International Researcher IDs

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Publons / Web Of Science ResearcherID: AAA-3037-2019

ScopusID: 7007157209

Yoksis Researcher ID: 152813

## Biography

1976 yılında İstanbul'da dünyaya geldim. 1992 yılında lisans eğitimine başladığım İTÜ Kimya-Metalurji Fakültesi'nden 1996 yılında mezun oldum. 2001 yılında Üretim Metalurjisi Kısmen Almanca Programından mezun oldum. 2004-2006 yılları arasında Cambridge Üniversitesi'nde doktora'nın deneysel kısmını tamamlayarak 2007 yılında İTÜ Fen Bilimleri Enstitüsü Malzeme Bilimi ve Mühendisliği'nden mezun oldum. 2011 yılında Marmara Üniversitesi'ne doktoralı öğretim görevlisi olarak atandım. 2014 yılında doçent unvanı almaya hak kazandım. Halen üniversite bünyesinde Ar&Ge, Katma değerli ürün üretimi ve eğitim-öğretim faaliyetlerine devam etmekteyim.

## Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği (Dr), Turkey 2001 - 2007

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Üretim Metalurjisi (YI) (Tezli) (Kismen Almanca), Turkey 1996 - 2001

Undergraduate, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, Turkey 1992 - 1996

## Foreign Languages

English, C1 Advanced

German, B1 Intermediate

## Dissertations

Doctorate, Bitmiş lityum-iyon ikincil pillerinden metalik değerlerin geri kazanımı ve fray-farthing-chen (FFC) Cambridge prosesi ile metalik kobalt üretimi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği (Dr), 2007

Postgraduate, Galvanizli hurdalardan çinkonun geri kazanımı, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Üretim Metalurjisi (YI) (Tezli) (Kismen Almanca), 2001

## Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Production Metallurgy, Engineering and Technology

## Academic Titles / Tasks

Associate Professor, Marmara University, Faculty of Engineering, Metalurji ve Malzeme Müh. Böl., 2011 - Continues

## Courses

Advanced Thermodynamics of Materials, Postgraduate, 2019 - 2020, 2018 - 2019

Advanced Extractive Metallurgy, Postgraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2015 - 2016, 2014 - 2015

Special Topics in Materials Engineering 2, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Engineering Project 1, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Engineering Project 2, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Chemical Metallurgy II, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

Waste Processing and Recycling in Materials Industry, Postgraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Introduction to Materials Engineering, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

Chemical Metallurgy, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

Solution Thermodynamics, Undergraduate, 2017 - 2018, 2015 - 2016

Non ferrous metals, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Metallurgical Thermodynamics, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Basic Chemistry, Undergraduate, 2015 - 2016, 2014 - 2015

General Chemistry 1, Undergraduate, 2014 - 2015

Special Topics in Environmental Engineering II, Undergraduate, 2014 - 2015

## Advising Theses

Aktaş S., Palladium recovery from waste plating solutions using commercial resin Lewatit TP 214, Postgraduate, E.Uluser(Student), 2021

Aktaş S., Indirect metal complex part production using binder jetting technology: A preliminary research, Postgraduate, E.VARLIK(Student), 2020

AKTAŞ S., Antimony recovery from various antimony solutions by cementation and process optimization, Postgraduate, A.Uysal(Student), 2019

AKTAŞ S., Atık rodyum kaplama çözeltilerinden rodyum geri kazanımı, Postgraduate, S.MORCALI(Student), 2014

## Jury Memberships

Post Graduate, Post Graduate, Marmara Üniversitesi, July, 2020

Post Graduate, Post Graduate, Marmara Üniversitesi, June, 2020

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, June, 2020

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, June, 2020

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, June, 2018

Doctorate, Doctorate, Marmara Üniversitesi, October, 2017

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, June, 2017

Doctorate, Doctorate, İstanbul Teknik Üniversitesi, August, 2016

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, June, 2016

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, June, 2016

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, December, 2015

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, May, 2015

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, January, 2015

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

- I. **Comparison of the Antimony Cementation from Chloride Media Using Various Cementators**  
Kucukoglu O., ÇETİNER B. N., Morcali M. H., AKTAŞ S.  
MINING METALLURGY & EXPLORATION, vol.39, pp.793-804, 2022 (SCI-Expanded)
- II. **Palladium recovery from spent Pd plating solutions using Lewatit TP 214 resin**  
ÇETİNER B. N., Yegul E. U., Zeytuncu Gökoğlu B., AKTAŞ S.  
DESALINATION AND WATER TREATMENT, vol.253, pp.211-222, 2022 (SCI-Expanded)
- III. **Metallic antimony recovery via cementation from antimony containing solutions and investigation of its conditions**  
Uysal A., ÇETİNER B. N., AKTAŞ S.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.37, no.1, pp.207-217, 2022 (SCI-Expanded)
- IV. **Recycling of precious materials by modified electrospun membranes**  
Zeytuncu Gökoğlu B., Tasdemir R. S., Tanc B., AKTAŞ S., Koyuncu İ.  
DESALINATION AND WATER TREATMENT, vol.211, pp.439-447, 2021 (SCI-Expanded)
- V. **Investigation of Alkaline Leaching Parameters on Stibnite Concentrate**  
Aktaş S., Çetiner B. N.  
MINING METALLURGY & EXPLORATION, vol.37, pp.1729-1739, 2020 (SCI-Expanded)
- VI. **Oxidative dissolution of nickel matte in dilute sulfuric acid solutions**  
Morcali M. H., Tafaghodi Khajavi L., Aktaş S., Dreisinger D. B.  
Hydrometallurgy, vol.185, pp.257-265, 2019 (SCI-Expanded)
- VII. **Recovery of Ruthenium Via Zinc in the Presence of Accelerator**  
AKTAŞ S., Morcali M. H., Aksu K., Aksoy B.  
TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS, vol.71, no.3, pp.697-703, 2018 (SCI-Expanded)
- VIII. **Synthesis of nanosized Cr<sub>2</sub>O<sub>3</sub> from turkish chromite concentrates with sodium borohydride (NaBH<sub>4</sub>) as reducing agent**  
Morcali M. H., Eyuboglu C., AKTAŞ S.  
INTERNATIONAL JOURNAL OF MINERAL PROCESSING, vol.157, pp.7-15, 2016 (SCI-Expanded)
- IX. **Production of Chromium Oxide from Turkish Chromite Concentrate Using Ethanol**  
AKTAŞ S., Eyuboglu C., MORCALI M. H., ÖZBEY S., sucuoğlu y.  
HIGH TEMPERATURE MATERIALS AND PROCESSES, vol.34, no.3, pp.237-244, 2015 (SCI-Expanded)
- X. **Studies of Gold Adsorption from Chloride Media**  
Morcali M. H., Zeytuncu B., Ozlem E., AKTAŞ S.  
MATERIALS RESEARCH-IBERO-AMERICAN JOURNAL OF MATERIALS, vol.18, no.3, pp.660-667, 2015 (SCI-Expanded)
- XI. **Investigation of cobalt sulfate precipitation by alcohol and influencing factors**  
AKTAŞ S., Gurcan H., Keskin A., Morcali M. H., ÖZBEY S., Yücel O.  
MINERALS & METALLURGICAL PROCESSING, vol.30, no.3, pp.174-179, 2013 (SCI-Expanded)
- XII. **Platinum adsorption from chloride media using carbonized biomass and commercial sorbent**  
MORCALI M. H., ZEYTUNCU B., AKTAŞ S., YÜCEL O., GÜLLÜOĞLU A. N.  
MINERALS & METALLURGICAL PROCESSING, vol.30, no.2, pp.129-136, 2013 (SCI-Expanded)
- XIII. **Cementation of rhodium from waste chloride solutions using copper powder**  
Aktas S.  
INTERNATIONAL JOURNAL OF MINERAL PROCESSING, vol.114, pp.100-105, 2012 (SCI-Expanded)

- XIV. **Gold uptake from dilute chloride solutions by a Lewatit TP 214 and activated rice husk**  
AKTAŞ S., MORCALI M. H.  
INTERNATIONAL JOURNAL OF MINERAL PROCESSING, vol.101, pp.63-70, 2011 (SCI-Expanded)
- XV. **A novel purification method for copper sulfate using ethanol**  
AKTAŞ S.  
HYDROMETALLURGY, vol.106, pp.175-178, 2011 (SCI-Expanded)
- XVI. **Gold recovery from chloride solutions using fallen leaves**  
AKTAŞ S., Gozuak B., AÇMA H., Ozalp M. R., Acma E.  
ENVIRONMENTAL CHEMISTRY LETTERS, vol.9, no.1, pp.47-53, 2011 (SCI-Expanded)
- XVII. **Recovery of mercury from spent silver oxide button cells**  
AKTAŞ S., MORCALI M. H.  
Minerals & Metallurgical Processing, vol.28, pp.198-203, 2011 (SCI-Expanded)
- XVIII. **Rhodium recovery from rhodium containing waste rinsing water via cementation using zinc powder**  
AKTAŞ S.  
hydrometallurgy, vol.106, pp.71-75, 2011 (SCI-Expanded)
- XIX. **Platinum recovery from dilute platinum solutions using activated carbon**  
AKTAŞ S., MORCALI M. H.  
Trans. Nonferrous Met. Soc.China, vol.21, pp.2554-2558, 2011 (SCI-Expanded)
- XX. **Silver recovery from spent silver oxide button cells**  
AKTAŞ S.  
HYDROMETALLURGY, vol.104, no.1, pp.106-111, 2010 (SCI-Expanded)
- XXI. **Silver Recovery from Waste Radiographic Films by Cementation and Reduction**  
AKTAŞ S., MORCALI M. H., YÜCEL O.  
CANADIAN METALLURGICAL QUARTERLY, vol.49, no.2, pp.147-153, 2010 (SCI-Expanded)
- XXII. **Gold recovery from dilute gold solutions using DEAE-cellulose**  
Tasdelen C., AKTAŞ S., AÇMA M. E., GÜVENİLİR F. Y.  
HYDROMETALLURGY, vol.96, no.3, pp.253-257, 2009 (SCI-Expanded)
- XXIII. **Towards environmentally safe recovery of platinum from scrap automotive catalytic converters**  
Eray k., AKTAŞ S., ŞEŞEN M. K.  
Turkish J Eng.Env. Sci., vol.33, pp.83-90, 2009 (SCI-Expanded)
- XXIV. **Silver recovery from silver rich photographic processing solutions by copper**  
AKTAŞ S.  
CANADIAN METALLURGICAL QUARTERLY, vol.47, pp.37-43, 2008 (SCI-Expanded)
- XXV. **Recovery of metallic values from spent Li ion secondary batteries**  
AKTAŞ S., Derek F., Odne B., Jo F., AÇMA M. E.  
Mineral Processing and Extractive Metallurgy (Trans. Inst. Min Metall. C), vol.115, pp.95-100, 2006 (SCI-Expanded)
- XXVI. **Current situation of scrap batteries in Turkey**  
AKTAŞ S., SİRKEÇİ A. A., AÇMA M. E.  
Journal Of Power Sources, vol.130, pp.306-308, 2004 (SCI-Expanded)
- XXVII. **A STUDY ON THE TREATMENT OF WASTES IN HOTDIP GALVANIZING PLANTS**  
SÖNMEZ S., AKTAŞ S., AÇMA M. E.  
Canadian Metallurgical Quarterly, vol.42, pp.289-300, 2003 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Recovery of Zinc from Galvanized Scraps**  
AKTAŞ S., AÇMA M. E.  
TURKISH JOURNAL OF ENGINEERING AND ENVIRONMENTAL SCIENCES, vol.26, pp.395-402, 2002 (Scopus)

## Books & Book Chapters

- I. **Chemical Metallurgy Laboratory Book with Lecturer's Notes**  
AKTAŞ S., ÇETİNER B. N.  
Dahi Yayıncılık A.Ş., İstanbul, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **PALLADIUM RECOVERY FROM WASTE PLATING SOLUTIONS USED IN AUTOMOTIVE PLASTICS INDUSTRY BY METALLIC COPPER POWDER**  
Atasoy S., Çöke N., Çetiner B. N., Aktaş S.  
7. ULUSLARARASI MUHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, İstanbul, Turkey, 21 - 22 May 2021, pp.1150
- II. **PEKTİN VE KİTRE KULLANILARAK ATIK PALADYUM ÇÖZELTİLERİNDEN PALADYUMUN ADSORPSİYON YÖNTEMİ İLE GERİ KAZANIMI**  
Karaalil Ö., Kaya S., Derelioğlu Y., Çetiner B. N., Aktaş S.  
7. ULUSLARARASI MUHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, İstanbul, Turkey, 21 May - 22 October 2021, pp.1151
- III. **PALLADIUM RECOVERY FROM WASTE PLATING SOLUTIONS USING COMMERCIAL RESIN LEWATIT TP 214**  
Yegül E. U., Çetiner B. N., Zeytuncu Gökoğlu B., Aktaş S.  
IMSTEC'20, Nevşehir, Turkey, 16 - 18 October 2020, pp.282
- IV. **ELEKTRONİK ATIKLARDAN YEŞİL KİMYA YÖNTEMİ İLE NANO ALTIN ELDESİ**  
Çolak H., Albayrak B., Çetiner B. N., Aktaş S.  
3. Uluslararası Mühendislik ve Teknoloji Yönetimi Kongresi, İstanbul, Turkey, 16 - 17 April 2020, pp.74
- V. **INDIRECT METAL COMPLEX PART PRODUCTION USING BINDER JETTING TECHNOLOGY: A PRELIMINARY RESEARCH**  
Varlık E., Aktaş S., Giorleo L.  
3. Uluslararası Mühendislik ve Teknoloji Yönetimi Kongresi, İstanbul, Turkey, 16 - 17 April 2020, pp.73
- VI. **Antimony Recovery from Various Antimony Solutions and Determination of Optimal Conditions**  
Uysal A., ÇETİNER B. N., MORCALI M. H., AKTAŞ S.  
2nd International Turkish World Engineering and Science Congress, Antalya, Turkey, 7 - 11 November 2019, vol.2, pp.652-661
- VII. **MAGNEZYOTERMİK REDÜKSİYON İLE AMORF BOR ÜRETİMİ**  
Öksüz F., Çokrak Ç. Y., Aktaş S., Çetiner B. N.  
4. Uluslararası Mühendislik, Mimarlık ve Tasarım Kongresi, İstanbul, Turkey, 23 - 24 April 2019, pp.348-351
- VIII. **PRODUCTION OF ANTIMONY TRIOXIDE FROM ANTIMONY ORE**  
Zerin M., Doğan Ö., Yavuz M., Fındık Z., Çetiner B. N., Aktaş S.  
3rd International Congress on Engineering, Architecture and Design, İstanbul, Turkey, 4 - 05 May 2018, pp.483
- IX. **PRODUCTION OF ZIRCONIUM OXIDE FROM ZIRCONIUM SILICATE**  
Doğan Ö., Yavuz M., Çetiner B. N., Aktaş S.  
3rd International Congress on Engineering, Architecture and Design, İstanbul, Turkey, 4 - 05 May 2018, pp.433-434
- X. **Synthesis of Nano-Sized Cr<sub>2</sub>O<sub>3</sub> from Turkish Chromite Concentrates Using Sodium Borohydride**  
MORCALI M. H., AKTAŞ S.  
8th International Advanced Technologies Symposium, Elazığ, Turkey, 19 - 22 October 2017, pp.83
- XI. **Synthesis of Cr<sub>2</sub>O<sub>3</sub> from Turkish Chromite Concentrates via Ethyl Alcohol**  
AKTAŞ S., MORCALI M. H.  
8th International Advanced Technologies Symposium, Elazığ, Turkey, 19 - 22 October 2017, pp.84
- XII. **Determination of mercury in spent and new fluorescent lamps byHG AAS**  
Seçil K., Aktaş S., Özcan M.

## Supported Projects

- Aktaş S., Project Supported by Higher Education Institutions, Çok işlevli reaksiyon tankı tasarımı, 2019 - 2024
- Aktaş S., Project Supported by Higher Education Institutions, Amonyum hegza klora platinat çökeleğinin yeni bir çevreci yöntemle rafinasyonu, 2019 - 2024
- Aktaş S., Project Supported by Higher Education Institutions, Platinum Recovery Method, 2018 - 2023
- Aktaş S., Project Supported by Higher Education Institutions, Paladyum ihtiva eden çeşitli atıklardan paladyumun ekstraksiyonu ve alkol bazlı sülfat çöktürme metoduyla rafinasyonunun araştırılması, 2018 - 2021
- Aktaş S., Project Supported by Higher Education Institutions, Alaşım Yoluyla Platin Hurdalarından Platinin Yeni Yöntemle Saflaştırılması ve Proses Optimizasyonu, 2018 - 2021
- Aktaş S., Project Supported by Higher Education Institutions, Yerli Sülfürlü/Oksitli Antimon Cevherlerinden Antimonun Mikrodalga Çözündürme Yöntemiyle Ekstraksiyonu, Arsenik Bertarafı ve Nano Boyutta Antimon Sentezi, 2017 - 2021
- Aktaş S., Project Supported by Higher Education Institutions, Çeşitli antimon çözeltilerinden sementasyon yoluyla antimon geri kazanımı ve proses optimizasyonu, 2019 - 2020
- Aktaş S., Project Supported by Higher Education Institutions, FEN-E-080415-0110 Klorlayıcı Kavurma ile Türk Kromit Cevherlerinden Krom, Demir, Magnezyum ve Alüminyum metallere Ekstraksiyonu ve Alüminotermik Redüksiyonla Metalik Krom Üretimi, 2015 - 2017
- Aktaş S., Project Supported by Higher Education Institutions, Atık Rodyum Kaplama Çözeltilerinden Rodyum Geri Kazanımı, 2014 - 2015
- Aktaş S., Project Supported by Higher Education Institutions, Etanol Sülfat Çöktürme Metoduyla Rodyumun Saflaştırılması 2012 Marmara Bapko FEN A 110412 0112, 2012 - 2014
- Aktaş S., Project Supported by Higher Education Institutions, Alkol Bazlı Sülfat Çöktürme Metoduyla Rutenyumun Saflaştırılması, 2012 - 2014

## Patent

- Aktaş S., Nano boyuttaki krom (III) oksidin üretim metodu ve bahsedilen krom (III) oksidin boya ve kaplama sanayisinde kullanımı, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2015 05000 , Standard Registration, 2020
- Aktaş S., Platin geri kazanım yöntemi, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: PCT/TR2020/050793 , Standard Registration, 2020
- Aktaş S., Saflaştırma Proseslerinde Kullanıma Yönelik Bir Reaksiyon Tankı, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: PT2019-00659 , Standard Registration, 2019
- Aktaş S., SOY METALLERİN GERİ KAZANIMI İÇİN BİR YÖNTEM, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Recourse Number: PT2019-00586 , Standard Registration, 2019

## Scientific Refereeing

- MINING METALLURGY & EXPLORATION, Journal Indexed in SCI-E, January 2019
- TUBITAK Project, 1505 - University-Industry Cooperation Support Program, TEYDEB, Turkey, January 2018

## Metrics

- Publication: 41
- Citation (WoS): 236
- Citation (Scopus): 257

H-Index (WoS): 10

H-Index (Scopus): 9

## **Awards**

Aktaş S., Çetiner B. N., Üniversitesi M., A METHOD for PLATINUM RECOVERY, 5. İstanbul Uluslararası Buluş Fuarı, September 2020

Fındık Z., Aktaş S., Kaplama Çözeltilerindeki Platinin Geri Kazanımı ve Saflaştırılmasının Ekonomik Optimizasyonu, Tübitak Bideb, October 2017